

Marine Spill Response on the West Coast



August-19-15



Agenda

- **Canada's Spill Response Regime**
 - **Regime Review**
- **WCMRC: B.C's Spill Response Organization**
- **Coastal Mapping Project**
- **Pipeline Proposals**

Canada's Spill Response Regime



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Overview

1976

- Burrard Clean established

1989

- Exxon Valdez

1989

- Public Review Panel on *Tanker Safety and Marine Spills Response Capability*

1990

- *Protecting Our Waters* “Brander-Smith Report”

Overview (cont'd)

1993

- Canada Shipping Act amendments

1995

- WCMRC becomes certified

2013

- Tanker Safety Expert Panel

Roles & Responsibilities: Steady State

Transport Canada

- Lead regulatory agency; regime review
- Certification of Response Organizations (ROs)



Canadian Coast Guard

- Respond to minor spills
- Lead cross-border exercises (CANUSDIX, CANUSPAC)



Environment Canada/B.C. Ministry of Environment/D.F.O.

- Provide assistance with mapping and shoreline assessment



Response Organizations

- Develop response plans
- Conduct certification exercises



Roles & Responsibilities: Incident

Responsible Party

- Lead the response as ICS Incident Commander

Canadian Coast Guard

- Lead agency (Federal Monitoring Officer)
- Take command if Responsible Party is unable or unwilling

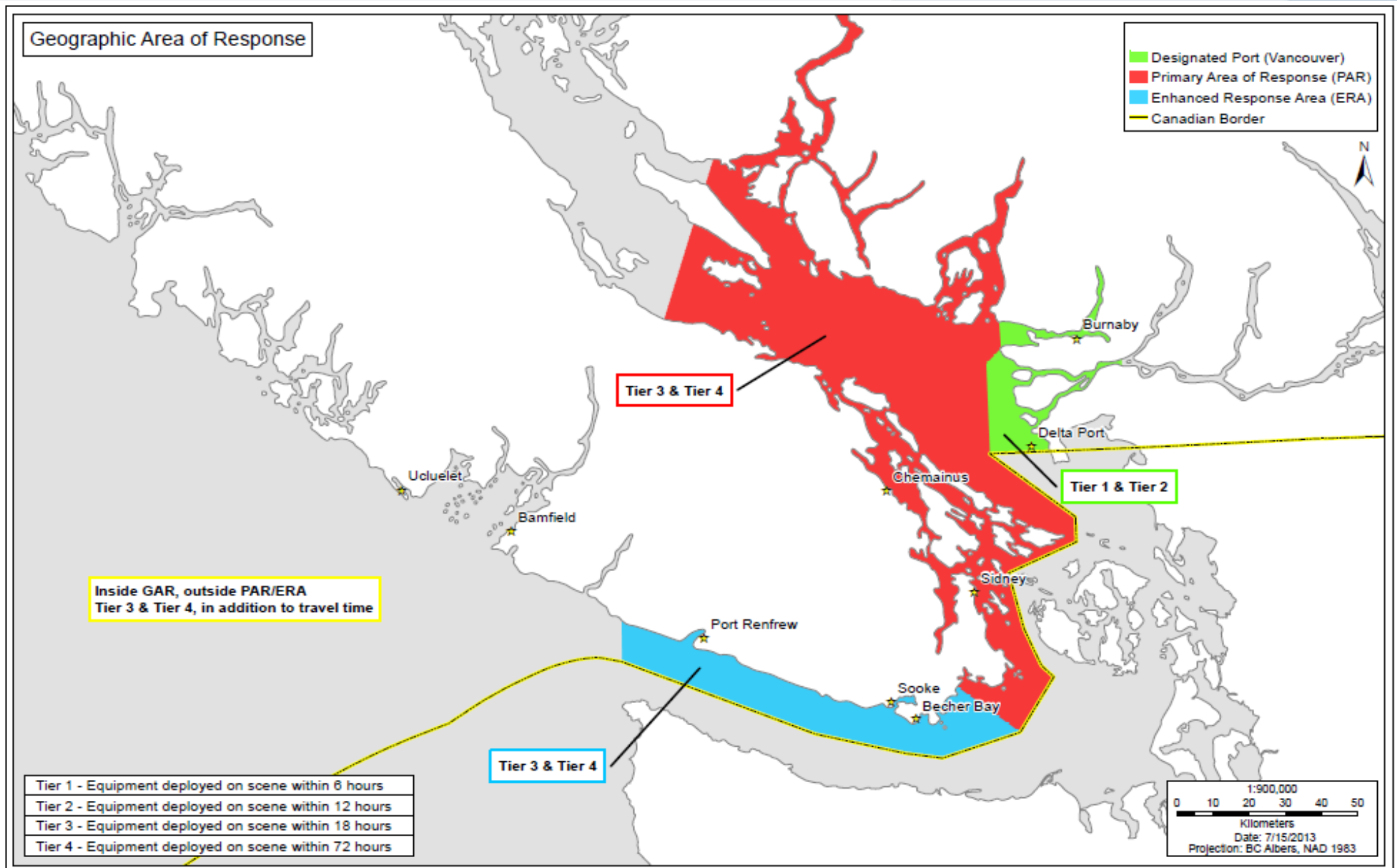
Environment Canada/B.C. Ministry of Environment/D.F.O.

- Provide environmental advice
- Assist in identifying environmental, cultural and economic priorities

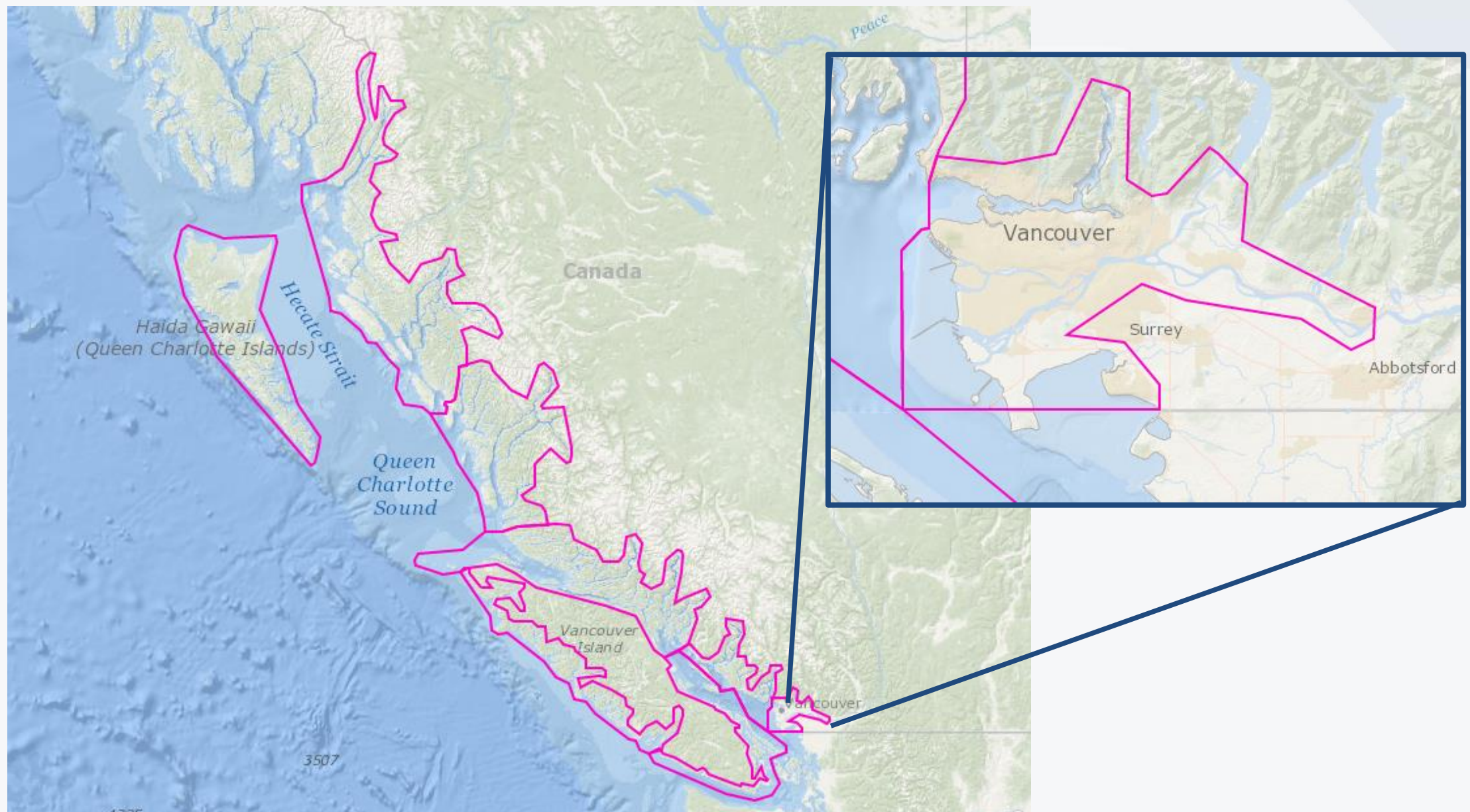
Response Organizations

- Execute the operational spill response
- Occupy key positions within the ICS

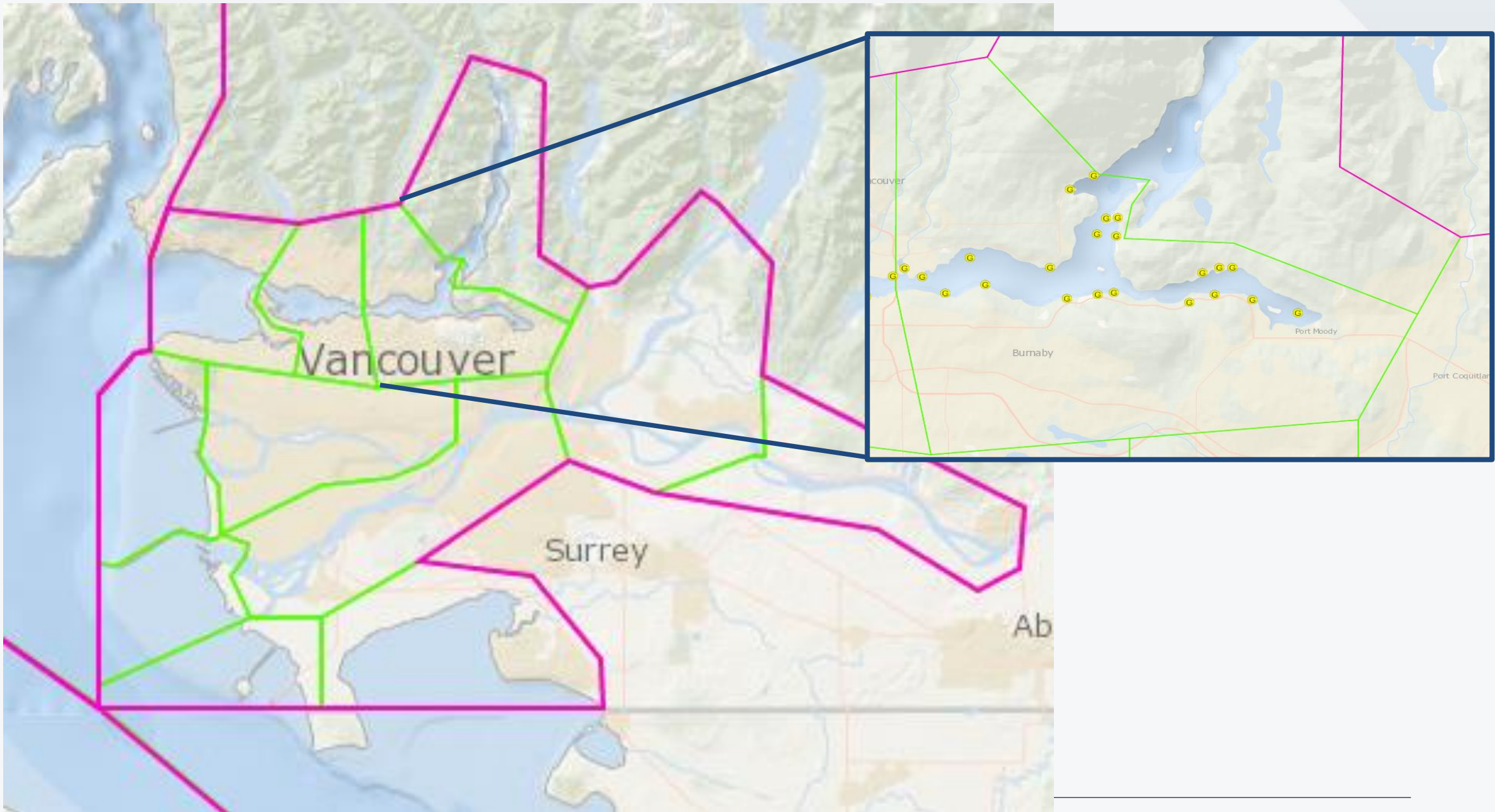




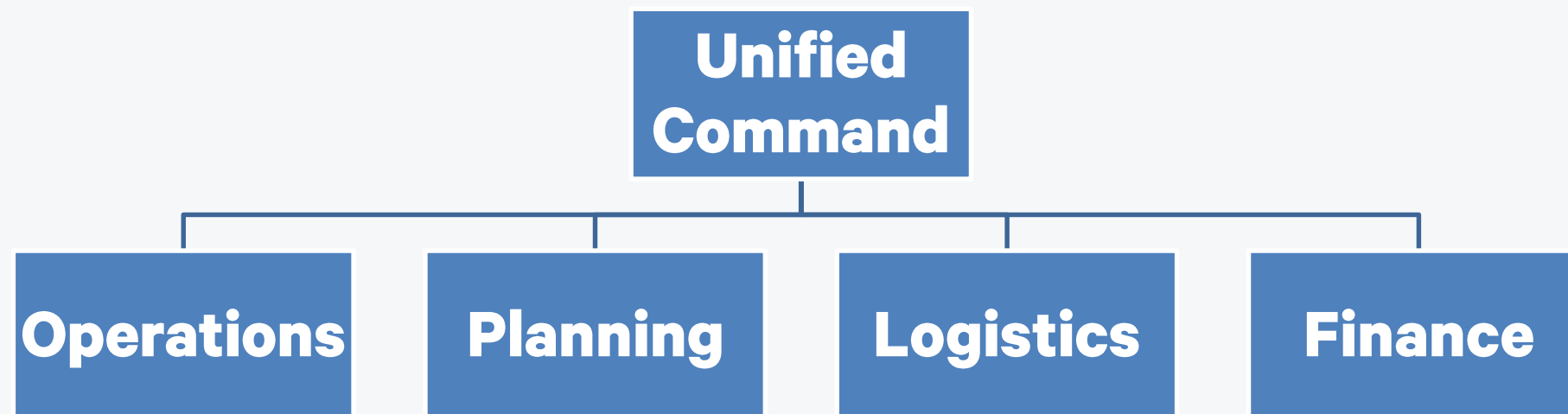
Area Response Plans (ARP)



Geographic Response Plans (GRP)

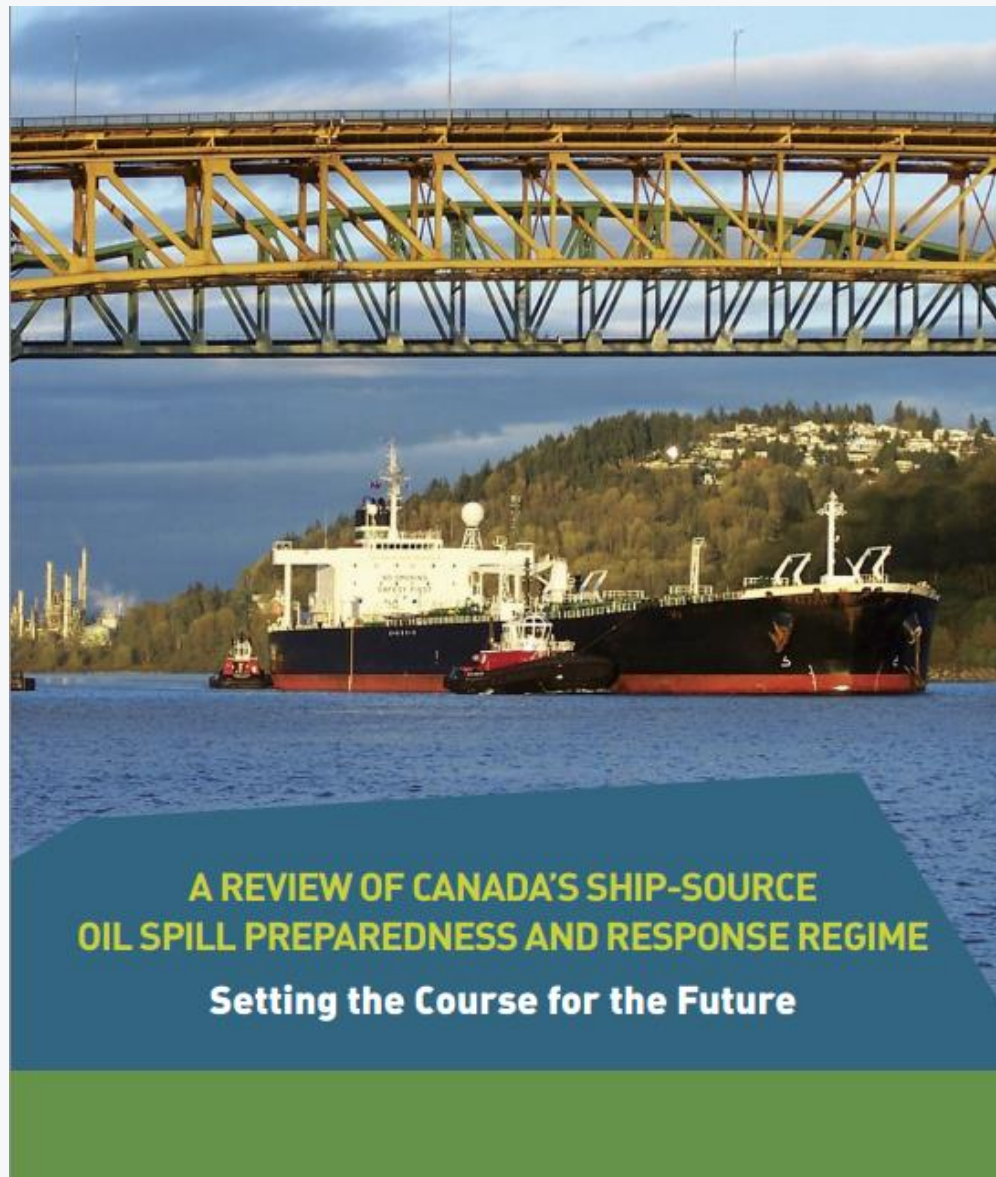


Incident Command System



- Unified Command includes: Responsible Party, First Nations, Provincial & Federal Government Agencies, Local Government

Regime Review



Transport
Canada

Tanker Safety
Expert Panel

Panel Recommendations

RECOMMENDATION 2:

The Government of Canada should implement a risk-based Area Response Planning model to prepare for ship-source oil spills.

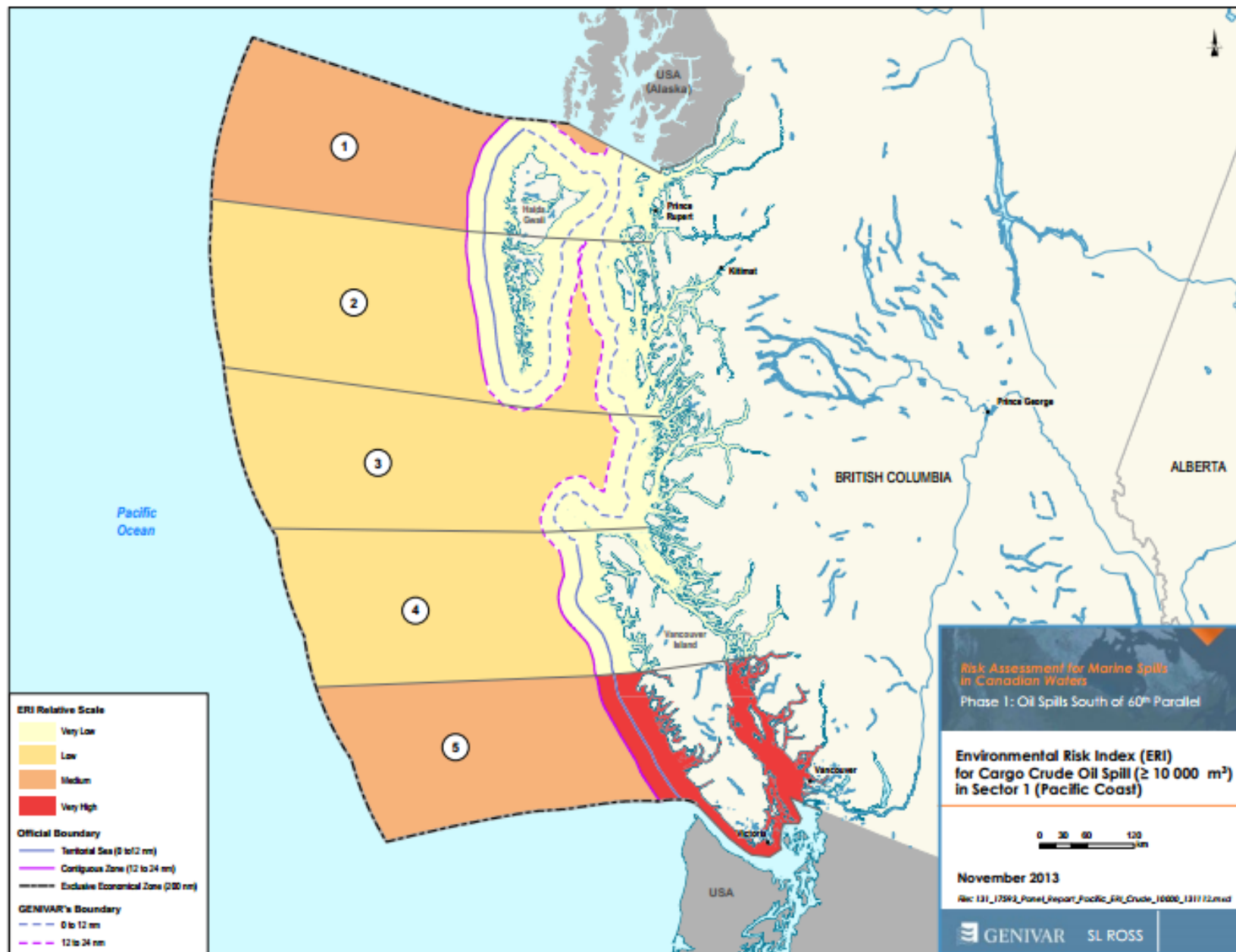
RECOMMENDATION 3:

Transport Canada should regularly review and update the national Risk Assessment for Marine Spills in Canadian Waters and make these results public.

RECOMMENDATION 4:

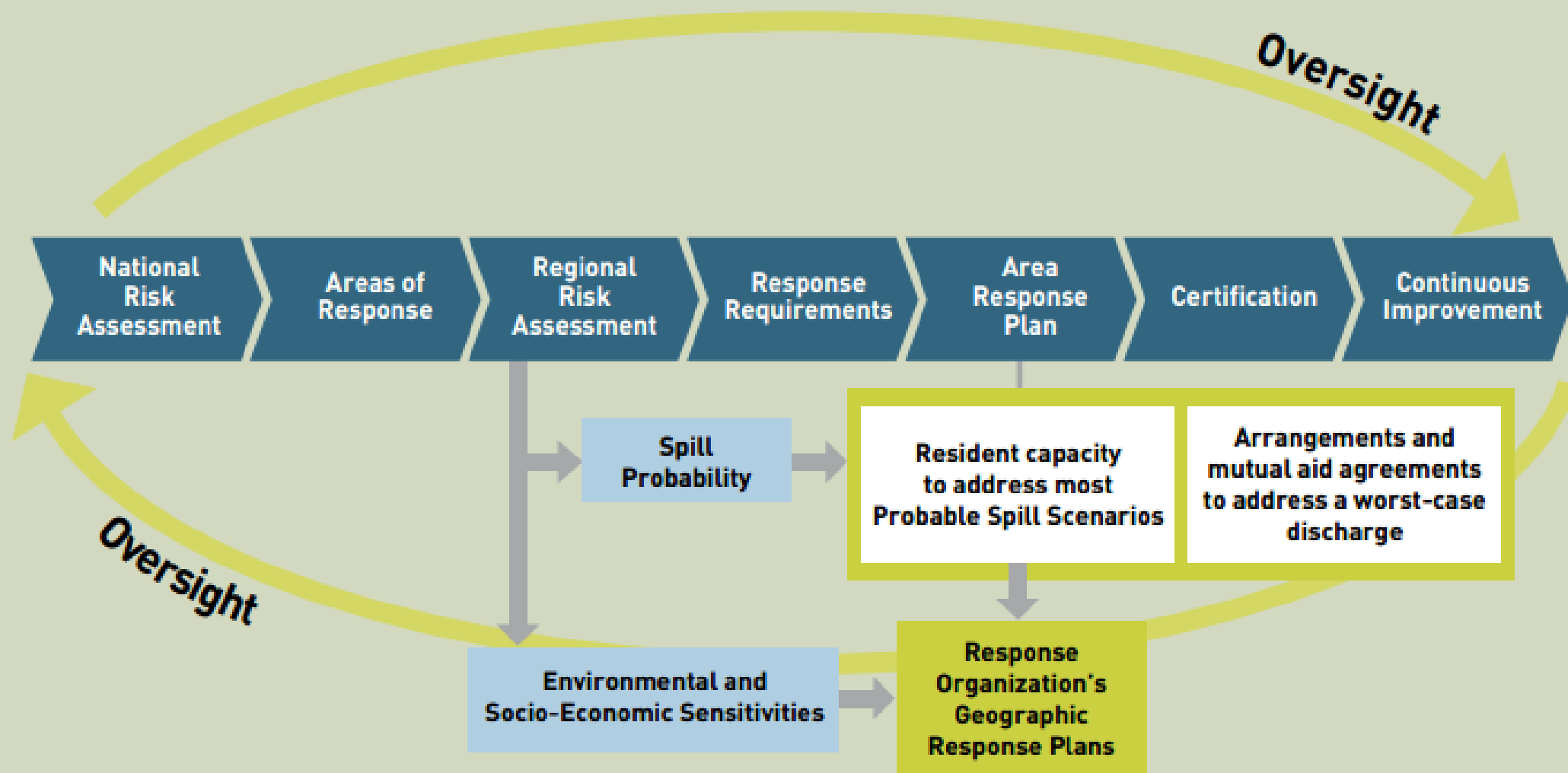
Transport Canada should designate new Areas of Response, based on the national Risk Assessment for Marine Spills in Canadian Waters.

Pilot Area: Southern B.C.



Risk-based Response Planning

Figure 5: Area Response Planning Model

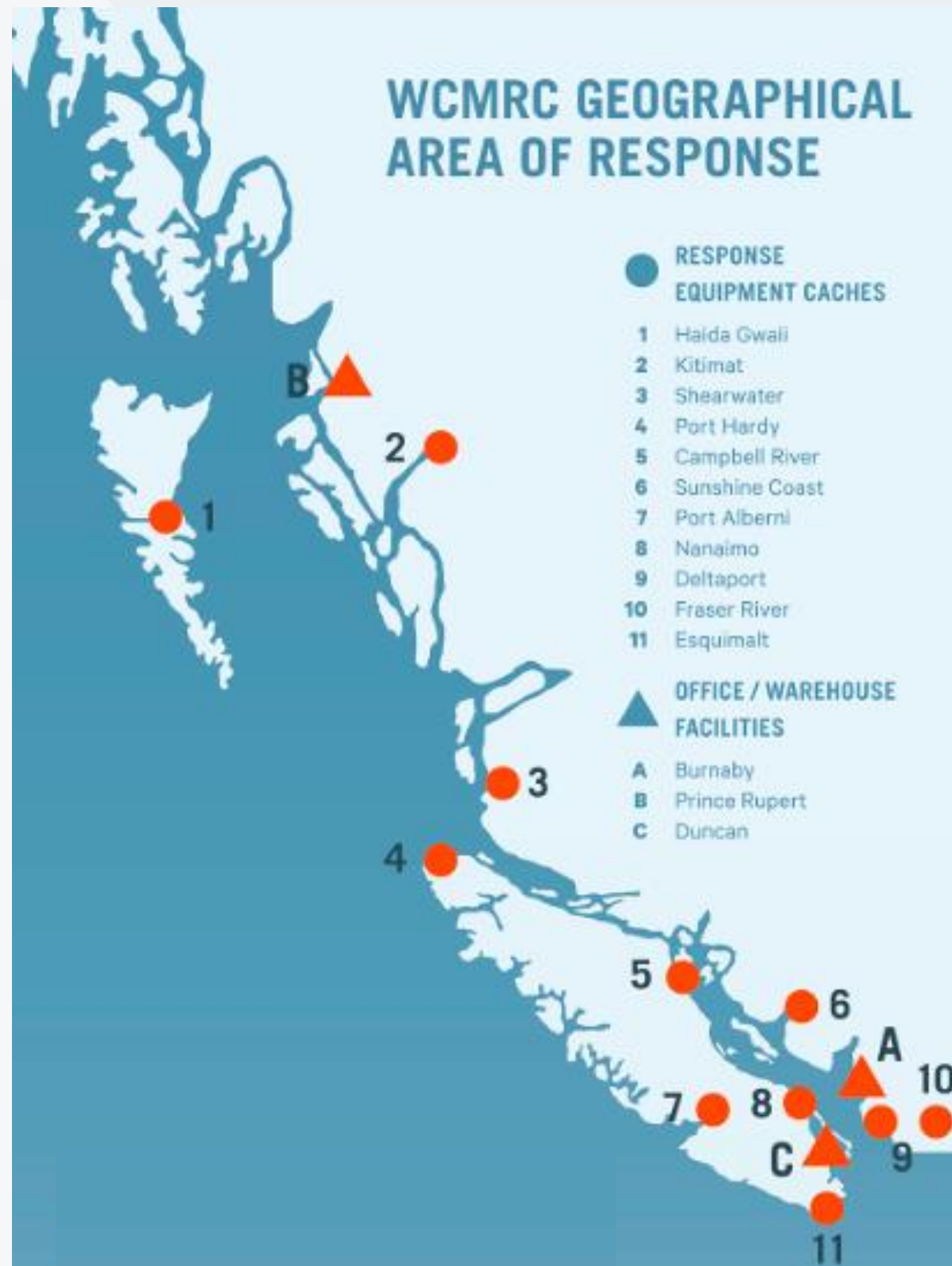


WCMRC: B.C.'s Spill Response Organization



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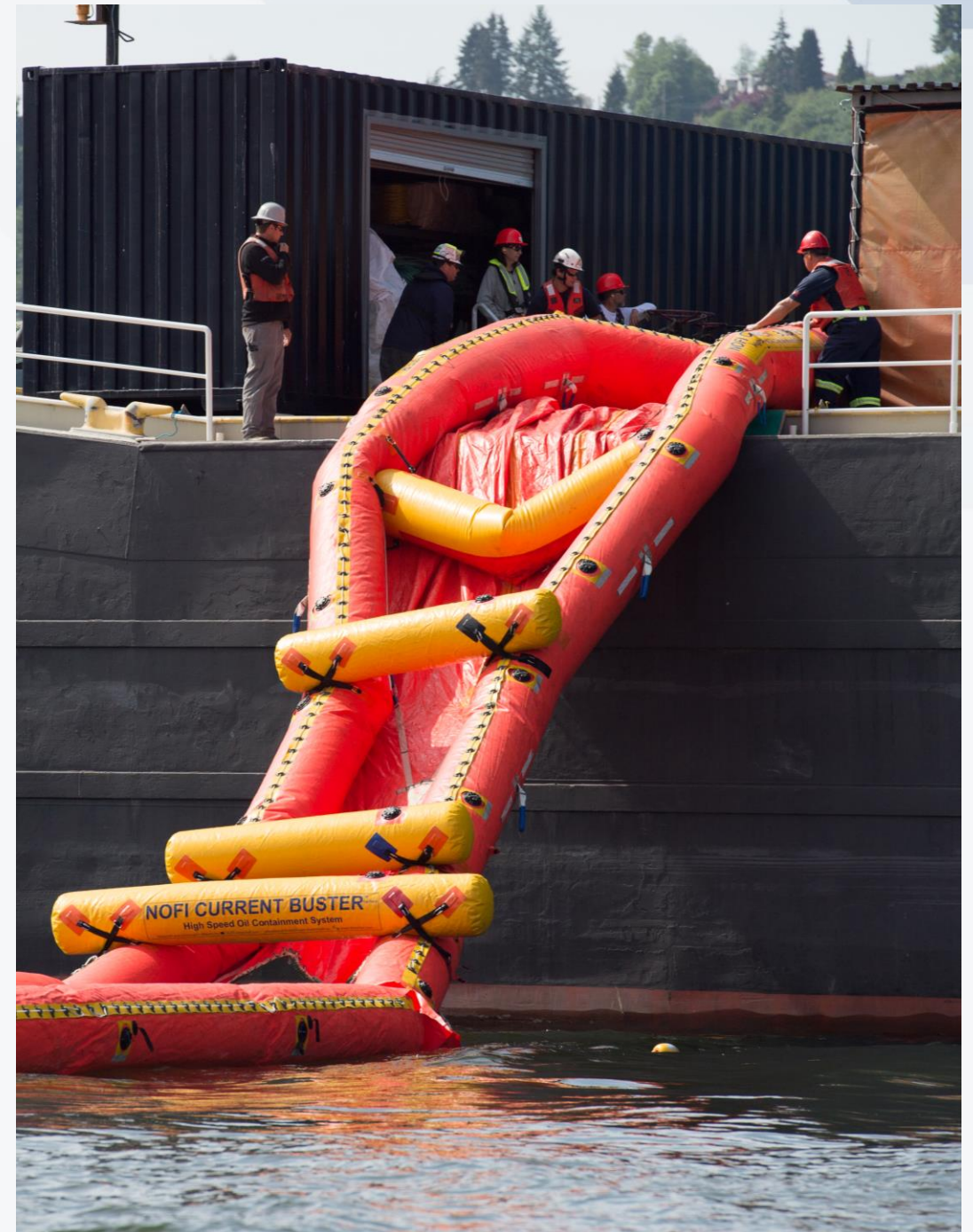
Funding

- +2,200 Members
 - Vessels
 - Oil Handling Facilities
- Subscribers
- 3rd Parties



WCMRC Response Equipment

- 31 vessels, including
 - 7 barges
- 3 mobile command centres
- 33,500 m of boom
- 80 portable skimmers
- 50+ response trailers
- Over 26,000 t of capacity
- 11 coastal caches + 3 bases



Vancouver Island Assets

- Victoria (4 vessels, boom, skimmers, storage)
- Duncan (3 vessels, boom, skimmers, storage)
- Ucluelet (boom)
- Hatch Point (skimmers, boom, storage)
- Cowichan Bay (boom)
- Nanaimo (1 vessel, skimmers, boom, storage)
- Port Alberni (1 vessel, skimmers, boom, storage)
- Port Hardy (skimmers, boom, storage)
- Campbell River (skimmers, boom, storage)

G.M. Penman



Hawk Owl: Aerostat Surveillance



NOFI Current Buster VI



RBS Triton 150: Skimming System



Spill Response Network

- 50 full + part-time staff
- Marine contractors
- Fishers Oil Spill Emergency Team (FOSET)
- Vessels of Opportunity (VOO)
- Spill response advisors
- Mutual aid partners



WCMRC Capacity

	Canada Shipping Act Requirements	WCMRC 2014
Boom (m)	15,000	33,500
Skimming (t/hr)	27	468
Shoreline clean-up (m/day)	500	1,500
Storage primary (t)	3,040	8,102
Sweep systems	2	4

Coastal Mapping Project



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The Project


- U.S. pioneered Environmental Sensitivity Index maps
- Identify coastal resources that are at risk
- Develop booming protection strategies
- Develop Geographic Response Strategies (GRS)
- Partner with First Nations and coastal communities



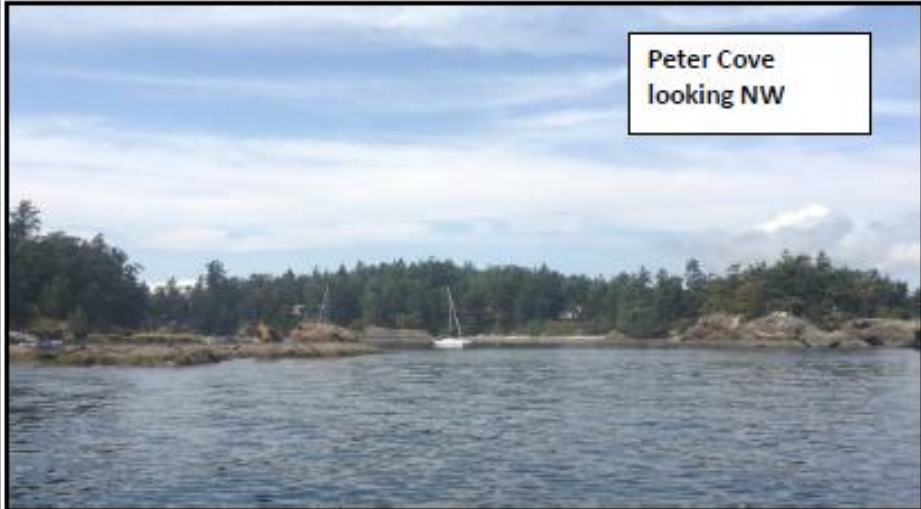
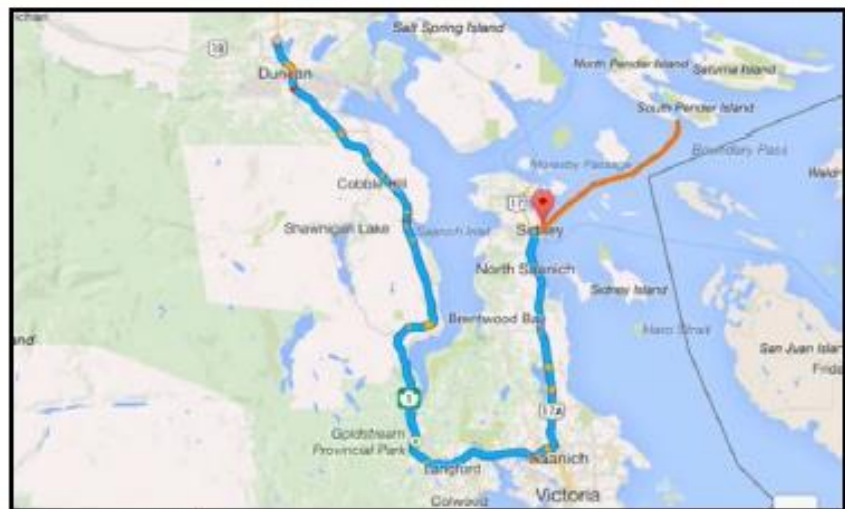
Protection Strategies

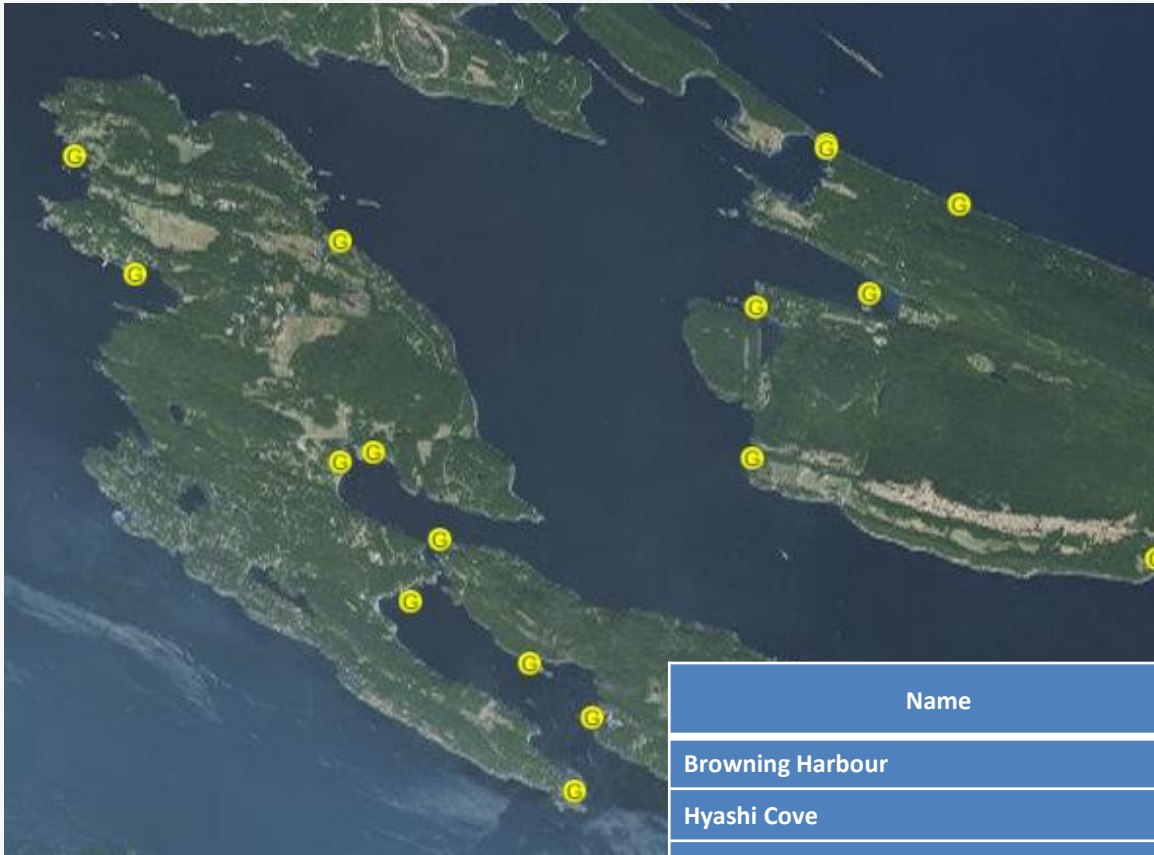


GRS: Sample Strategy

Peter Cove				GRS # 07-03-030							
Location	48° 44.31'N 123° 13.98'W		Seasonality	All Seasons							
Site Status	Cove/Bay										
Waterbody	Peter Cove										
Resources at Risk	First Nation Features, marine mammals										
Strategy Objective	Exclusion		Protect resources								
			Boom 1 - 1100 feet								
			Anchor	Lat	Long	Anchor	Lat	Long	Anchor	Lat	Long
			1	48° 44.19'	123° 13.87'						
			2	48° 44.36'	123° 13.86'						
			3	48° 44.27'	123° 13.82'						
			Boom		Boom		Boom				
Anchor	Lat	Long	Anchor	Lat	Long	Anchor	Lat	Long			
Recommended Equipment			Recommended Personnel								
Amount	Description		Number	Personnel							
1100 feet	General Purpose Boom		1	Supervisor							
100 feet	1/2" Polysteel		2	Labourers							
3	'Minimim' - Danforth Anchor kits and 2 shoreline ties		1	Vessel Operator							
1	Landing Craft		1	Vessel Operator							
1	Broadwater Craft										

GRS: Sample Strategy (cont'd)

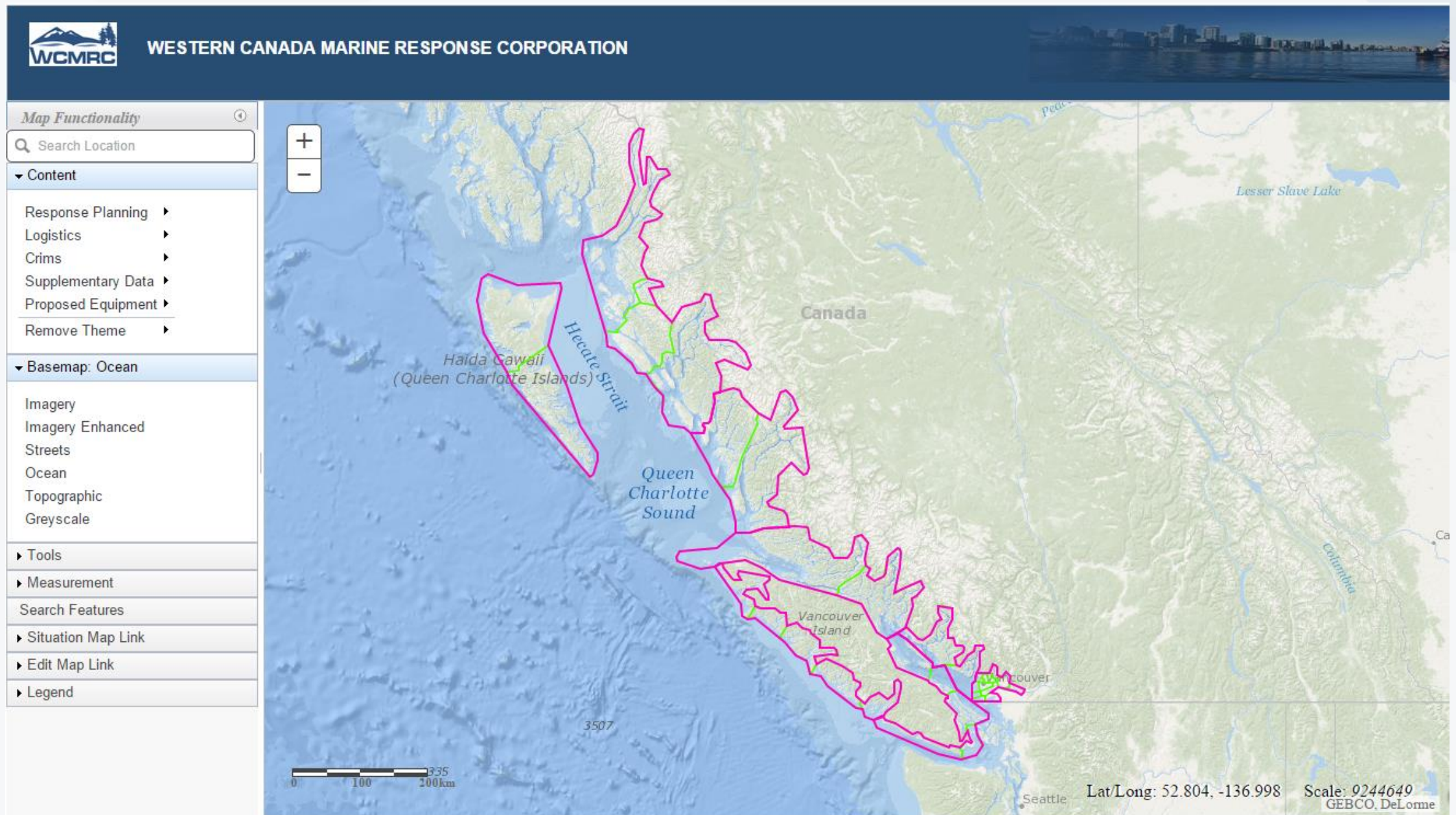
Peter Cove		GRS #	07-03-030
Site Access	Boat	Restrictions	No nearby staging area. Exposure to SE Winds
Implementation	Recommend starting with shoreline anchor. String to next shoreline anchor and then establish deepwater anchors.		
Staging Area	Potential Staging in Fulford Harbour. Primary staging in Sydney Harbour.		
Safety Notes	Usual Slips, trips and falls. Exposure to SE winds		
Field Notes	May not be practicable due to wind and wave action. Not tested due to length of boom required.		
 <p>Peter Cove looking NW</p>			
Site Contact Information	<div>Driving Directions</div> <ol style="list-style-type: none"> 1. Take the BC-17 N ramp to Sidney/Airport/Ferries 1.1 km 2. Merge onto Patricia Bay Hwy/BC-17 20.1 km 3. Turn right onto Beacon Ave 900 m 4. At the roundabout, take the 3rd exit onto Seaport Pl 5. Boat from Sydney harbour to Peter Cove 		
Nearest Address			
No nearby addresses			



Pender Island

Name	Area Plan	GRP	GRS Code	Sensitivity
Browning Harbour	7	3	7-3-003	Marina
Hyashi Cove	7	3	7-3-004	Marina
Bedwell Harbour	7	3	7-3-005	Marina, kelp beds, First Nations features, aquatic mammals
Grimmer Bay	7	3	7-3-009	Marina
Port Browning	7	3	7-3-011	Public Dock
Hope Bay	7	3	7-3-013	Marina and fish bearing stream
Medicine Bay	7	3	7-3-020	Aquatic mammals, fish habitats, shellfish parks
Bedwell Harbour Bird Sanctuary	7	3	7-3-021	Bird sanctuary, beach
Mortimer Spit	7	3	7-3-025	Cultural sites
Peter Cove	7	3	7-3-030	First Nations Features
Camp Bay	7	3	7-3-032	First Nations Features
Drummond Bay	7	3	7-3-033	First Nations Features, mussel beds, kelp

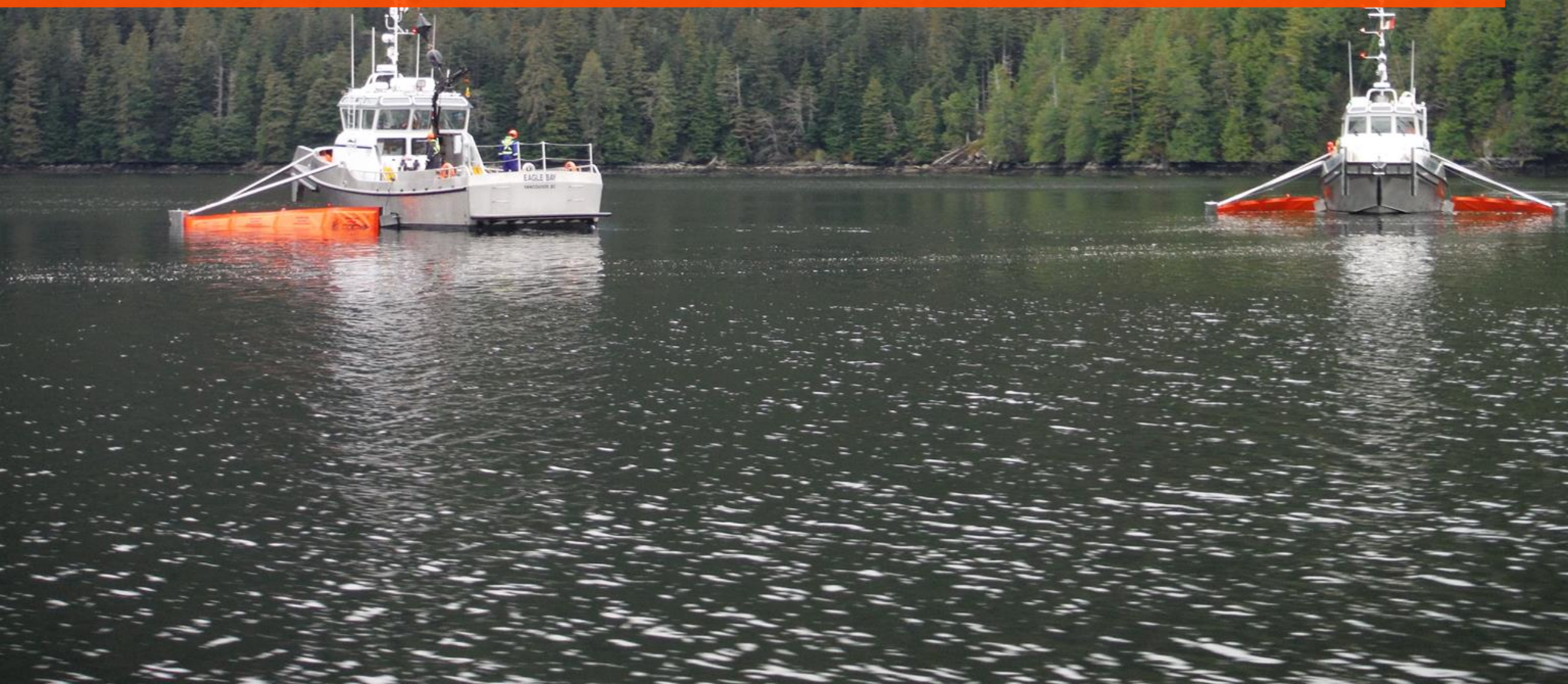
Geographic Response Planning Tool



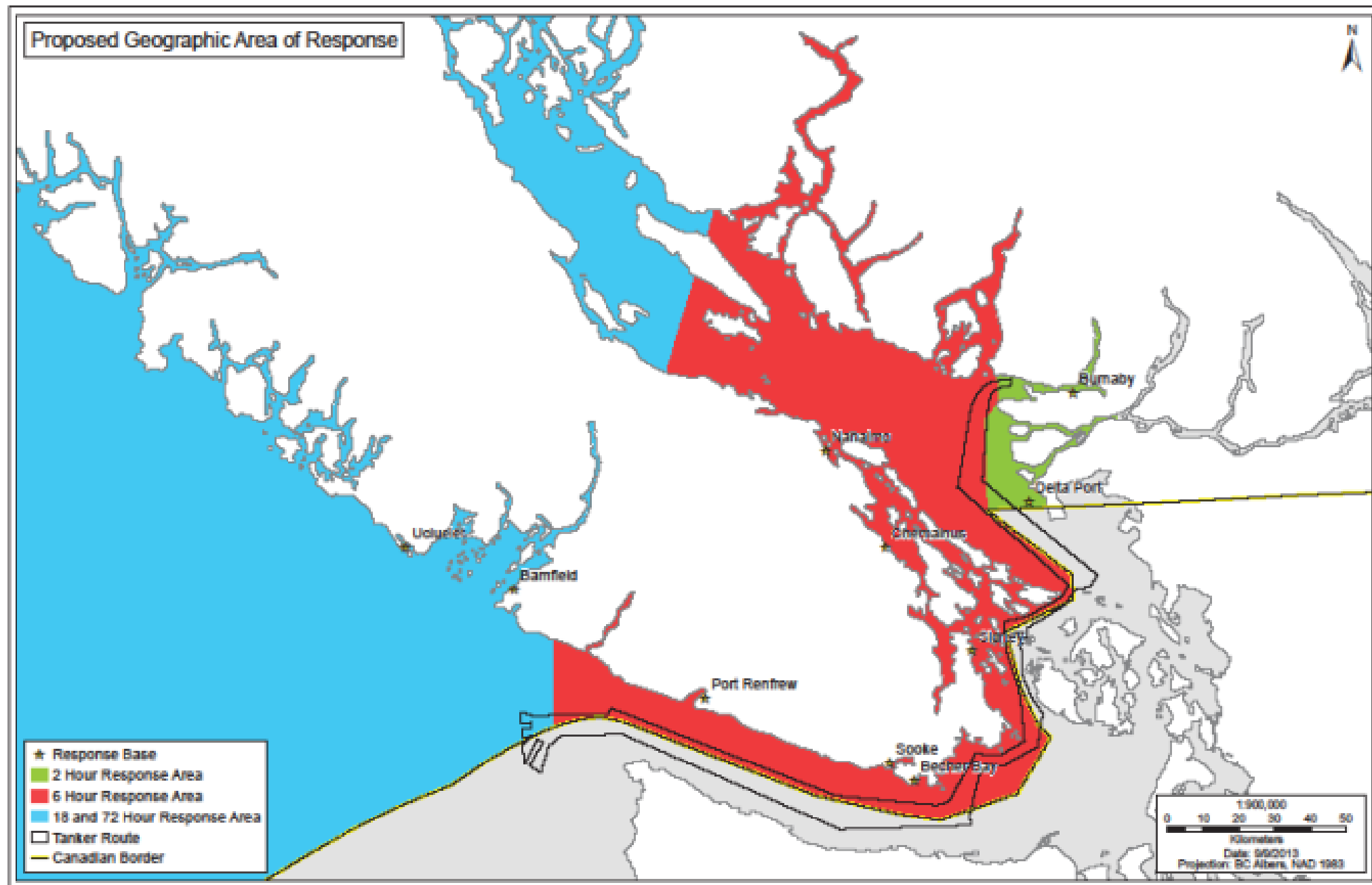
Pipeline Projects



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Trans Mountain Enhancements



Trans Mountain Response Bases

- Vancouver Harbour (with 24 hr. crewed boom boat)
- Steveston Area (with 24 hr. crewed boom boat)
- Nanaimo
- Saanich Peninsula (with 24 hr. crewed boom boat)
- Sooke/Beecher Bay area
- Ucluelet Area

Response Base Design

- Response base design location dependent
- Small warehouse / Office / Staff (10 – 25)
- Moorage for the following:
 - Rapid response skimming vessel
 - Rapid response boom vessel
 - Multi-functional landing craft (3 sites)
 - Supply vessel (1 site)
 - Mini aluminum barges – minimum 2 per site (40 t)
 - Work boats
 - * 5,000 t barge – TBD depending on tug availability and final decision on barge locations

WCMRC Potential Growth (estimates only)

	Personnel	Vessels	Barges	Mini Barges	Bases
Current (Q2 2015)	50	31	3	5	3
Business as Usual Growth (End of 2015)	15	5	1 Refit	2	----
Trans Mountain	90-100	26	3	10	4 plus enhancements to 2 bases
Northern Gateway	90 – 100 (if shifts x 2)	25	4	25	3
Total:	245 - 365	87	10	42	10

Thank you!