Emerging Energy Transportation Risks

Department of Ecology
Spill Prevention, Preparedness, and Response Program

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Spills Program - Prevention Section

- Vessel Inspections
- Oil Transfer Inspections
- Pre-boom Requirement

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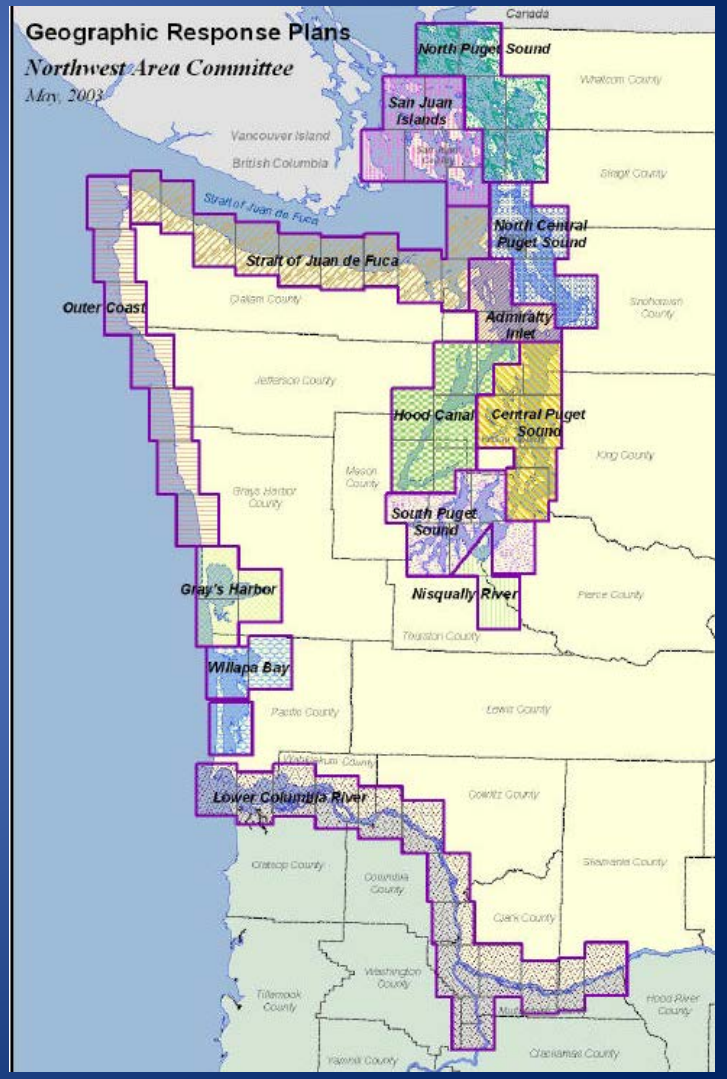
Spills Program - Preparedness Section

- Contingency Plan Approval
- Industry Drill Program
- Response Contractor Approval
- NW Area Contingency Plan
- Geographic Response Plans



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Spills Program - Response Section

- Oil, hazmat and drug lab cleanup
- Investigation and Enforcement
- Natural Resources Damage Assessment and Restoration
- Training

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Northwest Area Committee

Mission

- Protect public health and safety and the environment.
- Ensure coordinated, efficient, and effective support of the federal, state, tribal, local, and international responses to significant oil and hazardous substance.
- Area Plan Task Forces
  - Emerging Risks (2013)
    Final Report:
    http://rrt10nwac.com/Files/FactSheets/131217071637.pdf
  - Heavy Type V Oils (sinking oils)
  - Crude by Rail

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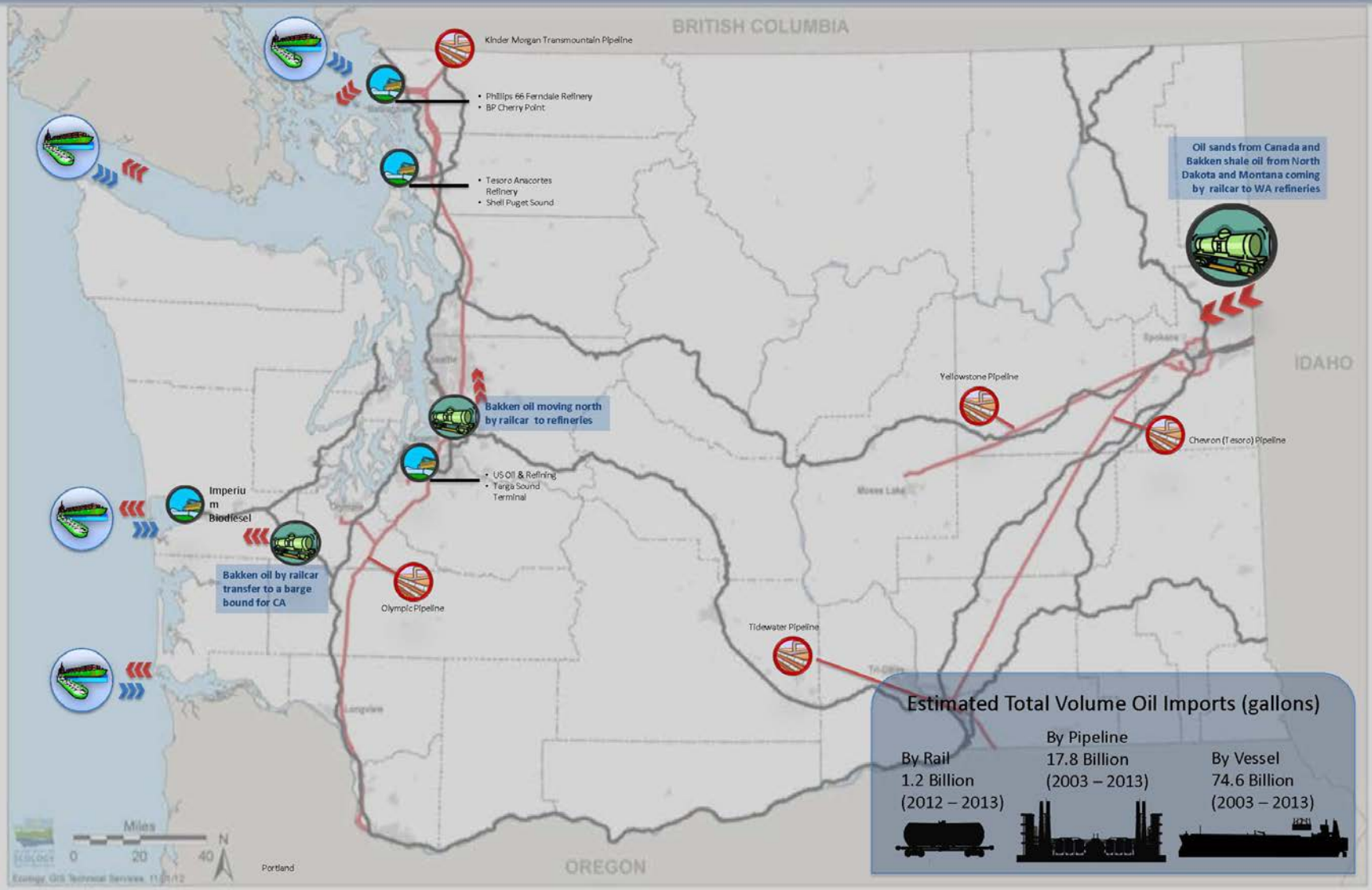

Data Assumptions

- Shipping 2008-2013: Aggregated data from the Advanced Notice of Transfer (ANT) system
- Shipping 2003-2007: Data reported to WSPA by industry (2004 is an estimate based on 2003 and 2005 data because reporting to WSPA is done every other year)
- Pipeline 2003 – 2013: Aggregated data reported by industry to the Washington State Department of Commerce (Data is from the Transmountain Pipeline)
- Rail 2012-2013: Estimate based on a number of factors including
  - Data on vessel transfers from ANT system
  - Total estimated throughput for Washington State refineries
  - Estimated pipeline throughput for each refinery
  - Predicted volumes transported by rail as reported by refineries
  - Estimated increases in total crude transported through Washington

Estimated Annual Oil Imports (barrels)

* 1 barrel = 42 gallons

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Vessel	185,785,000	174,216,856	180,675,000	178,156,500	170,820,000	164,501,163	165,234,154	132,649,298	147,038,612	140,975,573	136,857,556
Pipeline	18,460,391	30,783,144	25,998,188	31,141,392	38,900,433	42,342,972	38,075,318	47,925,823	51,830,000	49,417,963	49,170,819
Rail	0	0	0	0	0	0	0	0	0	12,123,256	16,971,625

Dept of Ecology; updated 2.13.14

Overview of Refineries, Facilities, and Proposed Facilities for Crude Oil by Rail – June 2014

CRUDE BY RAIL (CBR) – IN-OPERATION FACILITIES AND PROPOSALS – STATUS AS OF 6/25/14

CBR Owner or Proponent	Location	Facility type, type of system, # of offload stations, throughput, new storage if any)	Status	Trains Offloaded at Facility/Train Trips In and Out per day
BP	Cherry Point	Refinery, Loop, 52 offload stations, ~146,000 bpd, no new storage	Receiving oil by rail as of 12/26/13. Whatcom Co. issued MDNS for rail expansion.	1/2 (in-operation)
Imperium	Grays Harbor	Terminal, ladder, Number of offload stations not identified in SEPA checklist, ~75,000 , up to 9 new tanks.	Existing biodiesel facility proposed to add CBR capability and additional liquid storage. Summary judgment remanding MDNS back to Ecology and City of Hoquiam by the SHB 11/12/13.	1/2
NuStar	Vancouver	Terminal, single track, 4 existing offload stations, possible expansion to 12 stations, ~41,000 bpd, convert existing tank for crude storage.	Proposal to convert 120,000 bbl methanol tank to crude oil tank and add rail offload capability. Ecology submitted comments on environmental checklist to SWCAA 2/6/14.	.3/.6
Phillips66	Ferndale	Refinery, ladder, 54 offload stations, ~75,000 bpd, no new storage	In construction with completion anticipated 4th qtr 2014. Whatcom Co. issued MDNS 4/29/13 for rail expansion.	1/2
Shell	Anacortes	Refinery, Ladder, , ~75,000 bpd, new storage unknown.	Expansion proposed. SEPA process underway.	1/2
Targa Sound	Tacoma	Terminal. Ladder; 12 existing offload stations, 36 planned, ~75,000 bpd, 2 new tanks, 2 existing tanks modified.	DNS issued 12/2013 for rail expansion by City of Tacoma. Still completing permitting.	1/2
Tesoro	Anacortes	Refinery, Ladder, 100 offload stations, ~75,000 bpd, no new tanks.	Receiving Bakken oil since 9/2012. Skagit Co. issued MDNS 10/2011 for rail.	1/2 (in-operation)
Tesoro-Savage	Vancouver	Terminal, loop, 90 offload stations, ~292,000 bpd, 6 new tanks.	Proposed new site. EFSEC is SEPA lead. In EIS process	4/8
US Development	Grays Harbor	Terminal, Ladder, No information on system capabilities	Proposal still in discussion phase.	1/2
US Oil	Tacoma	Refinery, ladder, 64 existing stations, adding 48 additional stations, ~48,000 bpd, no new storage.	Receiving oil by rail at 60 stations as of 4/13. Permitting underway for project to increase the size of the rail facility. Construction expected in late 2014.	0.5/1 (in-operation)
Westway	Grays Harbor	Terminal. Ladder; 18 existing offload stations, planned increase to 76 stations, ~75,000 bpd, 4 new tanks.	Existing methanol terminal proposed to add CBR capability. Summary judgment remanding MDNS back to Ecology and City of Hoquiam by the SHB 11/12/13	0.6/1.2
TOTAL	**State**			12.4/24.8

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Oil by Rail Incidents – Bakken Crude

June 30, 1992 - Superior, WI

July 6, 2013 - Lac-Mégantic, Quebec

October 19, 2013 - Gainford, Alberta

November8, 2013 - Aliceville, AL

December 30, 2013 - Casselton, ND

January 7, 2014 - Plaster Rock, New Brunswick

January 20, 2014 - Philadelphia, PA

April 30, 2014 - Lynchburg, VA

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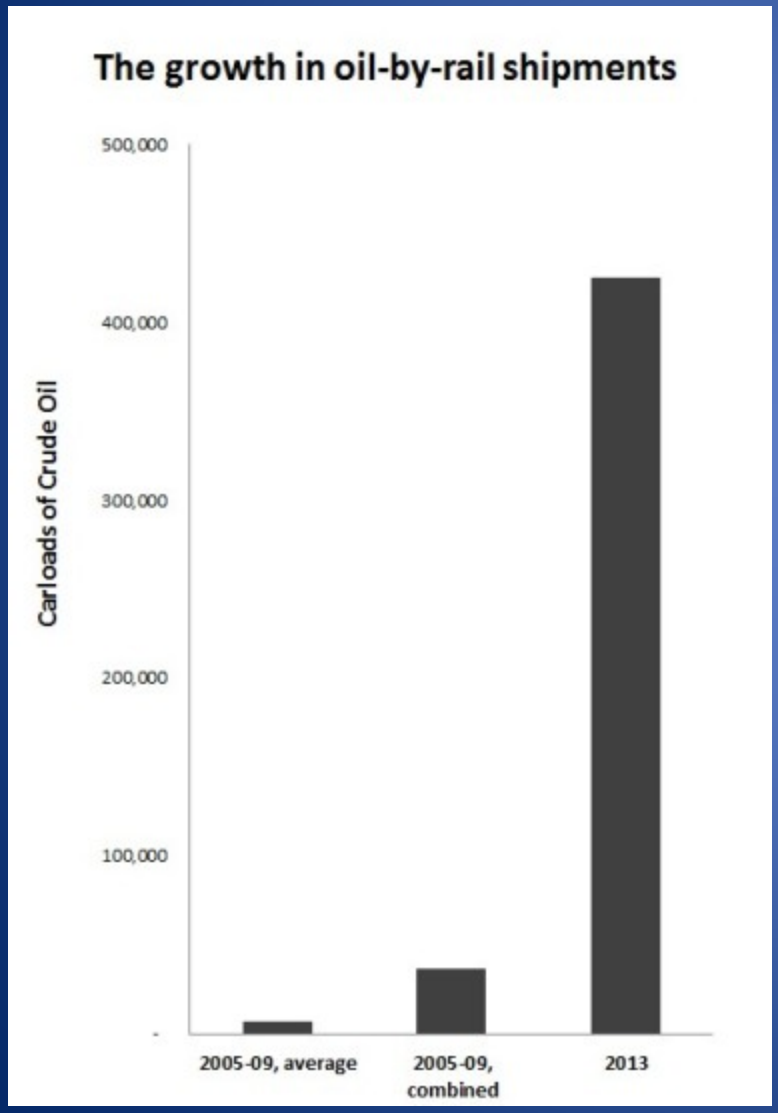

More crude oil was spilled in U.S. rail incidents in 2013 (1.15 million gallons) than was spilled in the previous four decades (0.8 M gallons).

This does not include the 1.5 million gallons spilled in Lac Megantic, Canada (July 2013) where 47 people died.

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Federal Jurisdiction
Oil by Rail

Federal Railroad Administration

- National railroad safety rules.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

- Issues rules and regulations governing the safe transportation of hazardous materials.

Surface Transportation Board

- Railroad rates, mergers, sales, construction and abandonment.

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Ecology Jurisdiction
Oil by Rail

- Lead on spill prevention, preparedness, and response plans for vessels, facilities and pipelines .
- Regulates oil transfer facilities, but not rail transportation.
- Oversees regulation for construction and operation of oil refineries, storage and handling facilities (air and water permits, GHGs, waste handling, cleanup of contamination, CZM consistency).
- SEPA lead for new proposals to construct facilities that store over 1 million gallons of liquid fuel that do not fall under EFSEC jurisdiction.
- Lead state agency for spill response.

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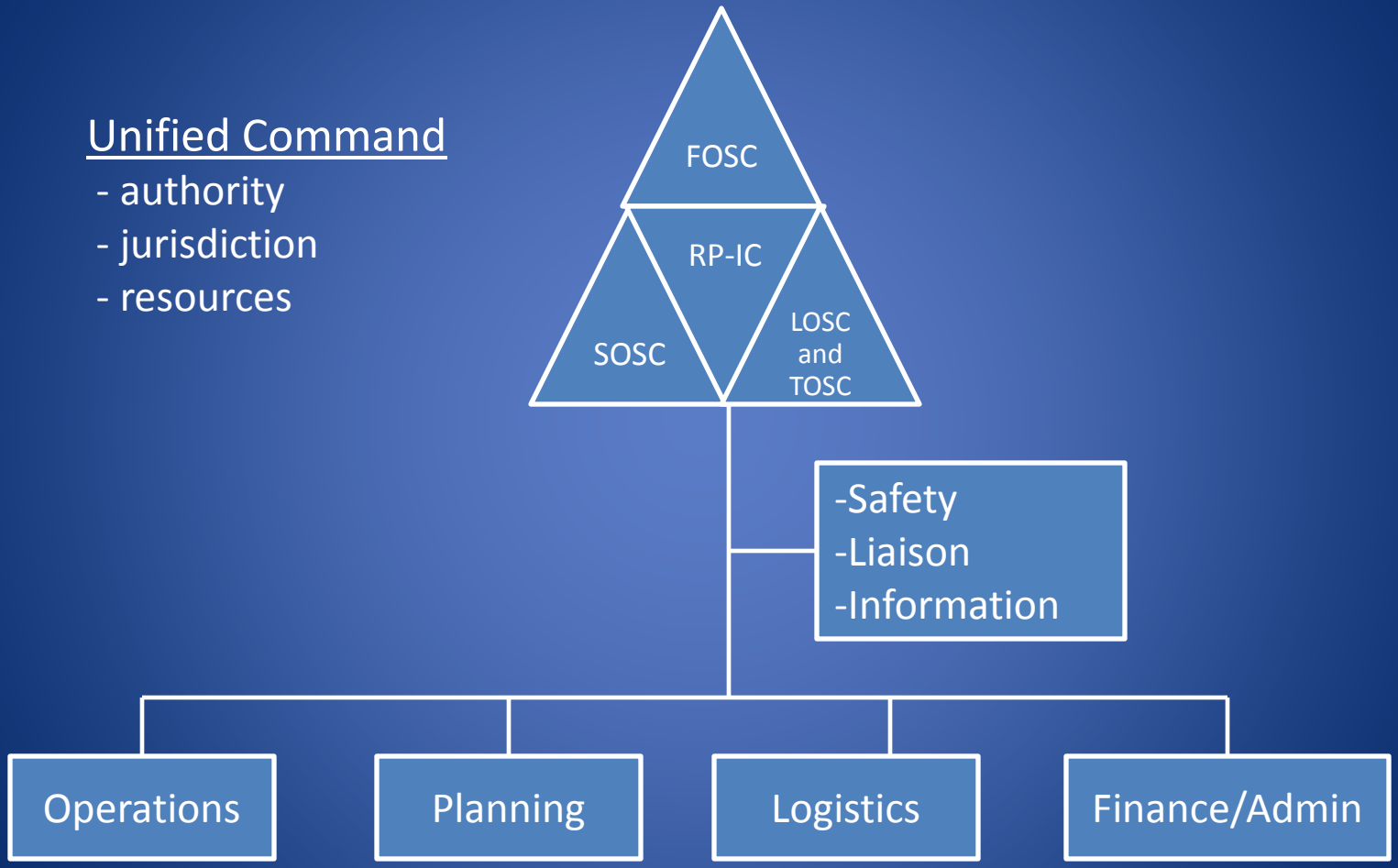
Rail Incident Management

Unified Command
- authority
- jurisdiction
- resources



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Identified Gaps – Ecology

- Lack of prevention and preparedness planning authority for rail
- Level of spill preparedness significantly different than maritime, pipeline and oil facilities in WA
- Oil property characteristics, community and responder safety and current response cleanup technology
- Potential decline in revenue to support Spills Program work
  - Crude coming into our refineries by ship is taxed
  - Crude coming by rail and pipeline is not taxed

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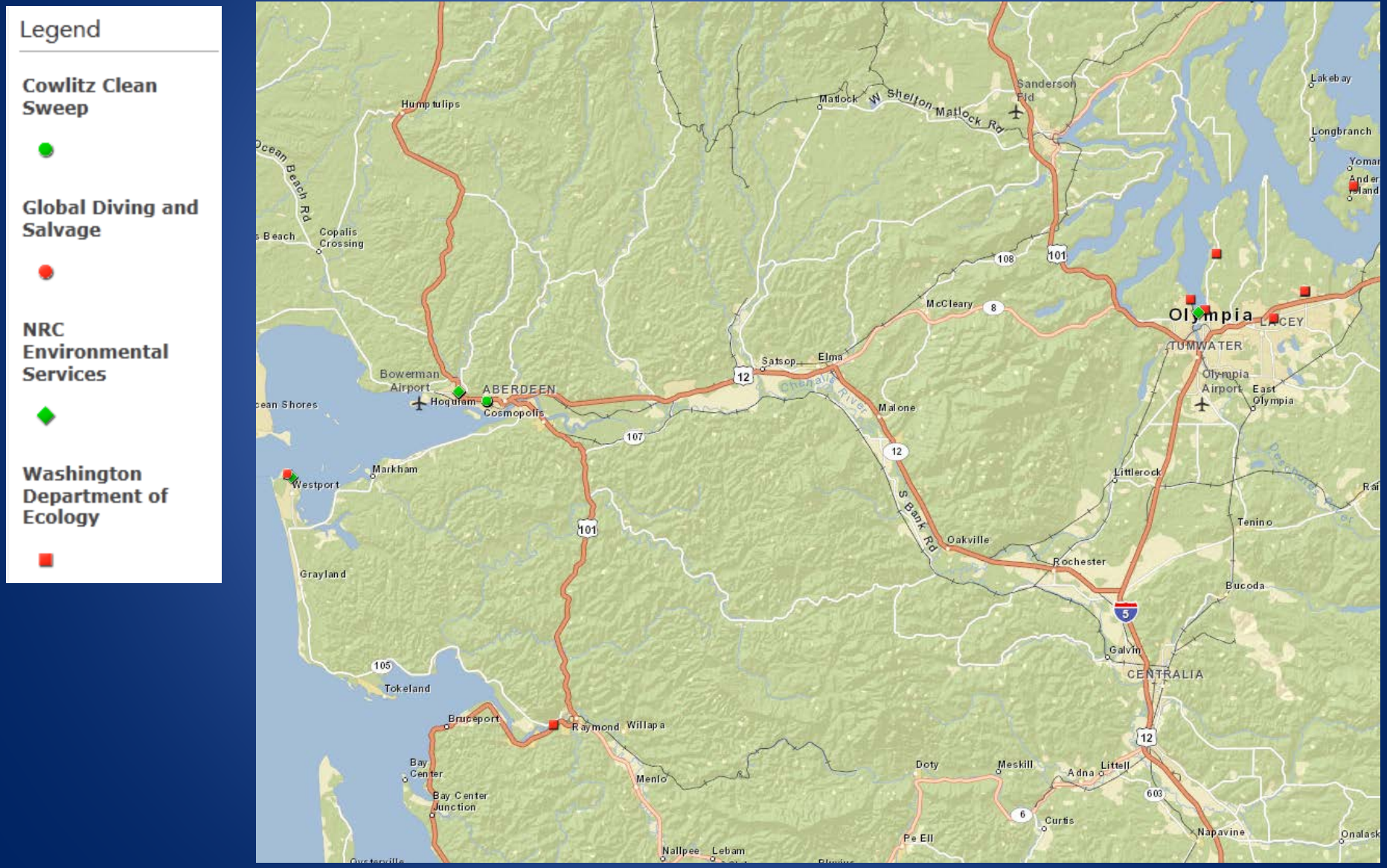
Specialized Response Equipment



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2014 Legislative Outcomes

- 5 Project Positions (1-year only)
  - 2 positions to address risk mitigation and management both on the marine and inland waters
  - 3 positions for developing geographic response plans along inland waters**
- Marine Rail Oil Transportation Study

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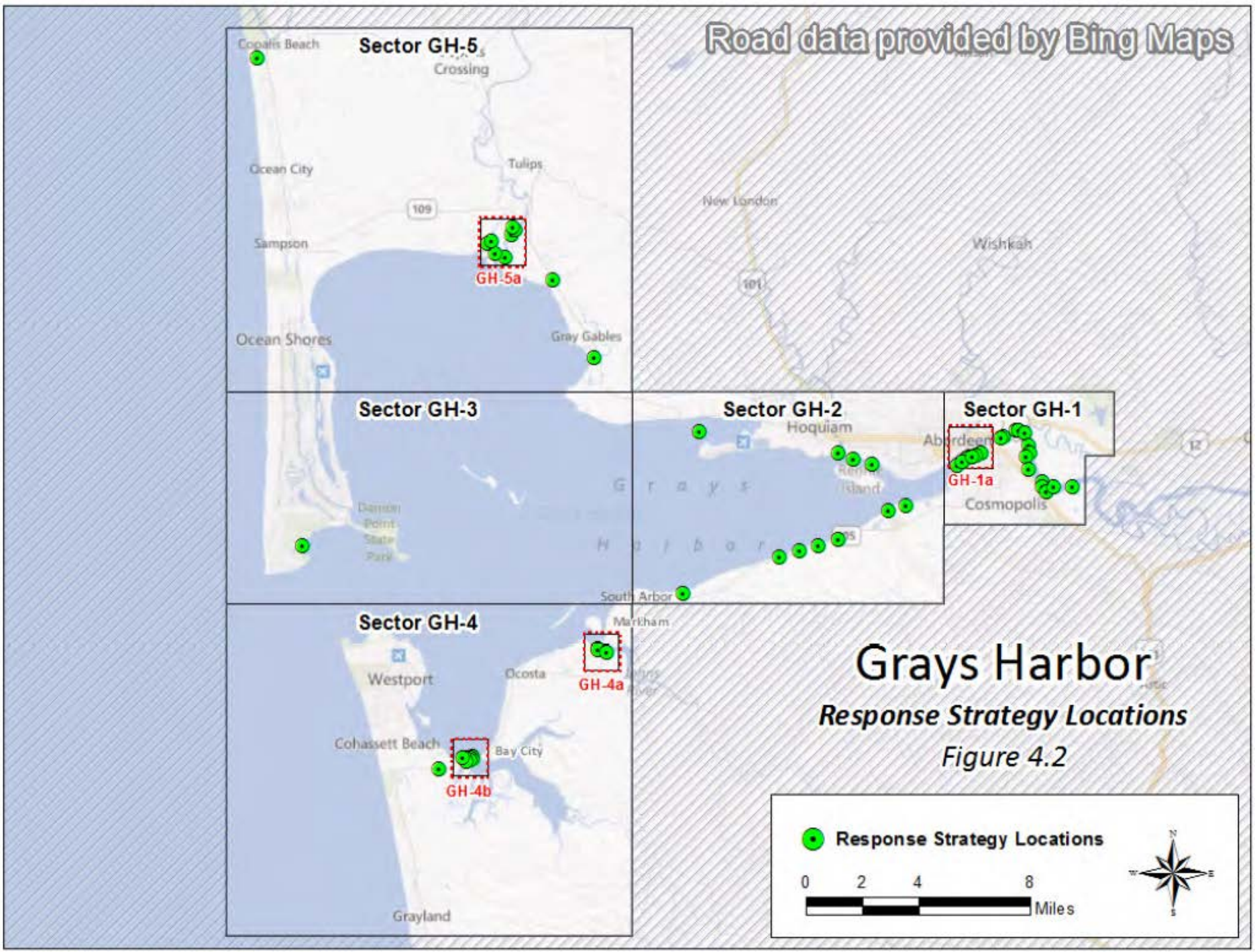
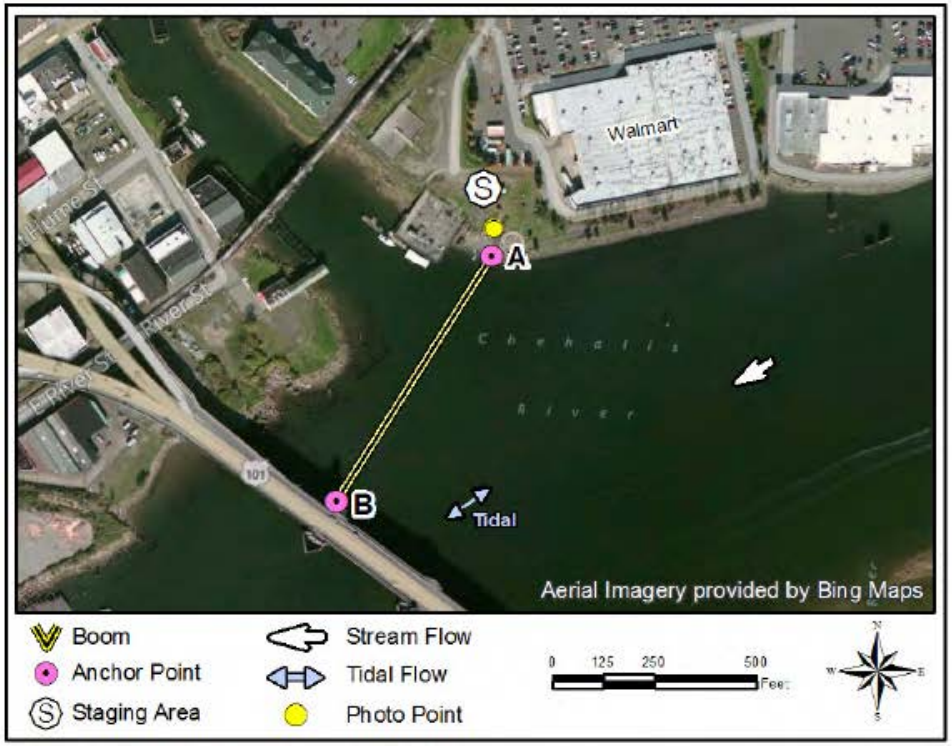
**New GRPS Include: Chehalis River, Clark/Cowlitz Rivers, Nisqually River, Green/Duwamish River, Lower and Middle Columbia, Moses Lake, Lake Washington, and Lake Chelan


Road data provided by Bing Maps
Sector GH-5
Copalis Beach
Crossing
Ocean City
Tulips
109
Sampson
GH-5a
Ocean Shores
Gray Gables
New London
Wishkah
101
Sector GH-3
Sector GH-2
Sector GH-1
Hoquiam
Aberdeen
GH-1a
Cosmopolis
Grays Harbor
Damon Point State Park
South Arbor
Markham
Sector GH-4
Westport
Ocosta
GH-4a
Cohassett Beach
Bay City
GH-4b
Grayland
Grays Harbor
Response Strategy Locations
Figure 4.2
Response Strategy Locations
0 2 4 8
Miles
N
W
E
S

Aberdeen - Chehalis River (NE Side of Hwy 101 Bridge) CHER-0.0

Position - Location:	46.97346	-123.808845	Aberdeen
Strategy Objective:	Collection	Collect oil moving upstream on the Chehalis River during incoming tide	
Implementation:	On north side of Chehalis River (river right) at the mouth of the Wishkah River, secure end of 700ft length of boom to shore near Point A (N46.97444, W123.80807) above the high water mark. Use workboat to tow boom out into the river and downstream, securing or anchoring the remaining boom end to NE corner of bridge works/fender system (east/upstream side of bridge) for the NW bridge stanchion/support near Point B (N46.97275, W123.80949). Use additional anchoring systems to keep boom secure in river. Use shoreside anchoring posts or existing structures to secure boom to shore. Vac truck collection at Point A.		
Staging Area:	On-Site:	Staging Area (SA-A-GH) is on site. Use Boat Launch BL-2-GH (Hoquiam 28th Street).	
Site Safety:	Slips, Trips, Falls; Water Hazard with Floating Debris Possible; Swift Currents and Eddys near Bridge		
Field Notes:	Best implemented at slack tide towards low. Notify Port of Grays Harbor (property owner) before implementation; call (360) 533-9528.		
Watercourse:	River (with tidal influence) - Chehalis River		
Resources at Risk:	Salmon, Steelhead, Waterfowl, and Wetlands		



Recommended Equipment		
700	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
8	Each	Anchoring System(s) - (anchor, lines, floats)
3	Each	Anchoring Post(s) - (shoreside) and (1) Post Driver
600	Feet	Line - 1/2" poly line
1	Each	Towing Bridal(s) - (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck(s)

Recommended Personnel	
1	Supervisor(s)
4	Laborer(s)
1	Boat Operator(s)

Emerging Energy Transportation Risks

Marine Rail Oil Transportation Study
Governor's Supplemental Budget – ESSB 6002

- $300,000 of the state toxics control account to conduct a study of oil shipment through the state.
- The purpose of the study is to assess public health and safety as well as environmental impacts associated with oil transport.
- The study must provide data and analysis of statewide risks, gaps, and options for increasing public safety and improving spill prevention and response readiness.

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Marine and Rail Oil Transportation Study

WA GOVERNOR's Directive - June 14, 2014

- Characterize risk of accidents along rail lines
- Review state and federal laws and rules with respect to rail safety and identify regulatory gaps
- Assess the relative risk of Bakken crude with respect to other crude oils
- Identify data gaps that hinder improvements in public safety and spill prevention and response
- Begin development of spill response plans for impacted counties
- Identify potential actions that can be coordinated with neighboring states and British Columbia
- Identify, prioritize, and estimate costs for state actions that will improve public safety and spill prevention and response
- Propose funding strategy for Governor's 2015-17 budget

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Marine/Rail Oil Transportation Study Stakeholders

- Tribes
- Local communities
- Local Emergency Planning Committees
- Environmental Advocacy Organizations
- Oil, rail and shipping industry
- Harbor Safety Committees
- Local fire departments
- Northwest Area Committee/Regional Response Team 10

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Utilities and Transportation Division (UTC)

- WA Rail System: 28 RRs, 3000 miles of track, 2,700 public RR crossings
  - 10 million miles of traffic each year
- Grade Crossing Safety:
  - Approve new crossings and modifications
  - Inspection for compliance of federal standards
- Support the Federal Railroad Administration:
  - 4 FRA-certified inspectors to enforce hazmat, signal and train control, track, and operating practices
- Railroad Employee Safety: Inspect railroad yard walkways, overheads and side clearance rules
- Respond to Citizen Complaints: crossings, walkways and noise
- Rail Public Safety and Education: Operation Lifesaver WA State

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State Military Dept.– Emergency Management Div. (EMD)

- EMD to reach out to and collect data from partners:
  - State Emergency Response Commission
  - Tribes
  - Local Emergency Planning Committee
    - Fire Departments and other Responders to include HazMat Teams
- State and Local Departments of Transportation
- State and Local Department Public Works
- Other Subject Matter Experts

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Marine Rail Oil Transportation Study Deliverables

September 1 – Preliminary Findings
September & October – Stakeholder Meetings
October 1 – Draft Interim Report to Governor
November 1 – 2nd Draft of Interim Report
December 1 – Interim Report to Legislature
March 1, 2015 – Final Report to Legislature

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More Information:
www.ecy.wa.gov/programs/spills/oilmovement/index.html

Questions?

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