

Transporting LNG: An Overview of West Coast Tanker Traffic Issues

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Outline

- Overview of Tanker Traffic on the West Coast
- Oil and Gas Projects in British Columbia
- Canadian Law Regarding Civil Liability, Offences and Penalties, and Incident Response
- Recent Developments in Canadian Maritime Law



LNG Projects in British Columbia

- The provincial government developed a Liquefied Natural Gas (“LNG”) Strategy to build the industry in British Columbia
- Near term contracts: Japan and Korea
- Goal of three fully operational LNG plants by 2020, resulting in an estimated **\$190 billion to \$280 billion investment in the province (EY)**
- There are currently 18 proposed LNG projects, now at various stages of development; 9 have received export licences
- Largest private investment proposals in the Province’s history. The government estimates that five facilities would generate **\$1-trillion in economic activity over 30 years**

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Tanker Traffic on the West Coast

- Canada has the world's largest coastline – 243,000 km
- 80 million tonnes of oil are shipped from Canada's east and west coasts
- Oil Tankers transiting West Coast since 1930s
- During OPEC oil embargo, Alberta oil exported from Vancouver and sent to eastern Canada via Panama Canal
- About 1.3% of commercial vessel movements on the West Coast (2011)
- Among Vancouver, Prince Rupert, and Kitimat



Great Circle Route: North American West Coast to Asia

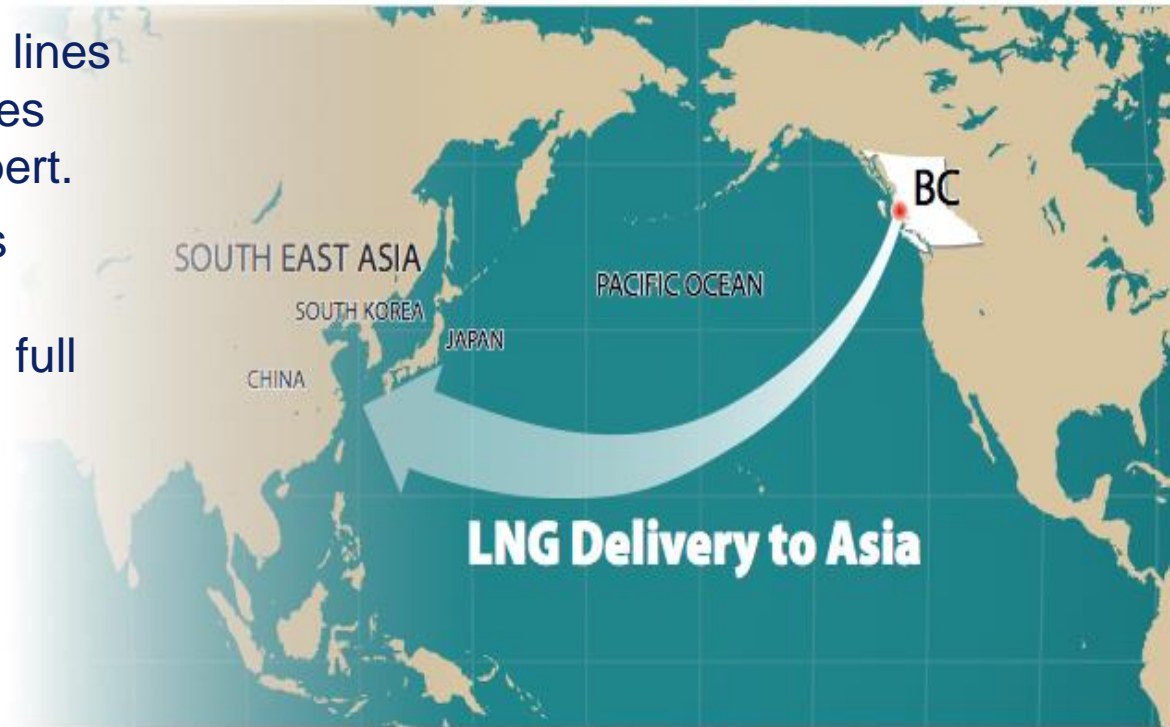
Distances from west coast ports to Shanghai:

- Prince Rupert 4482 nm
- Kitimat 4541 nm
- Vancouver 4879 nm
- Seattle 4972 nm
- San Francisco 5344 nm
- Long Beach 5649 nm



Great Circle Route: North American West Coast to Asia

- COSCO and Hanjin shipping lines both have ten-day transit times from Shanghai to Prince Rupert.
- Faster than best transit times offered by APL, Maersk, and Hanjin Lines to LA/LB by two full days (10 vs.12 days)
- Inland transit time remains a contentious issue



Tanker Traffic on the West Coast: Compulsory Pilotage



Compulsory Pilotage in BC Waters:

- Require an experienced local mariner with extensive knowledge of local waterway to pilot vessel
- Four pilot boarding stations along the B.C. Coast: Victoria, Steveston, Prince Rupert and Port Hardy.
- Service provided by the B.C. Coast Pilots
- Currently about 103 pilots
- Regulatory oversight provided by the Pacific Pilotage Authority

Moratorium on Offshore Oil and Gas Exploration

- **B.C. coastal seabed contains an estimated**

- 9 billion barrels of oil (1.3 billion recoverable)
- 42 trillion cubic feet of natural gas (9.8 trillion recoverable)

1972: Federal moratorium on offshore oil and gas exploration; Order-In-Council suspending existing permits

1986: Federal and provincial governments reassess moratorium

1989: Exxon Valdez spill occurs

2001: Province reassesses its moratorium and requests that federal government do the same

2003: Province lifts its moratorium on offshore exploration

2006: Federal government refuses to lift its moratorium on offshore exploration



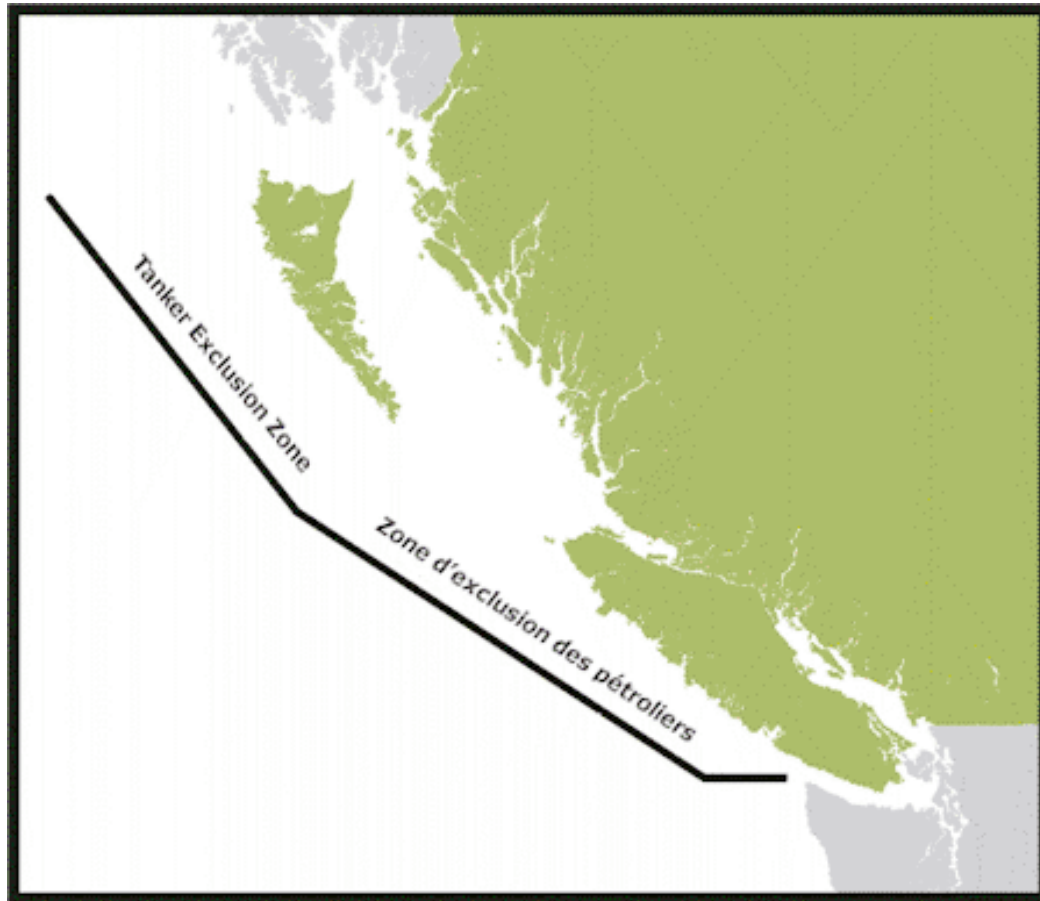
“Moratorium” on Tanker Traffic?

1972: Federal government allegedly declares moratorium on tanker traffic along the north coast

- No legislation; no order in council; no formal instrument in writing at all establishing policy
- Despite this, over the years, various secondary sources have referred to a moratorium on tanker traffic
- Barges and small tankers have long transited areas of the north coast in question
- Proponents of alleged moratorium say it was never intended to apply to local vessel traffic – only foreign tankers
- Current position of Transport Canada and Natural Resources Development Canada: no moratorium on tanker traffic on the west coast

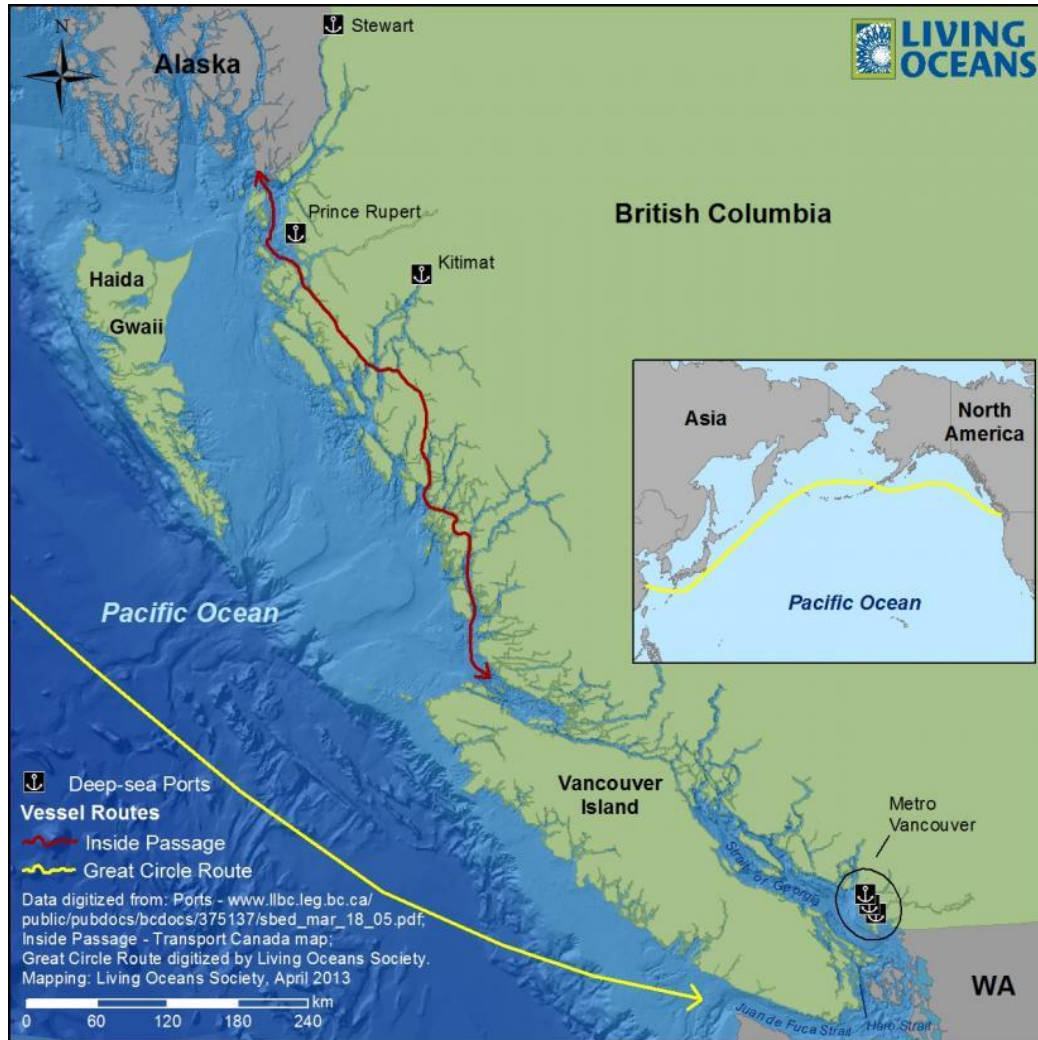


Tanker Traffic on the West Coast: Voluntary Tanker Exclusion Zone



- 1985 Voluntary Tanker Exclusion Zone for loaded oil tankers servicing the Trans-Alaska Pipeline System between Valdez and Puget Sound
- Approximately 100 km offshore
- Replaced earlier TAPS tanker routes to which loaded tankers had adhered
- More than 300 loaded tankers transit the B.C. coast annually while respecting the exclusion zone.

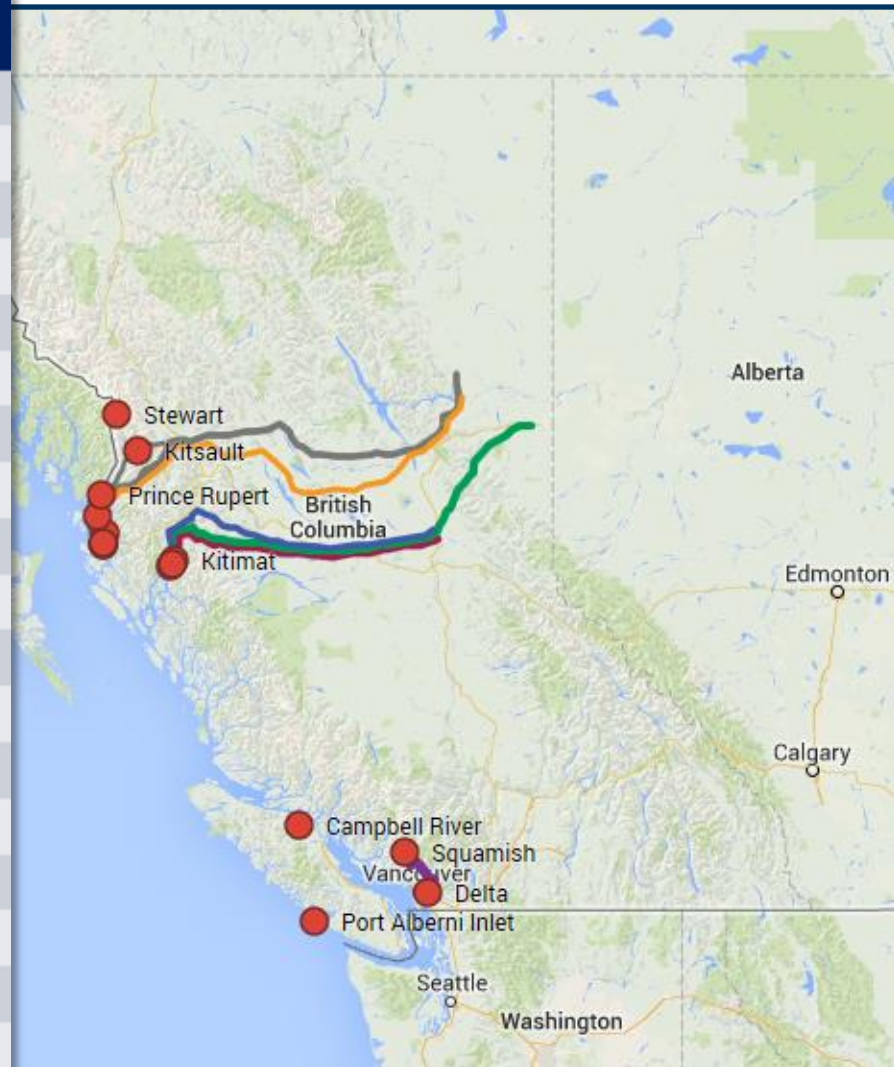
Tanker Traffic on the West Coast: Inside Passage Restrictions



- Other tankers greater than 40,000 deadweight tonnes when loaded are directed outside the Inside Passage (depicted in red)
- Must also have two pilots and an escort tug

Proposed LNG Projects in British Columbia

Location	Name	In-Service Date
Campbell River	Discovery LNG	2021
Delta	WesPac	2016
Kitimat	LNG Canada	2019
Kitimat	Kitimat LNG	TBD
Kitimat	Douglas Channel Energy (BC LNG)	TBD
Kitimat	Cedar LNG	2020
Kitsault	Kitsault Energy Project	2018
Port Alberni Inlet	Steelhead LNG	2022
Port of Prince Rupert	Prince Rupert LNG	2019
Port of Prince Rupert	Pacific NorthWest LNG	2018
Prince Rupert	Orca LNG	2019
Prince Rupert	WCC LNG Ltd.	2023
Prince Rupert	Grassy Point LNG	2021
Prince Rupert	Watson Island LNG	TBD
Prince Rupert	Aurora LNG	2021
Squamish	Woodfibre LNG Project	2017
Stewart	Canada Stewart Energy Project	2017
Location TBD	Triton LNG	2017



Kitimat LNG Projects



- Kitimat has been the subject of several proposals to develop B.C.'s first liquefied natural gas (LNG) export terminal.

→ Kitimat LNG

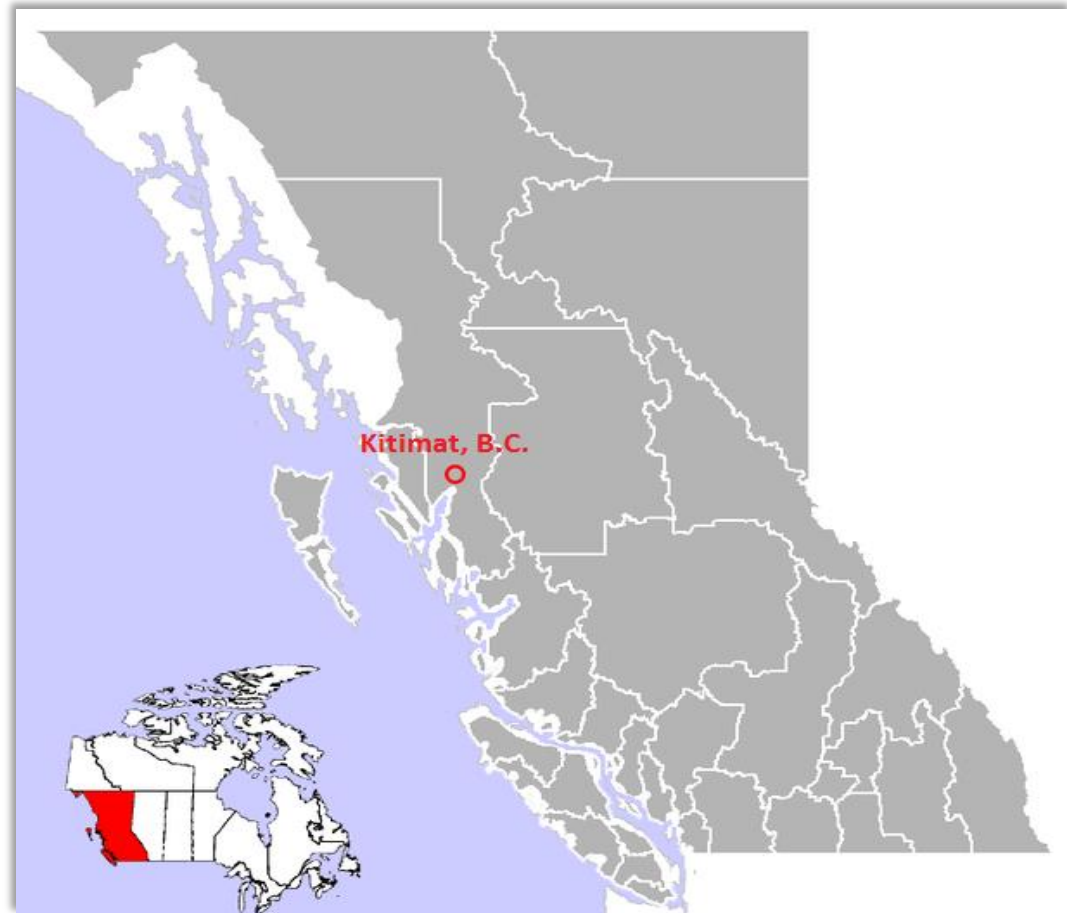
→ LNG Canada

→ Douglas Channel Energy (BC LNG)

→ Cedar LNG

City of Kitimat

- Coastal city in northwestern British Columbia
- Third largest port on the west coast
- Possible main export site for natural resources to the US and Asia
- **One of a few private ports in North America**
- No federal port authority
- No harbour dues
- No established traffic separation schemes



Other West Coast Oil and Gas Projects

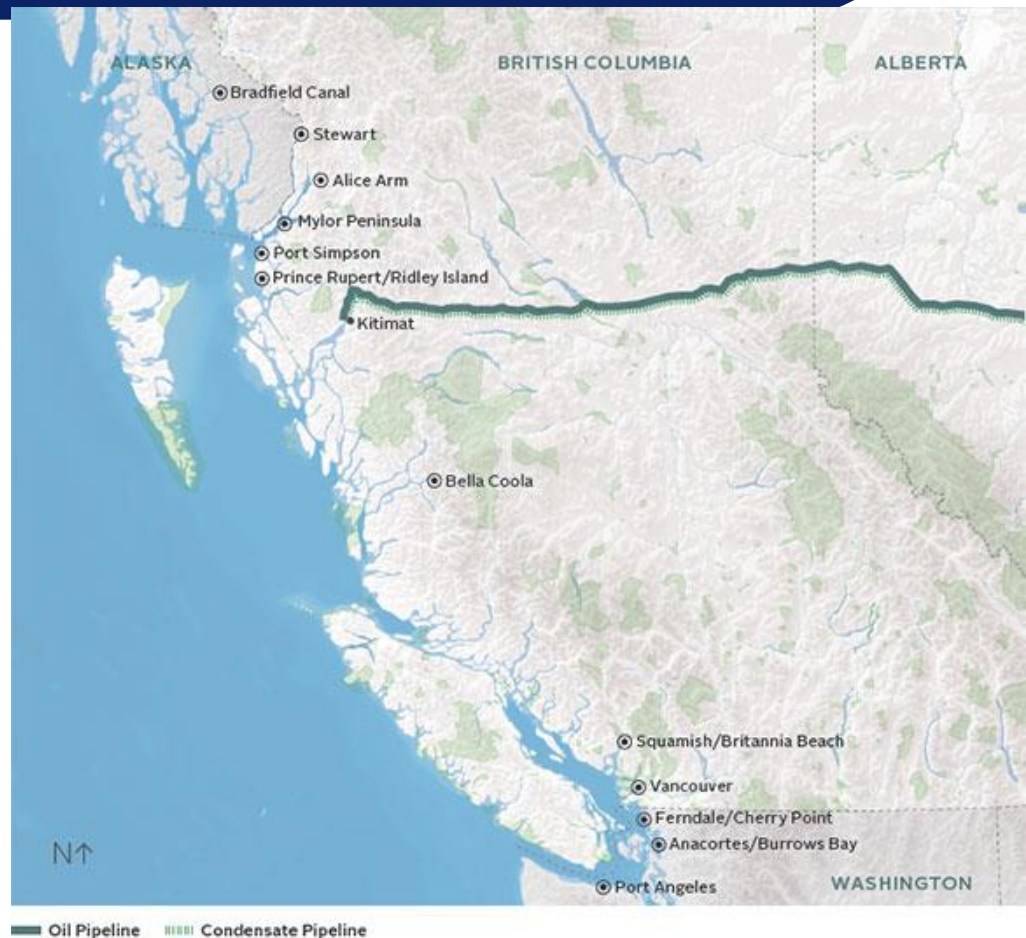
- Continued uncertainty regarding the Keystone Pipeline
- Two main oil pipeline proposals:
 1. Enbridge Northern Gateway
 2. Kinder Morgan Trans Mountain
- Additional 600 additional tankers per year on west coast



Other West Coast Oil and Gas Projects

- **Enbridge Northern Gateway:**

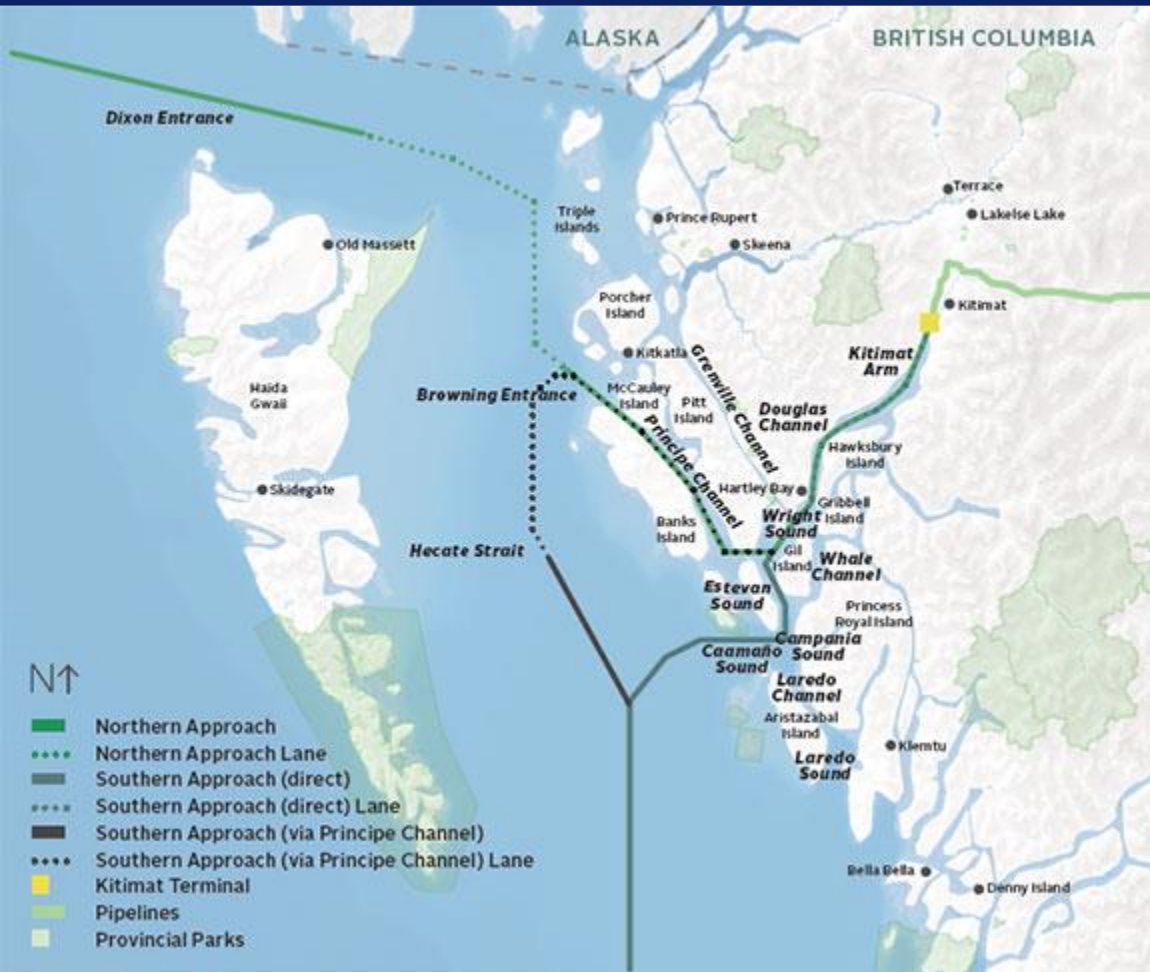
- Bruderheim, Alberta to Kitimat, British Columbia.
- 1,177 km of buried pipeline
- Export approximately 30 million tonnes of crude oil annually
- Import 11 million tonnes of natural gas condensate annually
- Up to 250 tankers will call on the Port of Kitimat annually
- Project proposal accepted by the Government of Canada in June 2014, with 209 conditions



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Proposed Tanker Routes from Kitimat



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Other West Coast Oil and Gas Projects

- **Kinder Morgan Trans Mountain Pipeline Expansion:**
- Expansion of current pipeline carrying crude oil from Edmonton to Vancouver
- Expansion would increase exports to 750,000 barrels per day from 300,000
- Regulatory applications filed in December 2013 for targeted service date in 2017
- Increase tanker traffic in PMV from 100 tankers annually to approximately 444 annually



Other West Coast Oil and Gas Projects



Other West Coast Oil and Gas Projects



Canadian Legislation Governing Ship Source Pollution

1. Civil Liability
2. Offences & Penalties
3. Incident Response



Civil Liability for Oil Spills

International Conventions: Oil Pollution Damage

- **Civil Liability Convention (1992)**
 - Strict liability for oil carried in bulk as cargo.
 - Within the EEZ of member states
 - Funded by compulsory insurance
- **IOPC Fund Convention (1992)**
 - Establishes International Oil Pollution Compensation Fund
 - Supplementary compensation where CLC unavailable or insufficient
 - Funded by levies on bulk oil importers
- **Supplementary Fund Protocol (2003)**
 - In force as of 2010
 - Funded by levies on bulk oil importers
- **Canada's Ship-Source Oil Pollution Fund**
 - Levies on oil companies and heavy industries until 1976
 - Current reserves are approximately \$400 million

Civil Liability for Oil Spills

International Conventions: Oil Pollution Damage

- “**Pollution damage**” is defined as loss or damage caused by contamination
- For environmental damage compensation is restricted to the cost of **reasonable measures** to reinstate the contaminated environment
- Pollution damage includes measures, wherever taken, to **prevent or minimise** pollution damage in the territory, territorial sea or EEZ or equivalent area of a State Party
- Includes expenses incurred for **preventive measures** are recoverable even when no spill of oil occurs
- Also includes property damage and economic loss claims (fishery, tourism, etc...)

Civil Liability for Oil Spills

International Conventions: Oil Pollution Damage

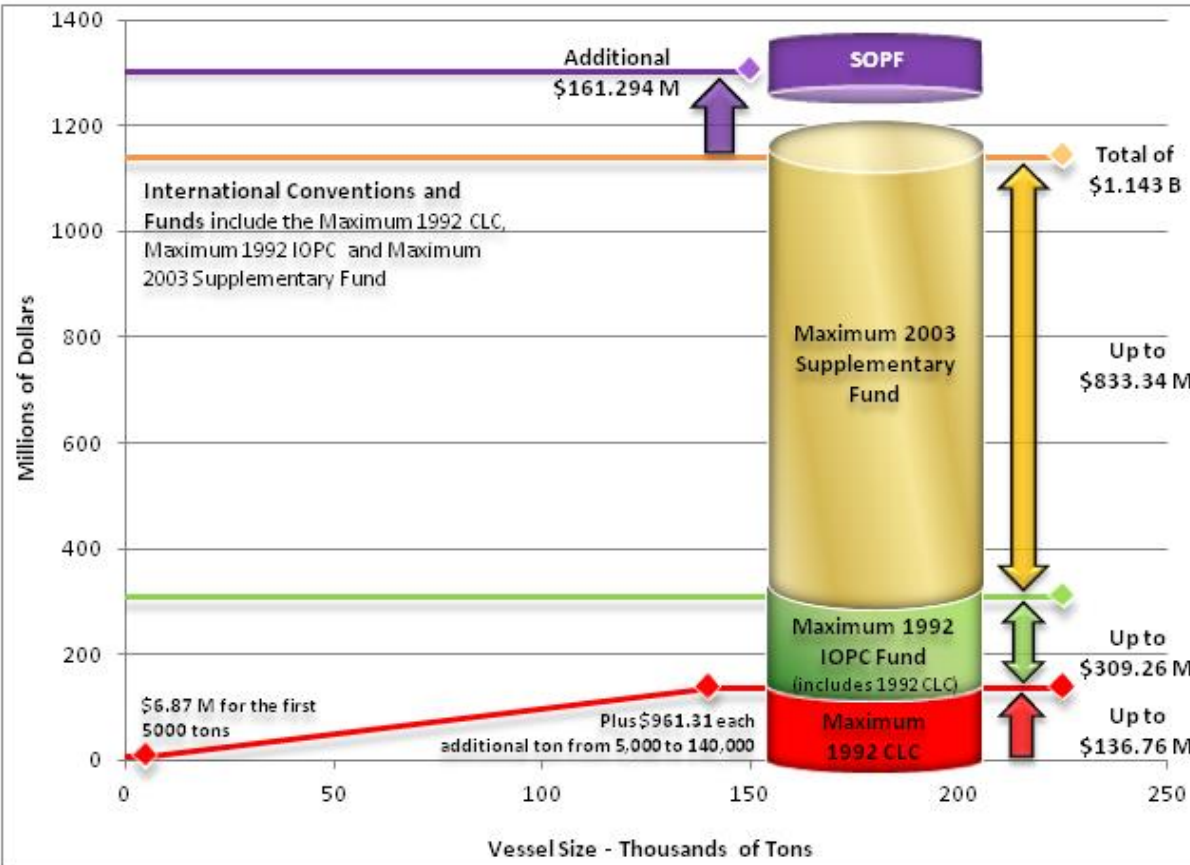
- Under CLC 92, liability is strict: shipowner liable pollution damage caused by the escape or discharge of persistent oil from its ship

Exemptions:

- Damage resulting from an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character
- Damage wholly caused by an act or omission done with the intent to cause damage by a third party
- Damage wholly caused by the negligence or other wrongful act of any Government or other authority responsible for the maintenance of lights or other navigational aids, in the exercise of that function.

If an exemption applies, compensation available from IOPC Compensation Fund

Civil Liability for Oil Spills



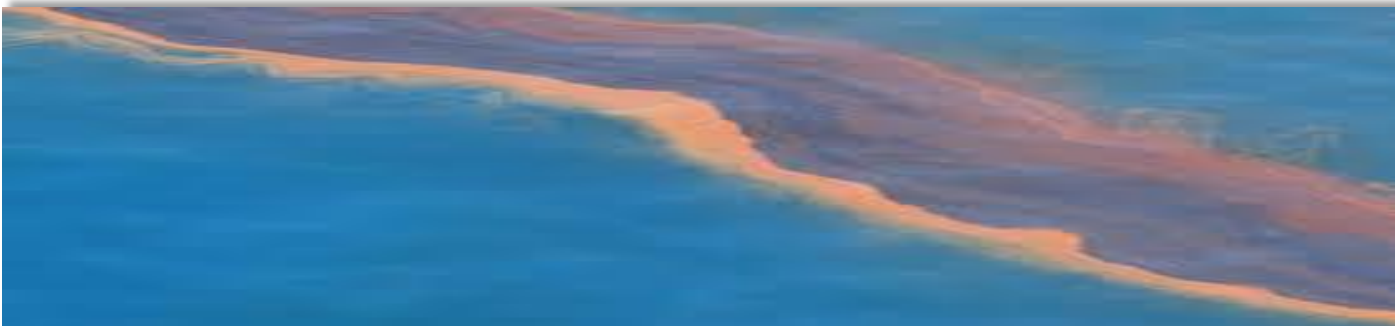
International Conventions and Funds	\$1,142,602,500
Total Domestic Fund (SOPF)	\$161,293,660 (changed to entire \$400 million in 2014)
Total Compensation Available for a Spill in Canadian Waters	\$1,303,896,160 (increased to approximately \$1.6 billion in 2014)

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Civil Liability for Oil Spills

- **Bunker Pollution Convention 2001**

- Covers liability for pollution damages caused by “bunker oil” (art. 1(5))
- **Bunker fuel** defined as any fuel used in the propulsion and operation of the ship and is carried on all motorized vessels.
- More frequently involved in pollution incidents than spills from oil tankers
- “Pollution damage” defined to include clean-up, preventive measures and further loss or damage they may cause (art. 1(9))
- “Polluter-Pay” principle
- Limitations of liability as per LLMC 1976 & 1996 Protocol (art. 6)
- Compulsory insurance (art. 7)



Civil Liability for LNG Spills

2010 Hazardous and Noxious Substances Convention

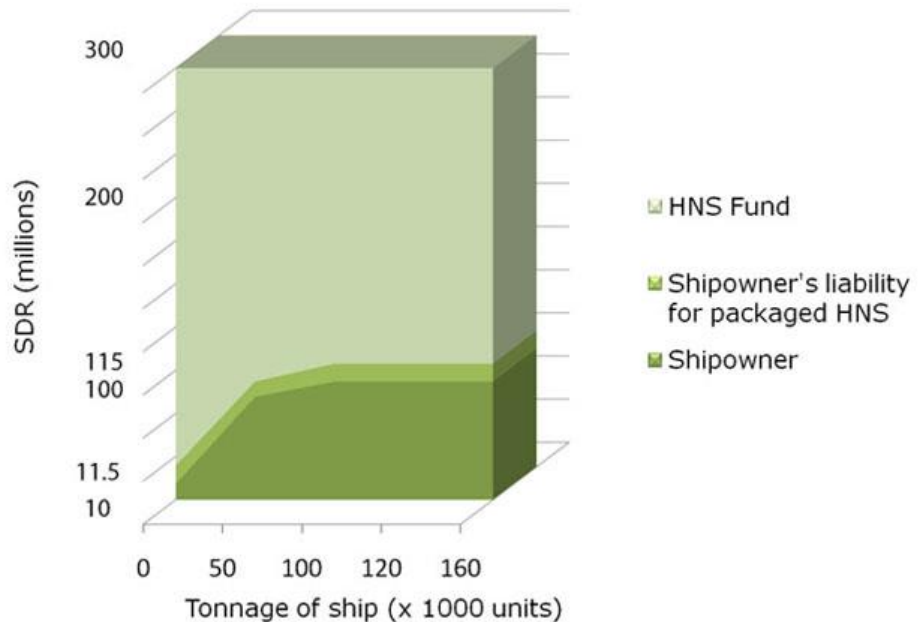
- Modelled on the CLC and Fund Conventions
- Applies to all sea-going ships carrying HNS to, from, and within a State Party
- Covers a total of some 6,500 substances, including liquefied gases



Civil Liability for LNG Spills

- **Two tiers of compensation:**

1. Tier 1 paid by the shipowner via compulsory insurance 115 SDRs (up to CAD \$205 million)
2. Tier 2 will be paid by an HNS Fund, up to a maximum of approximately 250 million SDRs (CAD \$445) million per incident (including the shipowner's portion)
 - Funded by importers of hazardous and noxious substances in member states of the convention



Civil Liability for LNG Spills

Will provide compensation for pollution-related damage, such as:

- damage caused by HNS carried by vessels,
- damage resulting from fire and explosion, including loss of life or personal injury;
- loss of or damage to property outside the ship;
- economic loss due to contamination (e.g. fishing and tourism);
- loss or contamination of the environment;
- the costs of preventive measures (e.g. clean-up) and further loss or damage caused by them; and
- costs of reasonable measures of reinstatement of the environment.

Civil Liability for LNG Spills

Implementation:

- The timing of the implementation of the HNS Convention is to be determined by the federal Cabinet, based on the number of states ratifying the convention Protocol and the volume of contributions to the Fund from cargo interests in ratifying states.
- Will come into force 18 months after 12 states have ratified or acceded.
- 8 states have ratified or acceded: Denmark, Canada, France, Germany, Greece, the Netherlands, Norway and Turkey.
- One outstanding issue is the use of the SOPF in respect of HNS incidents. Currently, that fund is only available for ship source oil spill incidents.

Issues Regarding Investigation and Enforcement

- **Risk of Regulatory Overlap and Lack of Unified Investigation/Enforcement Response**

1. “What Laws Would Apply If There Was a BP-Type Spill on the B.C. Coast?” *Vancouver Sun*, August 3, 2010 (Rossi & Walker)
2. “Canada Needs a Unified Oil Spill Regime” *Vancouver Sun*, August 12, 2010 (Editorial)

Federal Responsibility for Pollution Prevention, Response & Enforcement

- Transport Canada – Lead regulator/investigator for ship-source spills
- Fisheries and Oceans Canada – Reporting/logistical support
- Canadian Coast Guard – Spill response; no enforcement powers
- Other regulatory agencies (Transportation Safety Board, Pacific Pilotage Authority, etc.)
- Spill Response Organizations
- Environment Canada – Land-based spills



Pollution-Related Offences: Ship Source Spills

OFFENCES AND PENALTIES

- ***Canada Shipping Act 2001 (S.C. 2001, c. 26)***

- Administered by Transport Canada and Department of Fisheries and Oceans

- Offence:

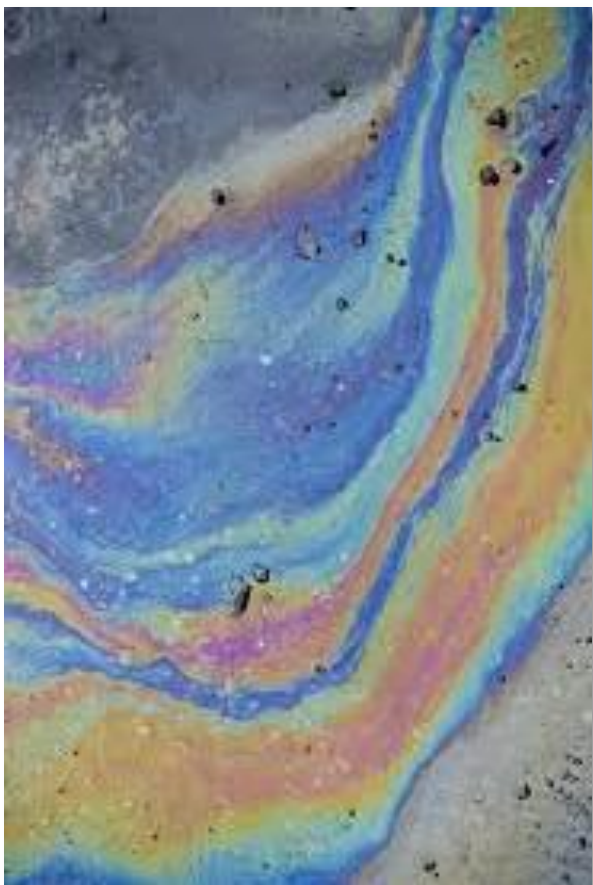
- Unauthorized discharge of a “prescribed pollutant” (includes oil) – CSA ss. 185, 187, 191(1)(a)

- Parties liable:

- persons and vessels

- Sanctions:

- Administrative Monetary Penalties (Up to \$25,000/day)
- Fines (Up to \$1 million)
- Imprisonment (18 months)



Pollution-Related Offences: Ship Source Spills

- ***Canada Environmental Protection Act, 1999***
(S.C. 199, c. 33) (“CEPA”)
 - Administered by Environment Canada
 - Offence:
 - Failure to take reasonable measure to remedy potential or actual releases of toxic substances
 - Parties liable:
 - Persons who own, have charge, management or control of substance before its release into environment and persons who cause or contribute to release or increase its likelihood (CEPA ss. 95(2)(a) and (b))
 - Offence:
 - Disposal of unauthorized substances in the sea without a permit (CEPA ss. 125(1) & (1.1) & 272)
 - Parties liable:
 - Persons and ships



Pollution-Related Offences: Ship Source Spills

- *Canadian Environmental Protection Act (cont'd)*
 - Master and chief engineers, corporate directors and officers may also be liable to similar penalties in some cases (CEPA ss. 280 and 281)
 - Penalties may be reduced where they would cause “financial hardship” (CEPA, s. 273)



Pollution-Related Offences: Ship Source Spills

- ***Migratory Birds Convention Act (S.C. 1994, c. 22) (“MBCA”)***
 - Administered by Environment Canada
 - Offence:
 - Unauthorized deposit of a substances harmful to migratory birds, or permitting such deposit, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters/area (MBCA ss. 5.1(1) & 13(1)(b))
 - Parties liable:
 - Persons and vessels (MBCA s. 5.1)
 - Sanctions:
 - Fines (discussed below) and/or imprisonment up to 3 years.



Pollution-Related Offences: Ship Source Spills

- *Canada Environmental Protection Act, 1999*
- *Migratory Birds Convention Act*

Offender	Summary Conviction		Indictable	
	Min	Max	Min	Max
Individual	\$5,000	\$300,000	\$15,000	\$1,000,000
Small corporation/ Ship under 7,500 tonnes	\$25,000	\$2,000,000	\$75,000	\$4,000,000
Large corporation/ Ship over 7,500 tonnes	\$100,000	\$4,000,000	\$500,000	\$6,000,000

Pollution-Related Offences: Ship Source Spills

- ***Fisheries Act (R.S.C. 1985, c. F-14) (“FA”)***
 - Administered by Department of Fisheries and Oceans
 - Offences:
 - Throwing overboard prejudicial or deleterious substances in any water where fishing is carried out (FA, ss. 36(1) & 40(2))
 - Unauthorized deposit, or permitting such deposit, of deleterious substances of any type in water frequented by fish or any place where it may enter such water (FA, ss. 36(3) & 40(2))
 - Parties liable:
 - Persons and (in some cases) directors, officers and agents, employers, license holders
 - Sanctions:
 - Indictment
 - Summary conviction



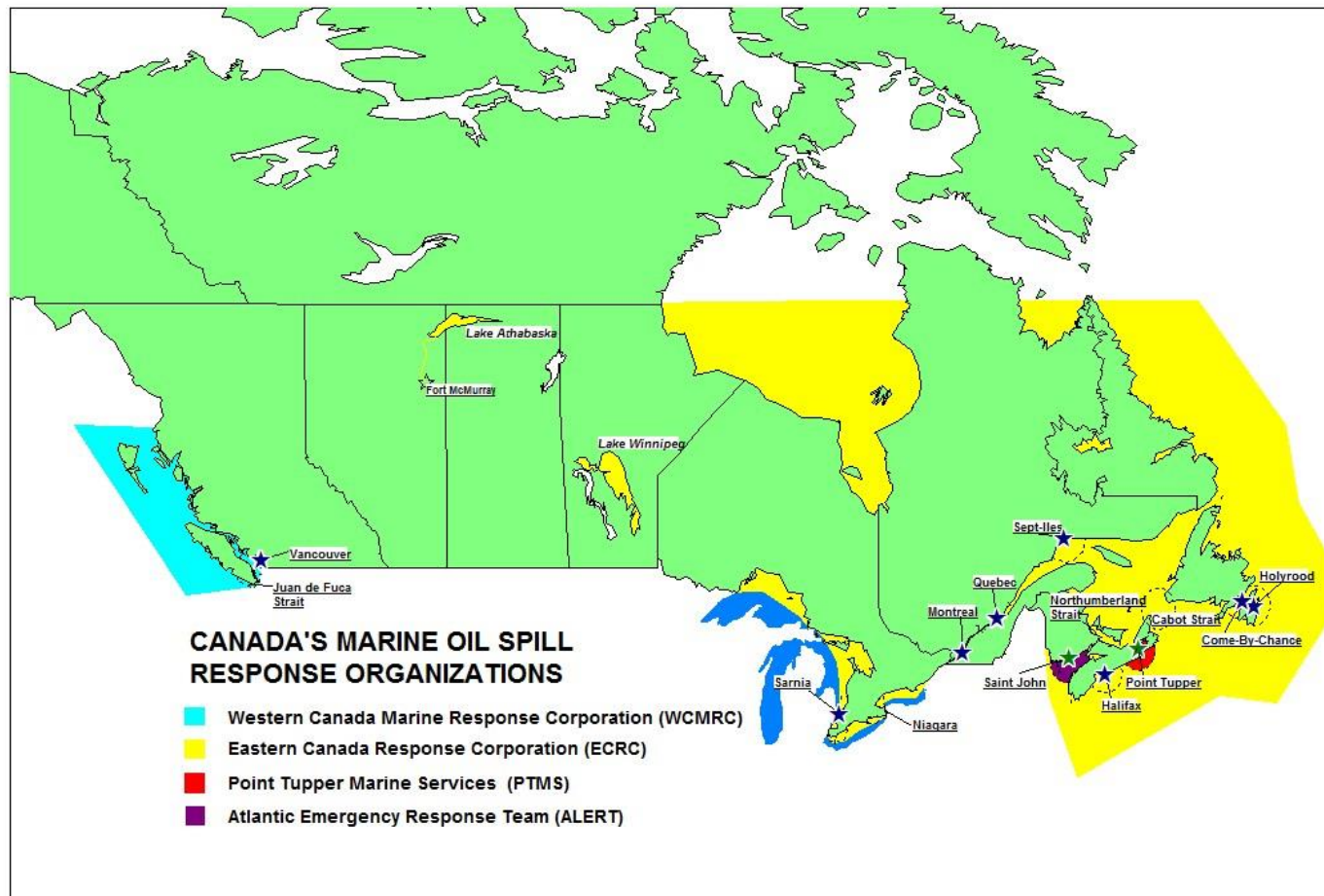
Canadian Law Governing Incident Response

• Spill Response Overview

- Shipowners and oil handling facilities must have agreements with **recognized response organizations** (CSA, 2001, ss. 167(1), 168(1))
- **International Convention on Oil Pollution Preparedness, Response and Cooperation**, 1990 (OPRC 1990) requires ships and oil handling facilities to have **response plans** (art. 3).
- Ships must implement shipboard **oil pollution emergency plans** (“SOPEPS”) (CSA, 2001, s. 188; Vessel Pollution and Dangerous Chemicals Regulations (SOR/2012-69, s. 27))
- Canadian Coast Guard (“CCG”) acts as “Federal Monitoring Officer”, monitoring remedial measures in marine pollution incidents in Canada where polluter responds (CSA, s. 180(1)(b))

Canadian Law Governing Incident Response

- Canada has 4 certified Response Organizations, with their respective geographic areas of responsibility (“GARs”):



© Transport Canada. "Area Map of Canada's Oil Spill Response Organizations. Reproduction of official work not in affiliation with or endorsed by Government of Canada"

Incident Response

Response Organization Enrollment

- **Western Canada Marine Response Corporation (WCMRC)**
- **Washington State Maritime Cooperative (WSMC)** has renewed its Reciprocal Arrangement Agreement with Western Canada Marine Response Corporation (WCMRC) that facilitates the need for continuous spill response coverage for vessels transiting the Strait of Juan de Fuca.
- While this blanket reciprocal coverage has been provided by WSMC to Canadian-bound vessels since 1998, WSMC has now advised that, as of 2014, in order to continue providing coverage to WCMRC covered vessels, an enrollment agreement must now be in place between WSMC and the vessel owner/operator.
- **New enrollment procedures are effective immediately.**
- Vessels that already have arrangements in place with WSMC or the other Washington State approved response organization, National Response Corporation (NRC), are already covered for the transit in US waters and do not need to re-apply.



Canadian Law Governing Incident Response

- ***Coasting Trade Act*, S.C. 1992, c. 31**

- Foreign ships or non-duty paid ships must be licensed to engage in the Canadian coasting trade (s. 3(1))
- Exception exists for marine pollution emergencies



Canadian Law Governing Incident Response

- **Responder Immunity under CSA 2001**

- **Formerly, only limited immunity for non-Canadian responders:**
- Section 181(1): “**A person** who is directed to take or refrain from taking measures under paragraph 180(1)(c) is not personally liable, either civilly or criminally, in respect of any act or omission in the course of complying with the direction or doing anything incidental to it, **unless it is shown that the person’s conduct was not reasonable in the circumstances**”
- **OLD** section 181(2): “**Response organizations and persons who have been designated in writing by the Minister [of Fisheries and Oceans]** as approved responders are not personally liable, either civilly or criminally, in respect of any act or omission occurring or arising during the course of a response operation unless it is shown that the act or omission was committed **with the intent to cause loss or damage, or recklessly and with the knowledge that loss or damage would probably result.**”

Canadian Law Governing Incident Response

- **Responder Immunity under CSA 2001**

- **NEW** s. 181(2): Response organizations, **their agents or mandataries**, and persons who have been designated in writing by the Minister as approved responders, are not personally liable, either civilly or criminally, in respect of any act or omission occurring or arising during the course of a response operation unless it is shown that the act or omission was committed with the intent to cause loss or damage, or recklessly and with the knowledge that loss or damage would probably result.

Canadian Law Governing Incident Response

- **Governmental Agencies**

- CCG acts as “**On-Scene Commander**”, taking remedial measures where polluter unknown or unable/unwilling to respond to marine pollution incidents in Canada
- Environment Canada has **Regional Environmental Emergency Teams**
- OPRC 1990 requires Canada to assist other signatory States in responding to marine pollution incidents and entitles Canada to call on such States for assistance with marine pollution incidents in Canada.
- CCG has its own “Marine Spills Contingency Plan – National Chapter”
- CCG and USCG have “Joint Marine Pollution Contingency Plan”

Canadian Law Governing Incident Response

Content of Response Plans:

- Employee training
- Oil spill exercise programs
- List response equipment
- Measures to be taken to protect and treat environmentally sensitive areas and support wildlife rehabilitation efforts



Recent Developments in Canadian Maritime Law

- **Tanker Safety Expert Panel:**



- ✓ **Phase 1** stakeholder input completed in 2013
- ✓ **Phase 1** Report released November 2013 – 45 recommendations
- ✓ **Phase 2** stakeholder input completed in the spring of 2014
- ✓ **Phase 2** Report expected to be released in the spring of 2015

Recent Developments in Canadian Maritime Law

• Improved Tanker Safety System and Spill Response:

1. All foreign tankers will be inspected on their first visit to Canada, and annually thereafter
2. Maritime traffic control measures will be improved; increase mandatory pilotage
3. Port of Kitimat will be designated a **public port** under the *Canada Marine Act*
4. Research will be conducted on non-conventional petroleum products
5. Expand the surveillance and monitoring of ships by air under the National Aerial Surveillance Program (**NASP**)
6. Establish an **Incident Command System**, an internationally accepted emergency management system used for coordination of emergency response. Will speed up CCG response to spills.
7. CCG will enhance Canada's current navigation system (eg. new weather buoys and navigation beacons)

Recent Developments in Canadian Maritime Law

- **Bill C-3 – *Safeguarding Canada's Seas and Skies Act***

- Omnibus transport bill that:

- Amends the preparedness and response provisions of the *Canada Shipping Act 2001*
- Implements the 2010 *Hazardous and Noxious Substances Convention*
- Received Royal Assent on December 9, 2014 and is now law.



Recent Developments in Canadian Maritime Law

- **Bill C-3 – *Safeguarding Canada's Seas and Skies Act***

- Strengthening requirements for pollution prevention and response at oil handling facilities
 - Proactive in preventing and responding to spills.
 - Oil handling facilities will be required to submit their emergency response plans to Transport Canada for vetting.
- Oversight and enforcement by Transport Canada
 - New offences will be introduced for breaches by oil handling facilities.
- Removing legal barriers to oil spill response
 - Current immunity for Canadian oil spill responders will be extended to foreign entities responding to spills from oil handling facilities.

Recent Developments in Canadian Maritime Law

- **Bill C-22 – *The Energy Safety and Security Act***

- Bill C-22 would amend Canada's civil liability regimes for the offshore oil and gas industry and nuclear energy industry.
- Adopts the “polluter-pay” compensation principle, and raises the limits of liability from \$30 million for Atlantic offshore areas and \$40 million for Arctic areas, to \$1 billion. This limit will apply without proof of fault or negligence.
- Applicants would be required to provide proof of financial resources sufficient to cover claims up to the limits.

Thank You!

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