Northwest Division

Seattle Subdivision

Reference to:
NWACP Geographical Response Plan

Reference the Entire Document as soon as possible to consult with Agency Responders. The full document can be found at:
http://www.ecy.wa.gov/programs/spills/preparedness/GRP/Introduction/introduction.htm

Map Key

 Mile Post Markers (BNSF)

 Geographic Response Plans (GRPs)

 Creek/Slough/River Crossing

 Creek/Slough/River/Bay Crossing and Adjacent

 Creek/Slough/River Adjacent

 Bay/Sound Adjacent

 Lake Adjacent

 Area of detail (red dashed rectangles)

Seattle Subdivision GRP Links

MP 1 – MP 7.: Central Puget Sound (CPS) GRPs

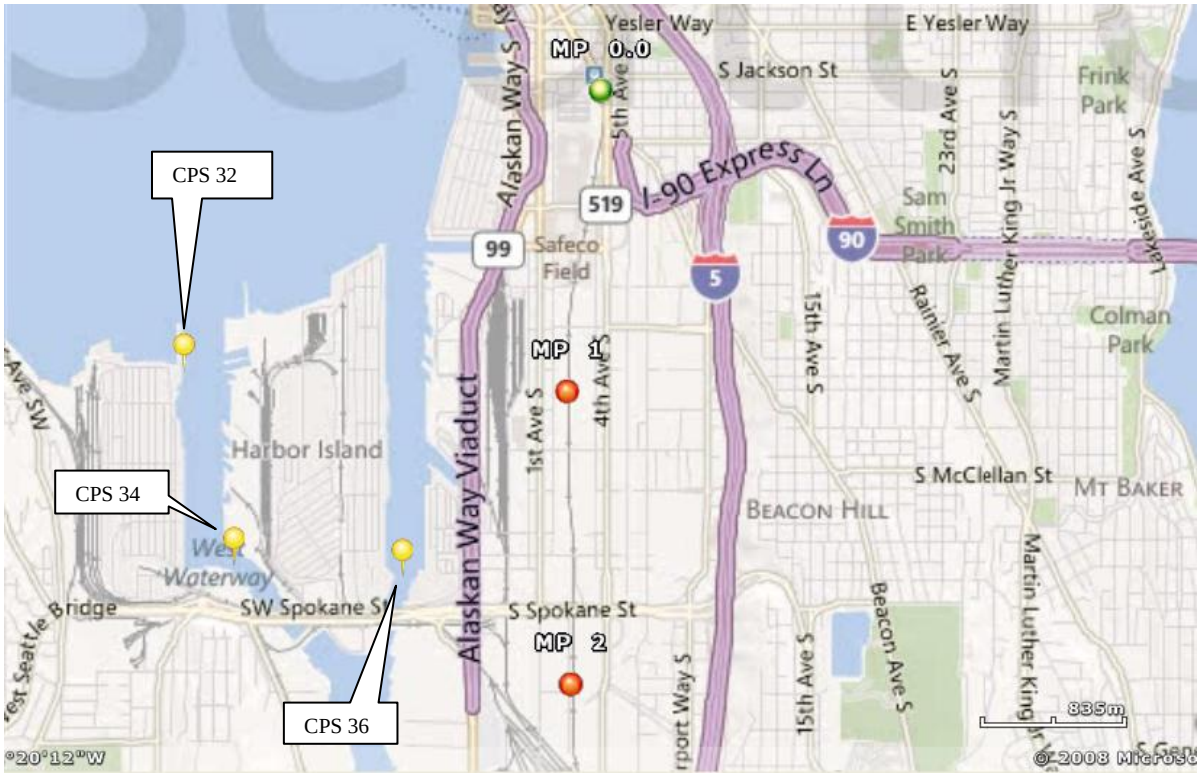
MP 7. – MP 24.: South Puget Sound (SPS) GRPs

MP 24. – MP 27.: Nisqually River (NR) GRPs

MP 70. – MP 136.: Clark/Cowlitz GRPs

MP 97. – MP 136.: Lower Columbia River (LCR) GRPs

http://www.ecy.wa.gov/programs/spills/preparedness/GRP/Introduction/introduction.htm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CPS 34
CPS 36
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S Jackson St
Alaskan Way S
5th Ave S
519
I-90 Express Ln
23rd Ave S
Frink Park
Martin Luther King Jr Way S
Lakeside Ave S
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Safeco Field
90
Sam Smith Park
5
Colman Park
MP 1
1st Ave S
4th Ave S
15th Ave S
Rainier Ave S
Harbor Island
S McClellan St
Mt Baker
Beacon Hill
Alaskan Way Viaduct
West Waterway
SW Spokane St
S Spokane St
MP 2
Beacon Ave S
835m
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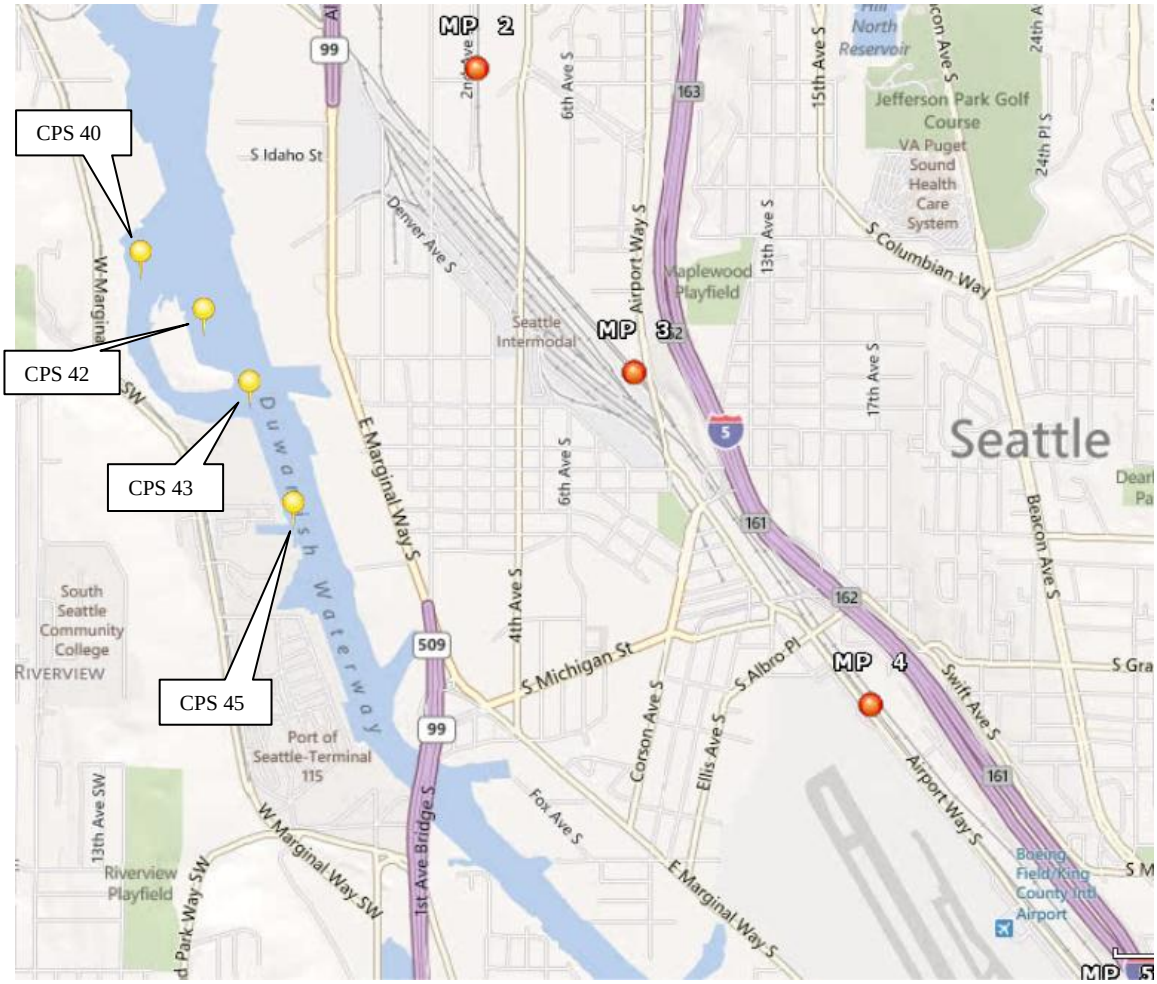
Seattle Subdivision MP 1 - 2

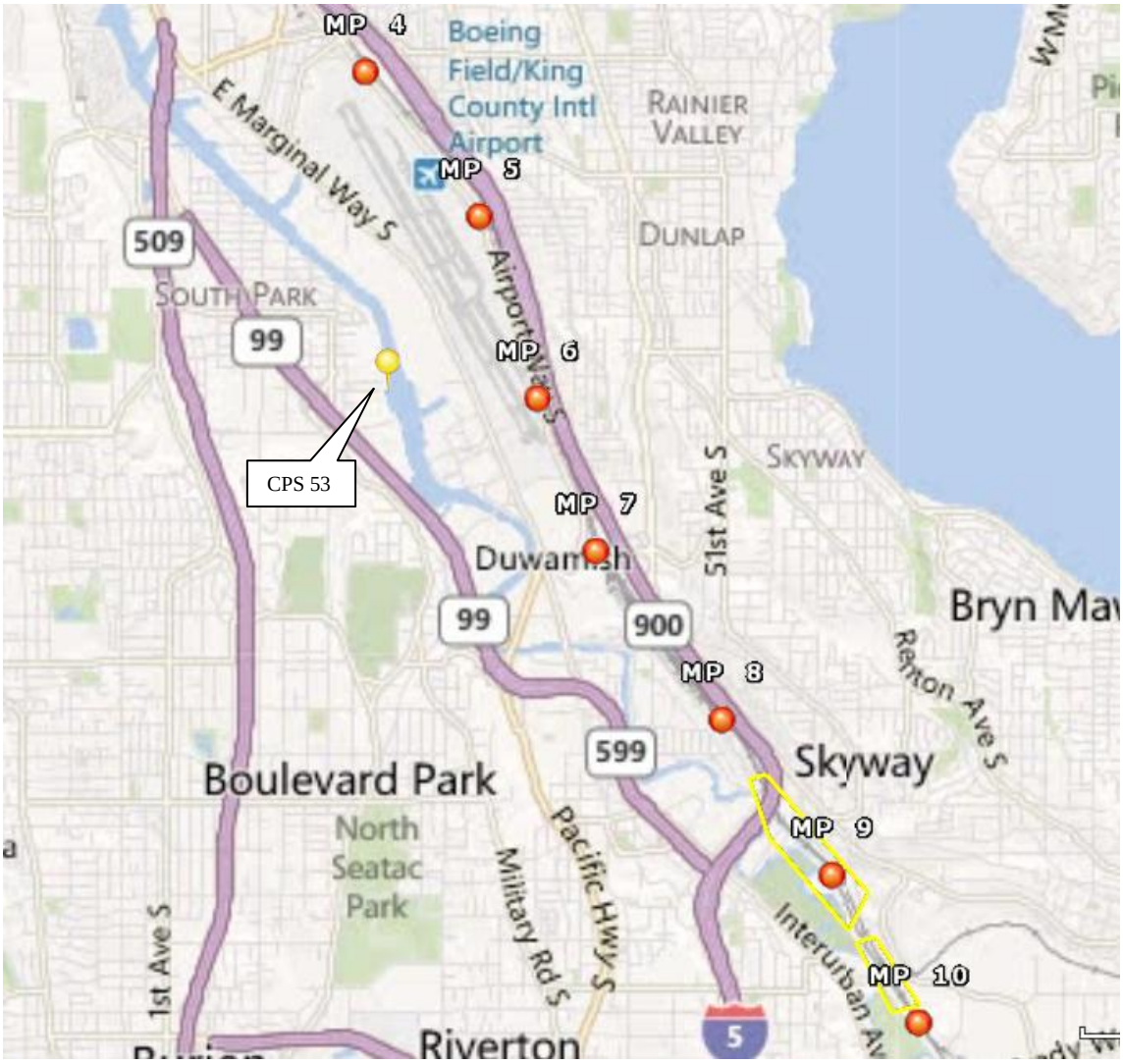
Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-32	Harbor Island - W Waterway, N End N 47° 34.985' W 122° 21.587' map page 4-27	Collection, exclusion -Prevent oil in the waterway from entering Elliott Bay.	1200ft Contractor Boom	Deploy boom from the north end of the BP/Arco pier to the old fire station pier on the west shore using a rolling bridle. For spills in Elliott Bay, allow oil to enter the waterway and then deploy the boom to prevent oil from moving back into Elliott Bay. Collect with skimmers/vac trucks.
CPS-34	Harbor Island - W Waterway, S End N 47° 34.399' W 122° 21.395' map page 4-27	Collection, exclusion -Prevent oil from moving into the Duwamish Waterway.	1000ft Contractor Boom	Deploy boom across the south end of the West Waterway at a site suitable for collection from shore with a vac truck.
CPS-36	Harbor Island - E Waterway, S End N 47° 34.332' W 122° 20.687' map page 4-27	Collection, exclusion -Prevent oil from moving into the Duwamish Waterway.	800ft Contractor Boom	Deploy boom across the south end of the East Waterway at a site suitable for collection from shore with a vac truck.

Seattle Subdivision MP 2 - 4



Seattle Subdivision MP 2 - 4

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-40	Kellogg Island N 47° 33.652' W 122° 20.866' map page 4-27	Collection, exclusion -Protect backwaters west of Kellogg Island	1600ft Contractor Boom	1600' on North entrance, anchor to pilings, boom around small island, can also connect to barges.
CPS-42	Kellogg Island N 47° 33.448' W 122° 20.723' map page 4-27	Collection, exclusion -Protect backwaters west of Kellogg Island	800ft Sorbent Boom	Boom gaps in barges to protect East side of island.
CPS-43	Kellogg Island N 47° 33.335' W 122° 20.620' map page 4-27	Collection, exclusion -Protect backwaters west of Kellogg Island	1000ft Contractor Boom	From the SE corner angle 1000' section of boom off end of Ideal Cement dock to the south tip of Kellogg Island to exclude oil from back channel of island.
CPS-45	Lone Star Cement Dock N 47° 32.950' W 122° 20.433' map page 4-27	Exclusion -Keep oil out of marsh area	1000ft Contractor Boom	Place boom outside of the cement piled dock to protect the marsh area west of the dock.



Seattle Subdivision MP 4 - 10

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-53	NW Cooperage (barrel factory) N 47° 31.146' W 122° 18.435' map page 4-27	Exclusion -Keep oil out of small inlet	200ft Contractor Boom	Place boom at mouth of inlet behind barrel factory.

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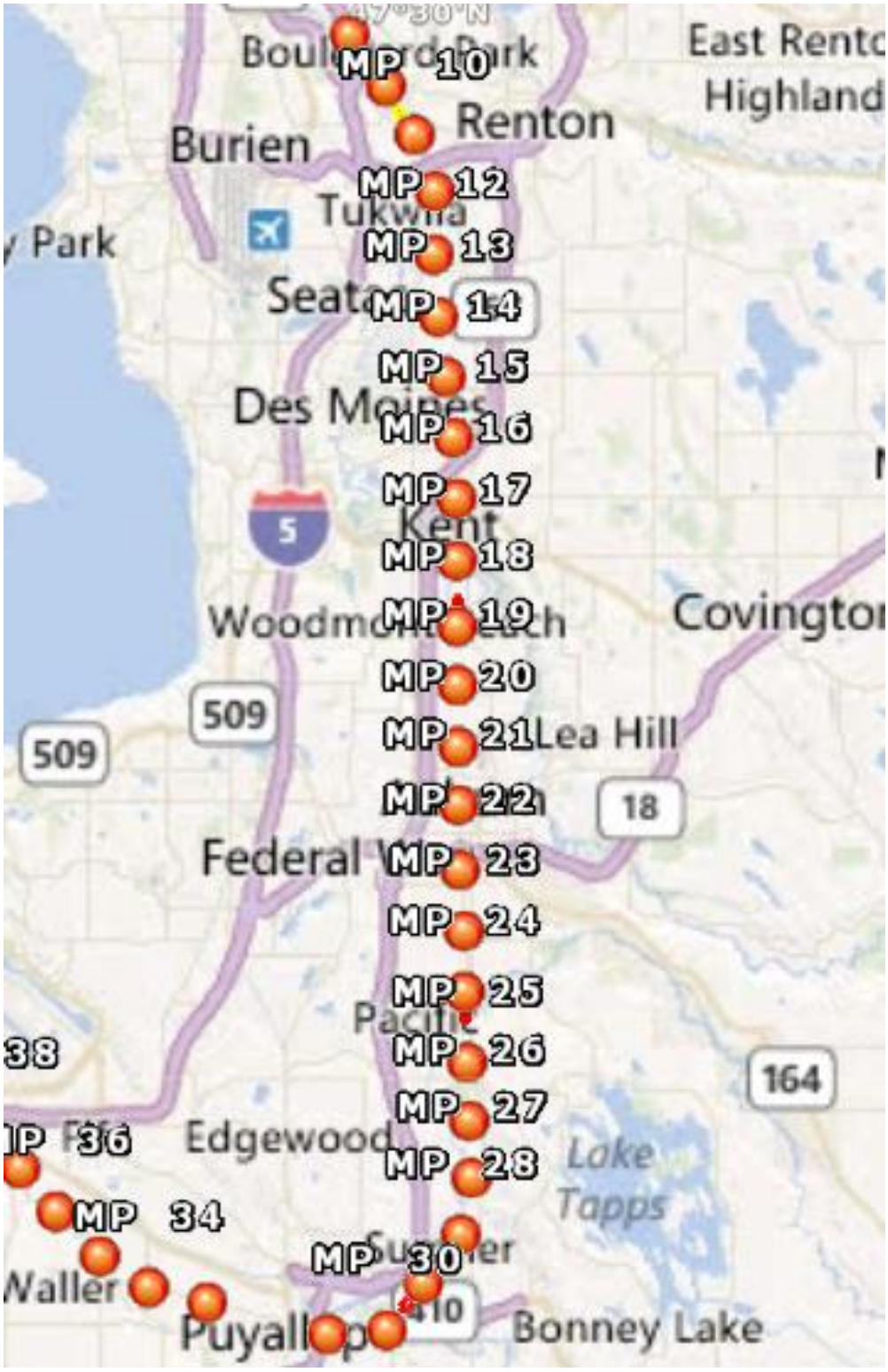
Seattle Subdivision MP 10 – 38



No current GRPs MP 10 – MP 38

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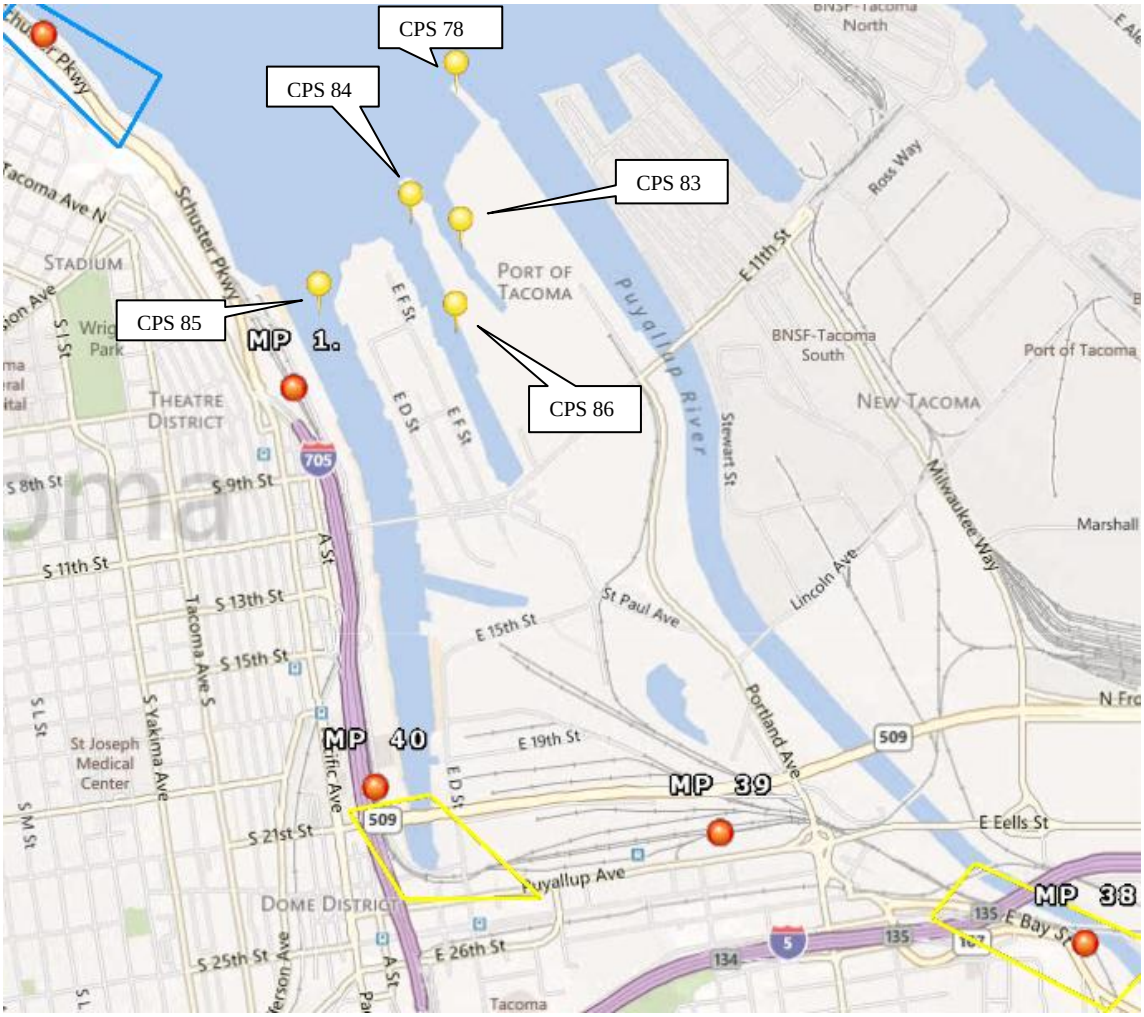
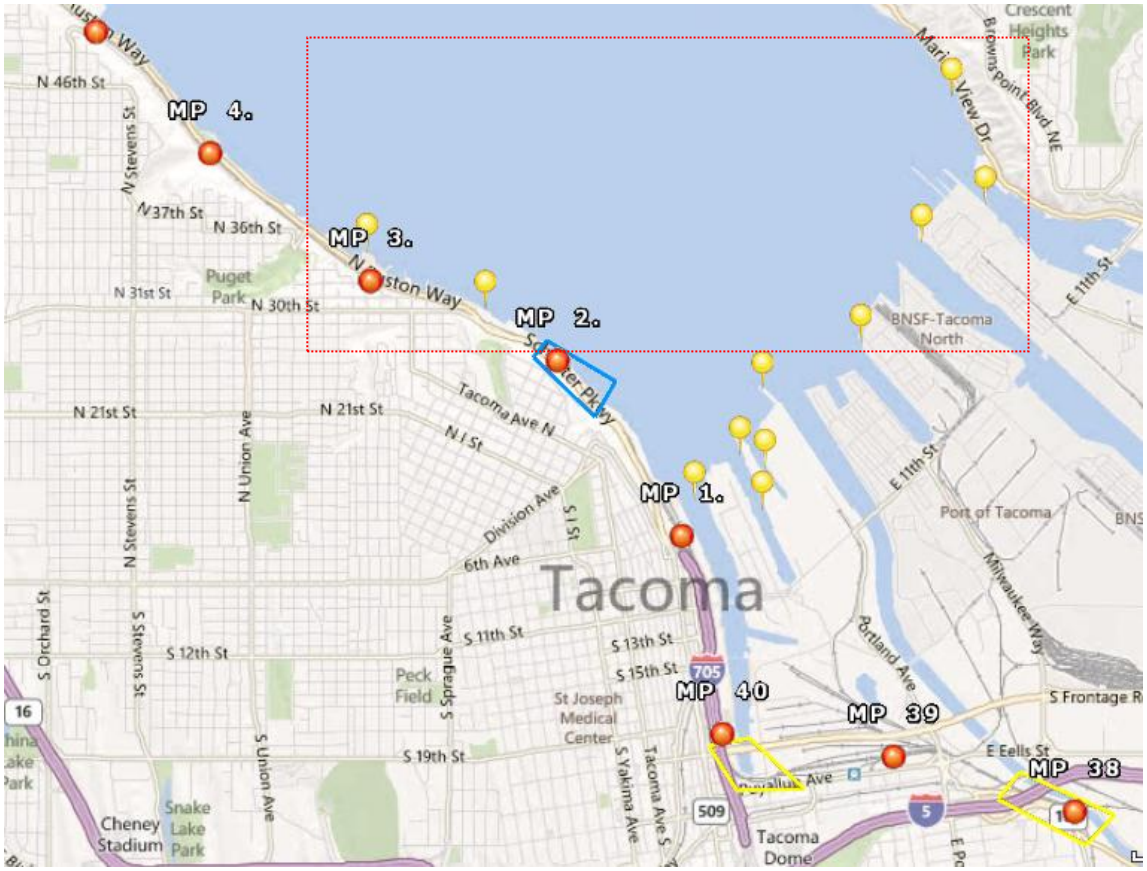
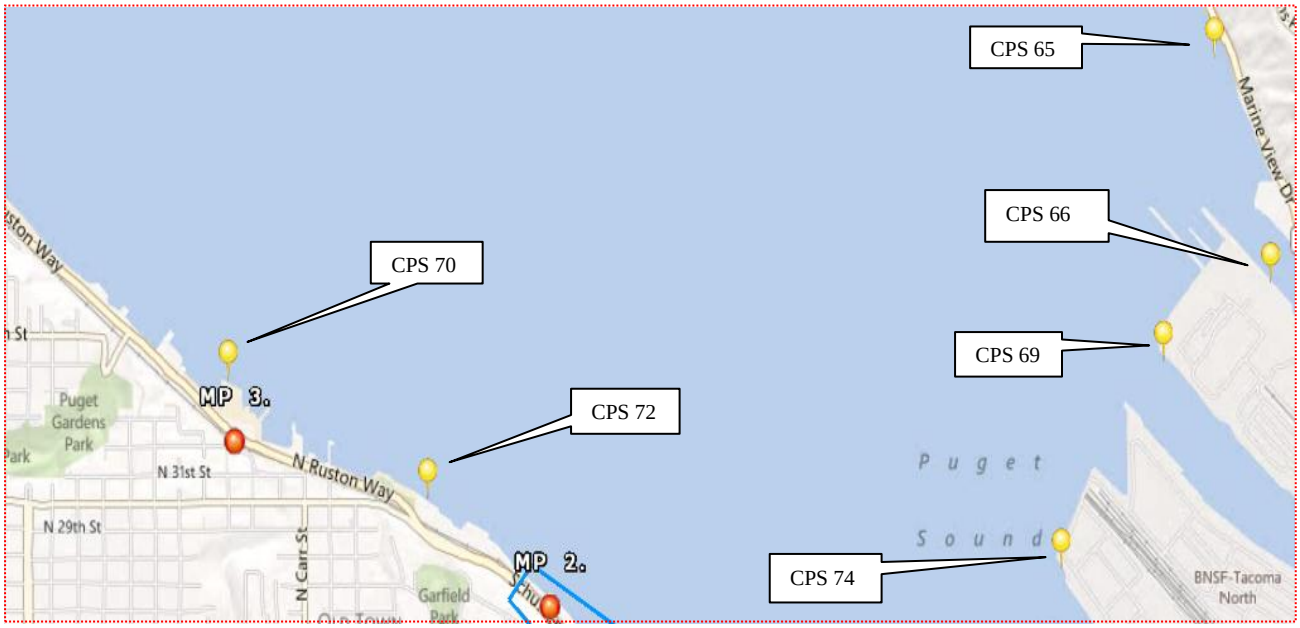
Seattle Subdivision MP 38 – 2.



Seattle Subdivision MP 38 – 2.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-78	St. Paul Waterway N 47° 16.046' W 122° 25.814' map page 4-30	Exclusion -Keep oil out of waterway	1200ft Contractor Boom	Waterway spill: place exclusion boom off North point to protect mudflats.
CPS-83	St. Paul Waterway N 47° 15.854' W 122° 25.827' map page 4-30	Exclusion -Keep oil in or out of waterway	400ft Contractor Boom	Angle Boom from the west to east side of channel. If the spill has occurred inside the channel the angle should be so that the oil is kept in the channel. If the spill has occurred outside the channel the angle should be so that oil is kept out of the channel.
CPS-84	Middle Waterway N 47° 15.823' W 122° 25.944' map page 4-30	Exclusion -Keep oil in or out of waterway	500ft Contractor Boom	Boom straight across waterway from Foss dock on West shore to end of gravel beach on East shore.
CPS-85	Thea Foss Waterway N 47° 15.705' W 122° 26.275' map page 4-30	Collection, containment, deflection -Keep oil in or out of waterway	1000ft Contractor Boom	Deploy boom from the rip-rap shoreline at the north end of the Valero Pier on the east shore across the waterway to a suitable anchor point on the west shore.
CPS-86	Middle Waterway N 47° 15.622' W 122° 25.822' map page 4-30	Exclusion -Keep oil in or out of waterway.	400ft Contractor Boom	Angle Boom from the west to east side of channel in a N-NE direction. Angle to be determined at time of deployment based on current conditions

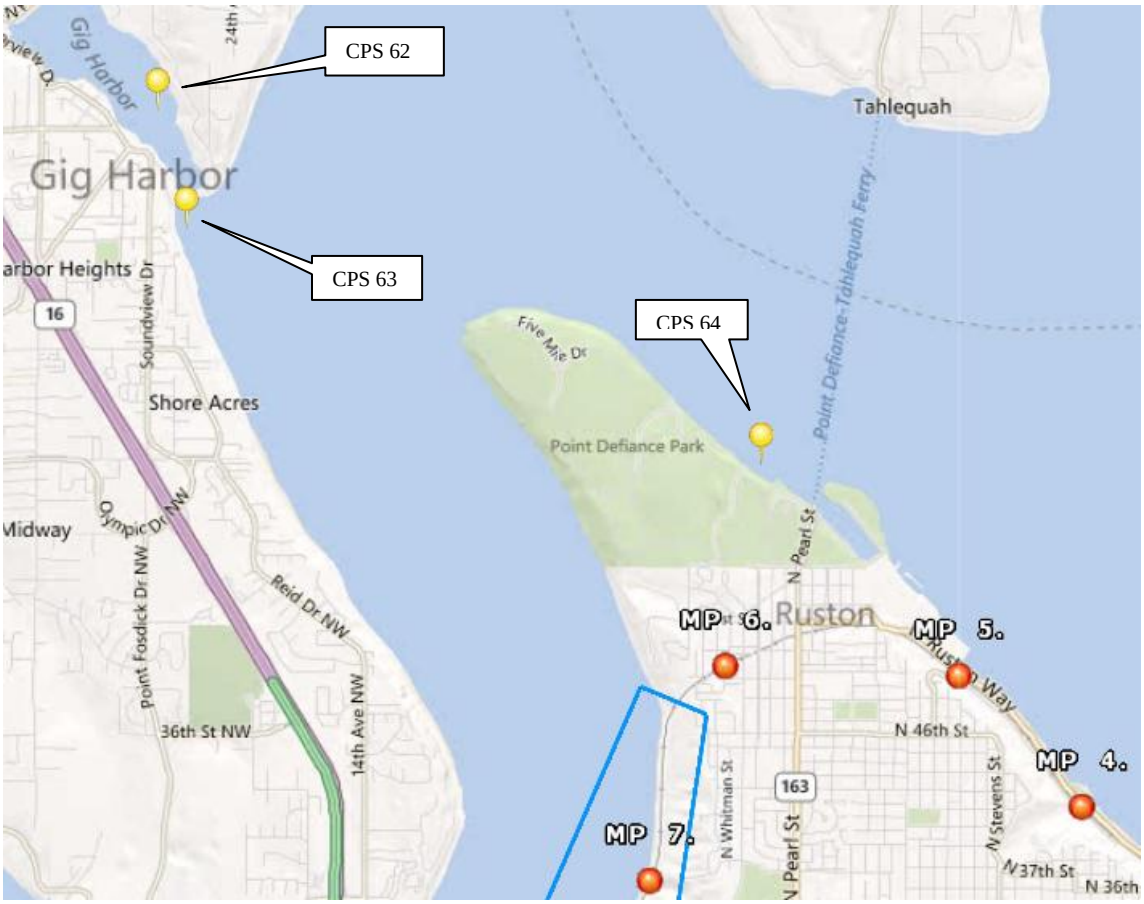




Seattle Subdivision MP 2. – 4.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-65	N 47° 17.239' W 122° 24.668' map page 4-30	Exclusion -Protect mudflats	3000ft Contractor Boom	Deploy boom from the north shore at the west end of Olie & Charlie's Marina (at 47º17.088'N 122º-24.442'W) near buoy "1", then back to shore just east of the log boom (at 47º17.390'N 122º-24.467'W).
CPS-66	Hylebos Waterway N 47° 16.945' W 122° 24.287' map page 4-30	Exclusion -Keep oil in or out of waterway	1000ft Contractor Boom	Deploy 600' of boom from the rip-rap or old dock on the south shore (at 47º-16.898'N 122º24.264'W) to the end of the finger pier at the west end of the Chinook Marina if oil is coming from the east. If oil is coming from the west, deploy an additional 400' of boom from the finger pier to the north shore.
CPS-69	Mouth of Blair Waterway N 47° 16.684' W 122° 24.783' map page 4-30	Exclusion -Keep oil in or out of waterway	1300ft Contractor Boom	Angle from tip of Pier 2 to the opposite shore at mouth of waterway.
CPS 70 High Tide	Dickman Mill Pocket Marsh N 47° 16.664' W 122° 28.203' map page 4-30	Exclusion - Keep oil out of marsh	100ft Contractor Boom	Dickman Mill Pocket Marsh - Perched pocket marsh. Only threatened on high tides. Based on observation of the site from land, there would appear to be minimal current flow into the marsh on an incoming tide. An estimated 50 feet of boom placed on the seaward side of the channel entrance at the concrete walkway would be sufficient to block the entrance to the marsh.
CPS 72 High Tide	Tahoma Salt Marsh N 47° 16.459' W 122° 27.452' map page 4-30	Exclusion - Keep oil out of marsh	100ft Contractor Boom	City of Tacoma Saltwater Marsh (ref. #A.4) Perched pocket marsh with single entrance, adjacent to the berthed Navy ships. Only threatened on high tides. An estimated 100 ft of boom placed in chevron formation on the seaward side of the channel entrance would be sufficient to block marsh entrance. Possible to connect the apex of the chevron to pilings supporting the short loading dock near the marsh entrance. It's also possible that the boom could be configured to collect oil on the shore at the Navy facility, where there is access for a vac truck. Contact immediately or before entering: Navy Regional Operations Center, (W) 360-315-5123, Alt Business Phone 360-315-5122
CPS-74	Sitcum Waterway N 47° 16.281' W 122° 25.205' map page 4-30	Exclusion -Keep oil in or out of waterway	1500ft Contractor Boom	Angle SW from end of concrete abuttment on East shore to pilings on West shore.

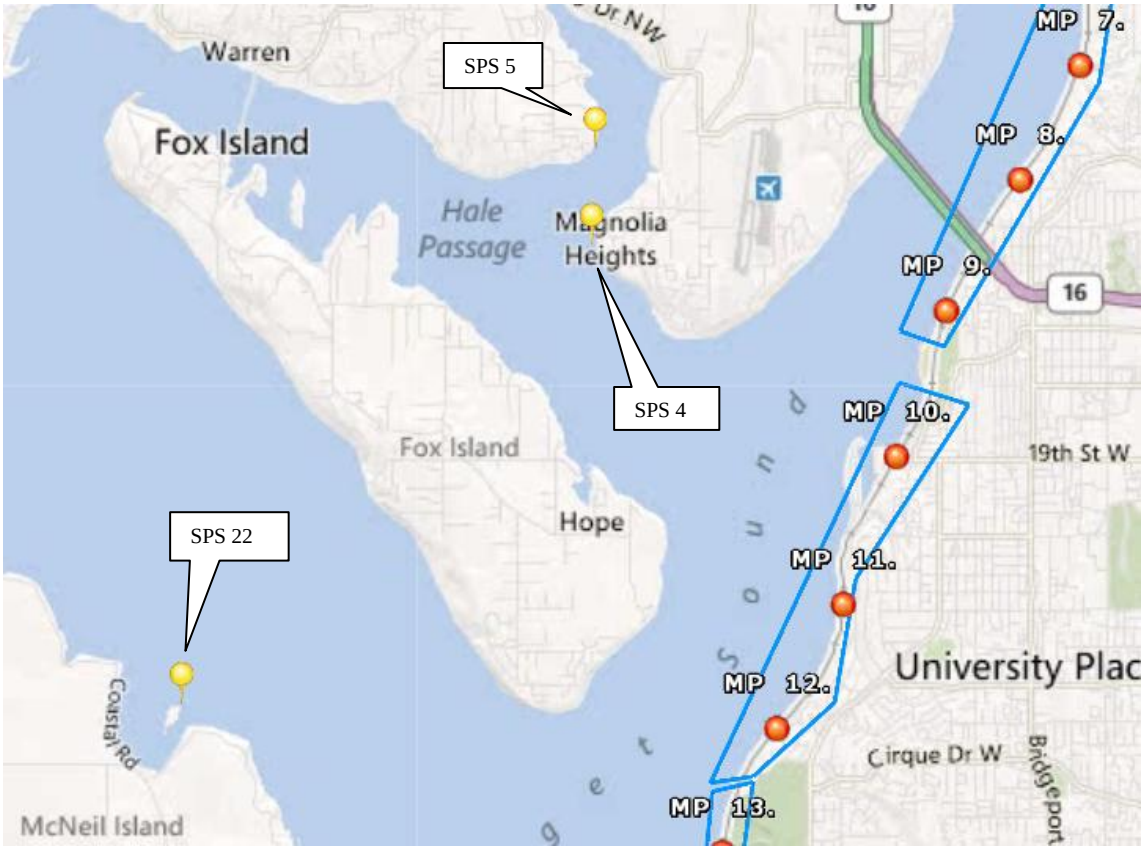
Seattle Subdivision MP 4. – 7.



Seattle Subdivision MP 4. – 7.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
CPS-62	Gig Harbor N 47° 19.626' W 122° 34.549' map page 4-29	Collection, deflection, exclusion -Keep oil out of harbor	500ft Contractor Boom	Angle boom behind chevron (placed across mouth) from lighthouse NW to sand beach by private ramp next to flagpole.
CPS-63	Gig Harbor N 47° 19.466' W 122° 34.441' map page 4-29	Collection, deflection, exclusion - Keep oil out of harbor	1000ft Contractor Boom	Place chevron across mouth, anchor to dock w/ davit on West side & to East spit w/ land anchor (may be able to use bridle on small lighthouse).
CPS-64	Point Defiance Park N 47° 18.477' W 122° 31.097' map page 4-30	Notification - Provide notice to Aquarium so they can take appropriate steps.	NA	Provide notice to Point Defiance Zoo and Aquarium. Contact immediately or before entering: John Rupp, Point Defiance Park, (W) 253-404-3675, (M) 253-677 -3386, (H) 206-463-3149, Office: M-F 8:00-5:00, Home: 5:00-8:00 Stan Chapin, Point Defiance Park, (W) 253-404-3802, (M) 253-677-1543, (H) 253-8471614, Office: M-F 8:00-5:00 Scott Clark, Point Defiance Park, (W) 253-404-3660, (M) 253-677-7104, (H) 253-5492414 Robin Thompson, Point Defiance Park, (W) 253-4043631

Seattle Subdivision MP 7. – 13.



Seattle Subdivision MP 7. – 13.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
SPS-4	Wollochet Bay PIE0481 47º-16.01'N 122º-35.79'W	Deflection/ Collection - Keep oil out of bay.	2000'	Anchor to boat ramp near old ferry dock, tend end w/ boat (30" boom in high winds).
SPS-5	Wollochet Bay PIE0460 47º-16.24'N 122º-36.69'W	Deflection/ Collection - Keep oil out of bay.	2000'	Anchor to cement bulkhead just around point near E Cromwell, tend end w/ boat (30" boom in high winds).
SPS-22	Still Harbor - SE McNeil PIE0592 47º-13.08'N 122º-39.40'W	Exclusion Booming - Prevent oil from entering harbor.	2000'	Double chevron from Gertrude Is. to E shore. Need - (2) 100# anchors @ each apex = total of 100# anchors.

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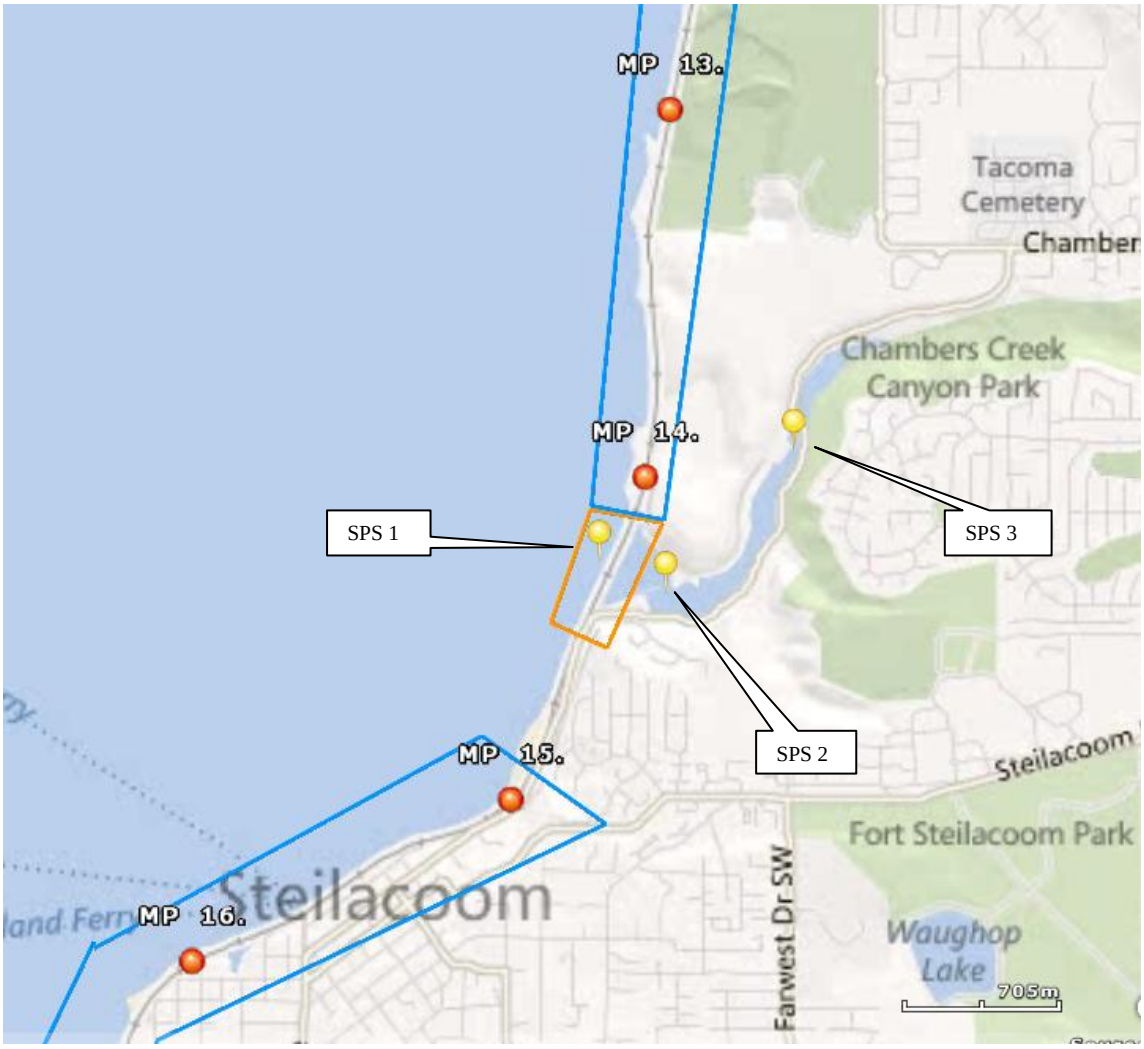
Seattle Subdivision MP 13. – 16.



Seattle Subdivision MP 13. – 16.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
SPS-1	Chambers Bay PIE0145 47º-11.25'N 122º-35.00'W	Exclusion booming - Keep oil out of Chambers Bay.	400'	Deploy boom in a chevron configuration on the west side of the railroad trestle to keep oil out of the bay.
SPS-2	Chambers Bay PIE0145 47º-11.24'N 122º-34.97'W	Containment booming - Keep spill inside the bay.	400'	Deploy boom in a chevron configuration on the east side of the railroad trestle to keep oil in the bay.
SPS-3	Chambers Bay PIE0146 47º-11.44'N 122º-34.40'W	Exclusion booming - Keep oil out of the fish ladder.	200'	Deploy boom across the north end of the bay to keep oil out of the fish ladder and trap.

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Seattle Subdivision MP 16. – 20.

Seattle Subdivision MP 16. – 20.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
SPS-26	Anderson Island West Oro Bay PIE0641 47º-08.29'N 122º-42.03'W	Exclusion booming - Keep oil out of bay.	2200'	Boom west bay with chevron. Attach intertidal boom to each shoreside leg end if available.
SPS-27	Anderson Island East Oro Bay PIE0646 47º-08.64'N 122º-41.53'W	Exclusion booming - Keep oil out of bay	2800'	Boom east bay in a chevron configuration. Attach intertidal boom to each shoreside leg end. If the strategy cannot be deployed as described, or if winds are likely to drive oil past the boom, back up the strategy with 200' to prevent oil from entering the slough.

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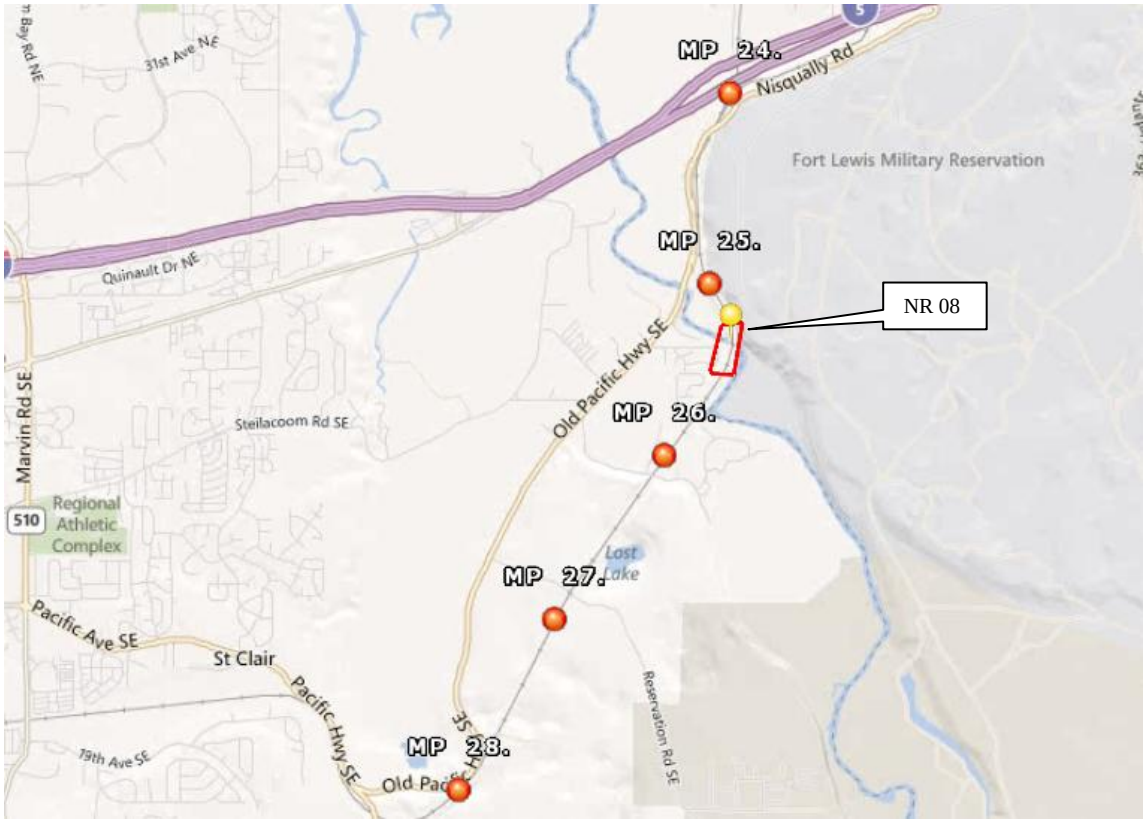
Seattle Subdivision MP 20. – 24.

Seattle Subdivision MP 20. – 24.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
SPS-30	McAllister Creek THU0025 47º-05.55'N 122º-43.56'W	Exclusion booming - Keep oil out of creek.	1200'	Exclusion boom across McAllister Creek at Luhr Beach (move upstream if upstream spill from I-5).
SPS-31	Cove in Hogum Bay THU0029 47º-06.37'N 122º-44.37'W	Exclusion - Keep oil out of cove.	100'	Deploy boom across the mouth of the cove.
SPS-32	Butterball Cove THU0032 47º-07.11'N 122º-45.62'W	Exclusion - Keep oil out of cove.	100'	Deploy boom across the mouth of the cove.
SPS-33	Big Slough THU0034 47º-07.31'N 122º-46.52'W	Exclusion - Keep oil out of slough.	300'	Deploy boom across the mouth of the slough.

Seattle Subdivision MP 24. – 28.



Seattle Subdivision MP 24. – 28.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
NR-8	Burlington Northern Railroad Bridge - River Mile 4 47º-03.500'N 122º-41.370'W	Deflection/ Collection.	500'	Angle from north trestle upstream towards handicapped-access fishing site. Collect with vac trucks/ skimmers.

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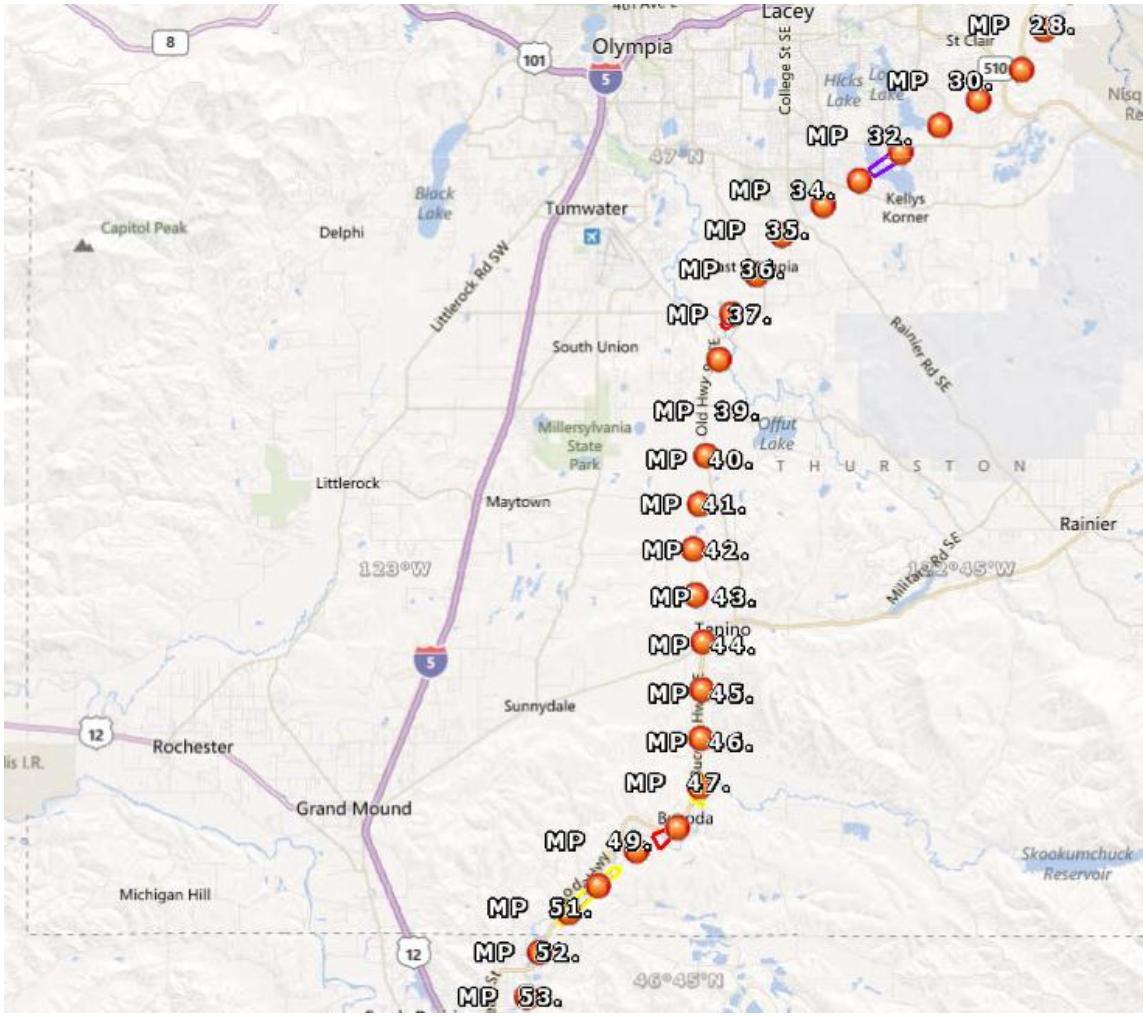
Seattle Subdivision MP 28. – 53.



No current GRPs MP 28. – MP 53.

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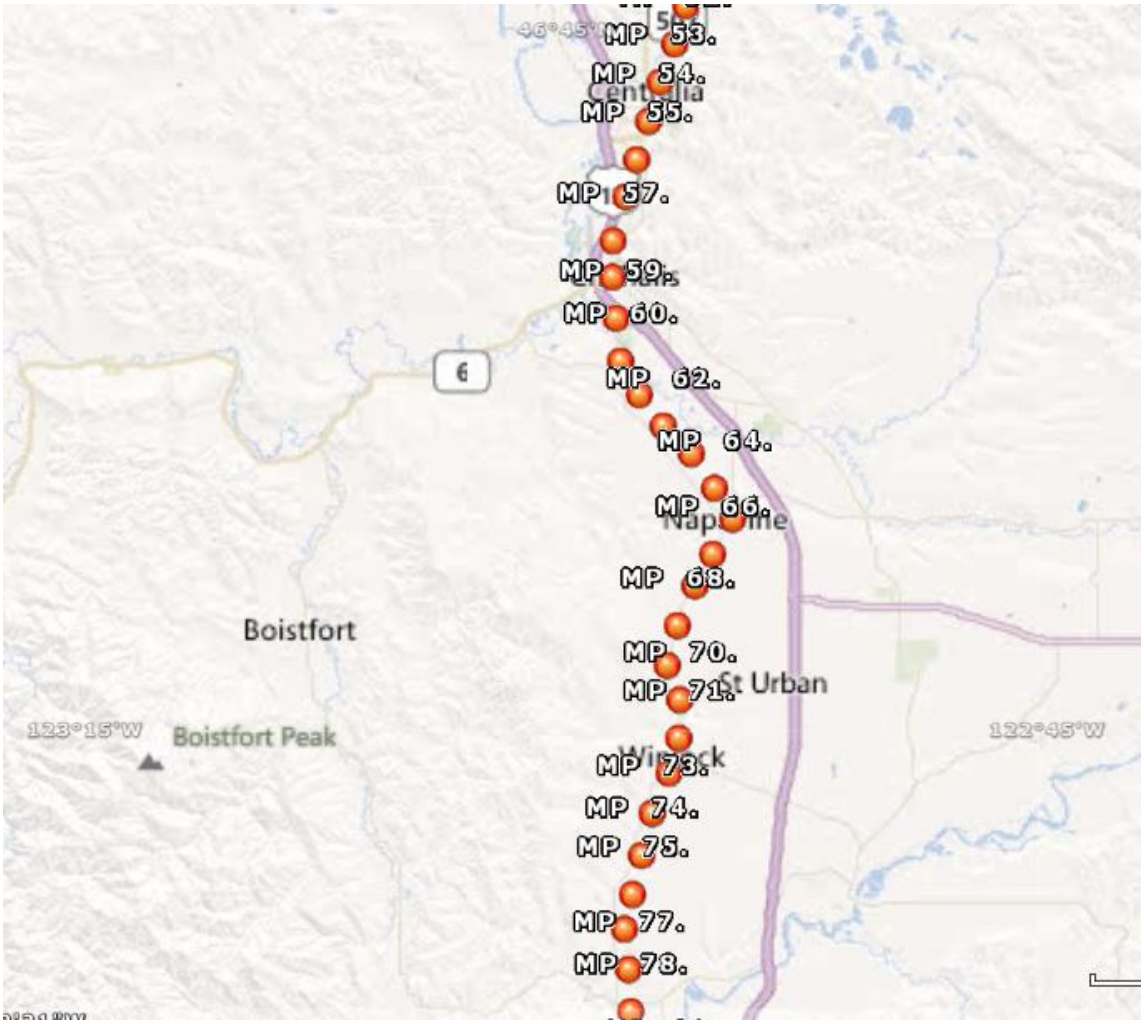
Seattle Subdivision MP 53. – 78.



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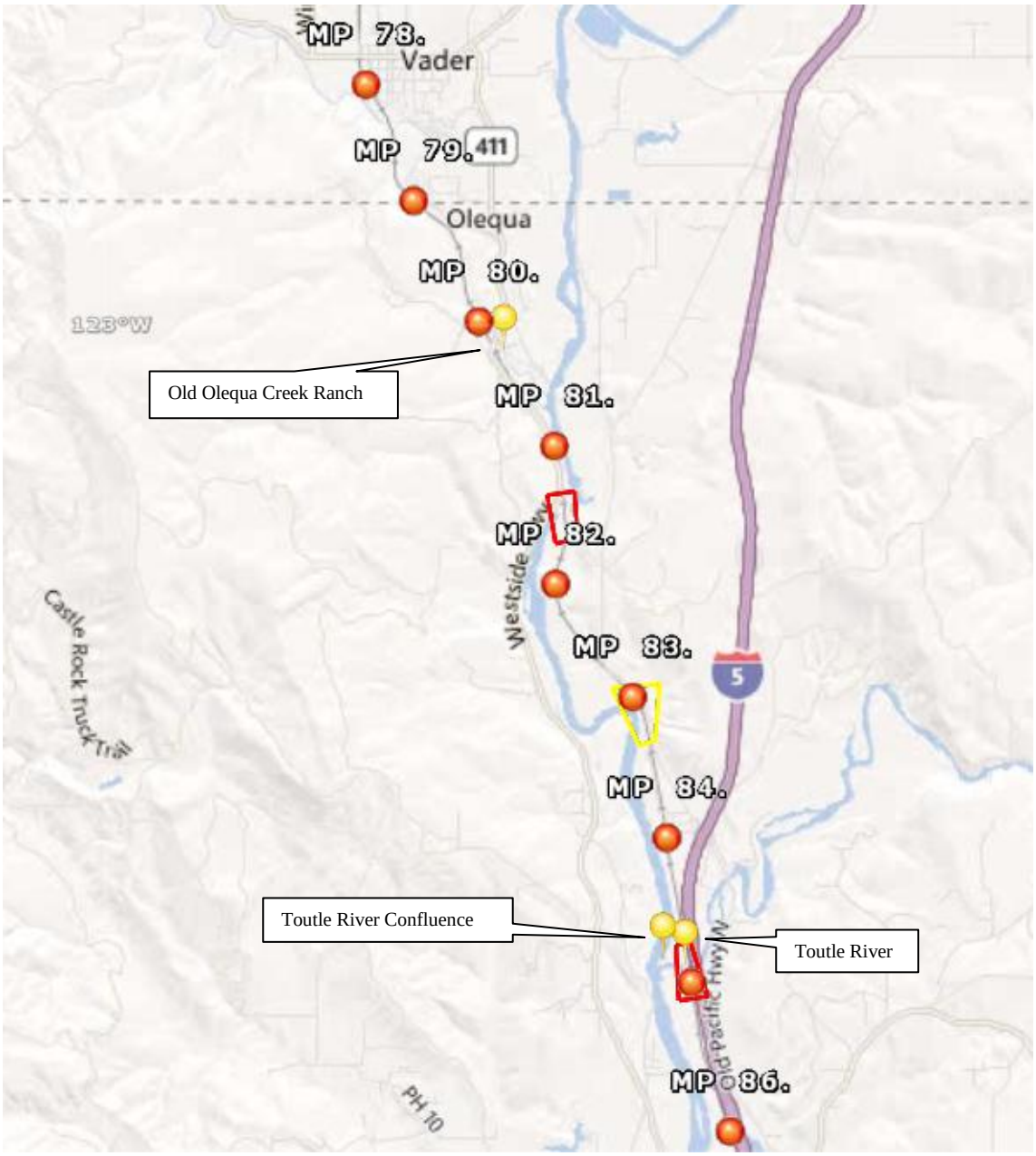
Seattle Subdivision MP 78. – 86.



Seattle Subdivision MP 78. – 86.

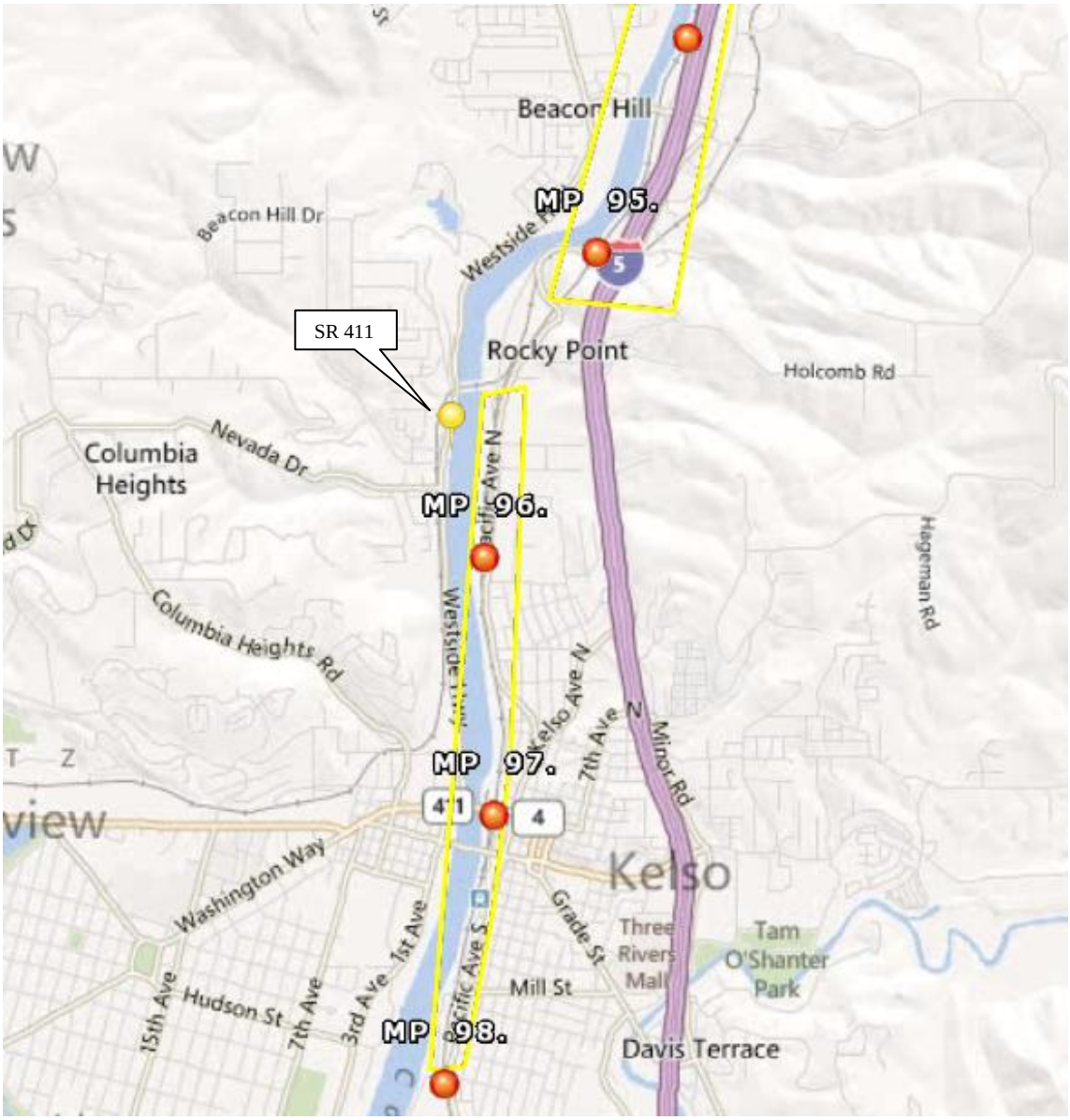
Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Olequa Creek, Olequa Creek Ranch	Cowlitz County, WA		300 ft Containment Boom 100 ft Sorbent Boom	Deploy segments of containment boom across Olequa Creek using shoreline anchoring technique to divert product to the left descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
Toutle River, Mouth of Toutle River	Cowlitz County, WA		1000 ft Containment Boom 200 ft Sorbent Boom	Deploy segments of containment boom across Toutle River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Excavate a sump to aid in recovery operations.
Cowlitz River, Toutle River Confluence	Cowlitz County, WA		2000 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Cowlitz River using shoreline and bottom anchoring technique to divert product to the left descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.

Seattle Subdivision MP 86. – 94.

Seattle Subdivision MP 86. – 94.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Cowlitz River, Camelot Park	Cowlitz County, WA		2500 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Cowlitz River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom down- stream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
Salmon Creek, Pleasant Hill Road	Cowlitz County, WA		None	Seal culvert using poly sheeting, lumber and/or sandbags to pool product for collection by vac truck and skimmer and/or sorbents. Line the collection area with poly sheeting to prevent permeation and migration of product. During high water flow periods, pumps may be needed to remove excess water from containment area. If this is not practical, a flow through dam may be constructed upstream of the culvert or an underflow device may be installed at the culvert.
Unnamed Creek 1, Pleasant Hill Road	Cowlitz County, WA		50ft Sorbent Boom	Utilize sandbags to build dam with inclined tubes for continued water flow. Use vac truck to recover products trapped at the dam. Deploy sorbent boom downstream of the dam to capture any free floating product that escapes the dam. Cover the dam and adjoining shore with poly sheeting to prevent soil permeation. Note: During high-flow conditions evaluate site and consider alternate response tactics.
Unnamed Creek 2, Railroad Tracks	Cowlitz County, WA		50ft Sorbent Boom	Utilize sandbags to build dam with inclined tubes for continued water flow. Use vac truck to recover products trapped at the dam. Deploy sorbent boom downstream of the dam to capture any free floating product that escapes the dam. Cover the dam and adjoining shore with poly sheeting to prevent soil permeation. Note: During high-flow conditions evaluate site and consider alternate response tactics.
Cowlitz River, Iron Butterfly	Cowlitz County, WA		2000 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Cowlitz River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.

Seattle Subdivision MP 94. – 98.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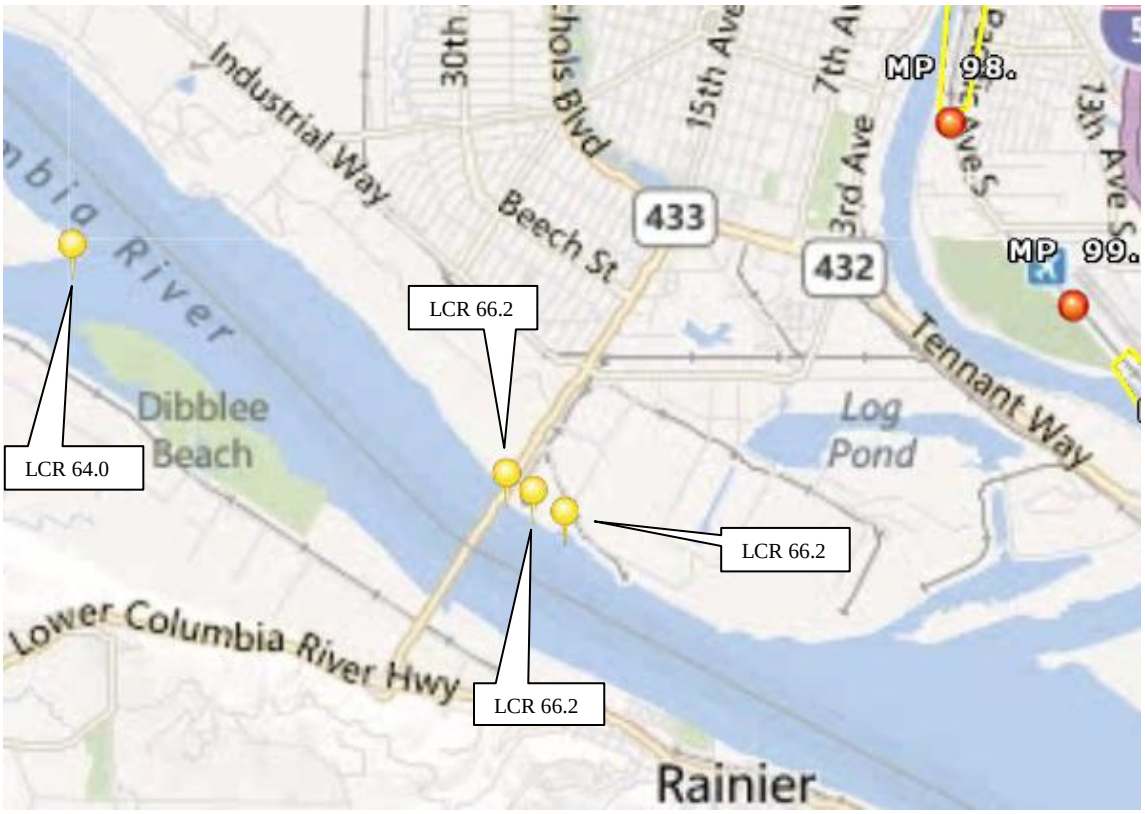
SR 411
Rocky Point
Holcomb Rd
Columbia Heights
Nevada Dr
Pacific Ave N
MP 96.
Hageman Rd
Columbia Heights Rd
Westside Hwy
Kelso Ave N
7th Ave N
Minor Rd
MP 97.
411
4
Kelso
Washington Way
Grade St
Three Rivers Mall
Tam O'Shanter Park
Mill St
15th Ave
Hudson St
7th Ave
3rd Ave
1st Ave
Pacific Ave S
MP 98.
Davis Terrace

Seattle Subdivision MP 94. – 98.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Cowlitz River, SR 411	Cowlitz County, WA		2500 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Cowlitz River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.

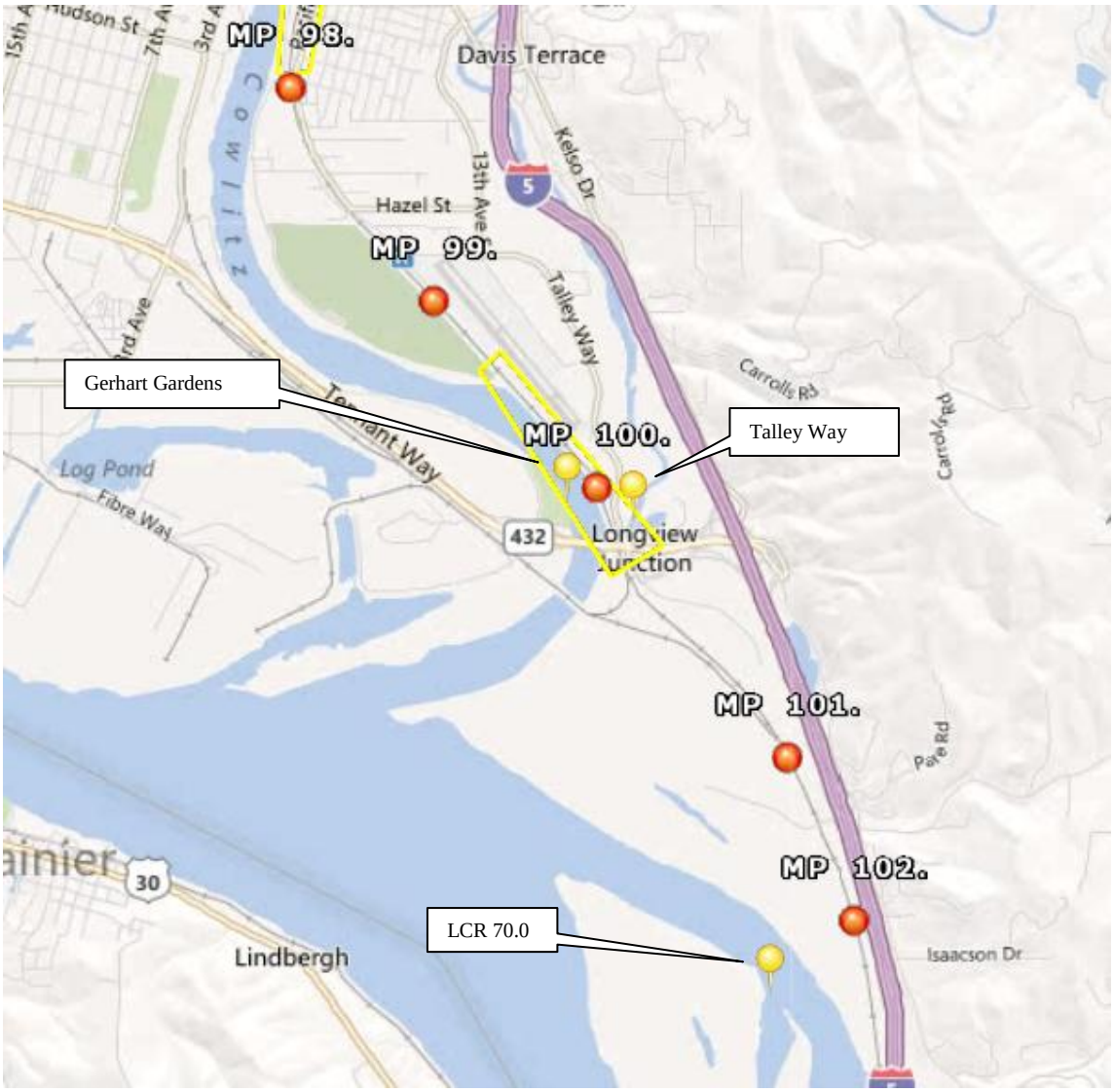
Seattle Subdivision MP 98. – 99.



Seattle Subdivision MP 98. – 99.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
LCR-64.0	Lord Island - east end (OR) 46º-07.310'N 122º-59.890'W	Exclusion -Prevent oil from moving through the channel between Lord Island and Slaughters Dike.	1,400'	Deploy boom across the opening between Lord Island and Slaughters Dike.
LCR-66.2	Port of Longview (WA) 46º-06.435'N 122º-57.378'W	Collection -Prevent oil from moving down stream.	3,000'	Deploy 1,000' lengths of boom from the Port of Longview to contain/collect oil under docks. May need tug to assist in deployment. This is a major natural collection site, and the last good chance to prevent oil from moving down stream. *Note -Longview Fibre has developed a number of additional strategies in this vicinity to address the unique hazards of a toluene spill; consult their response plan for more information.*

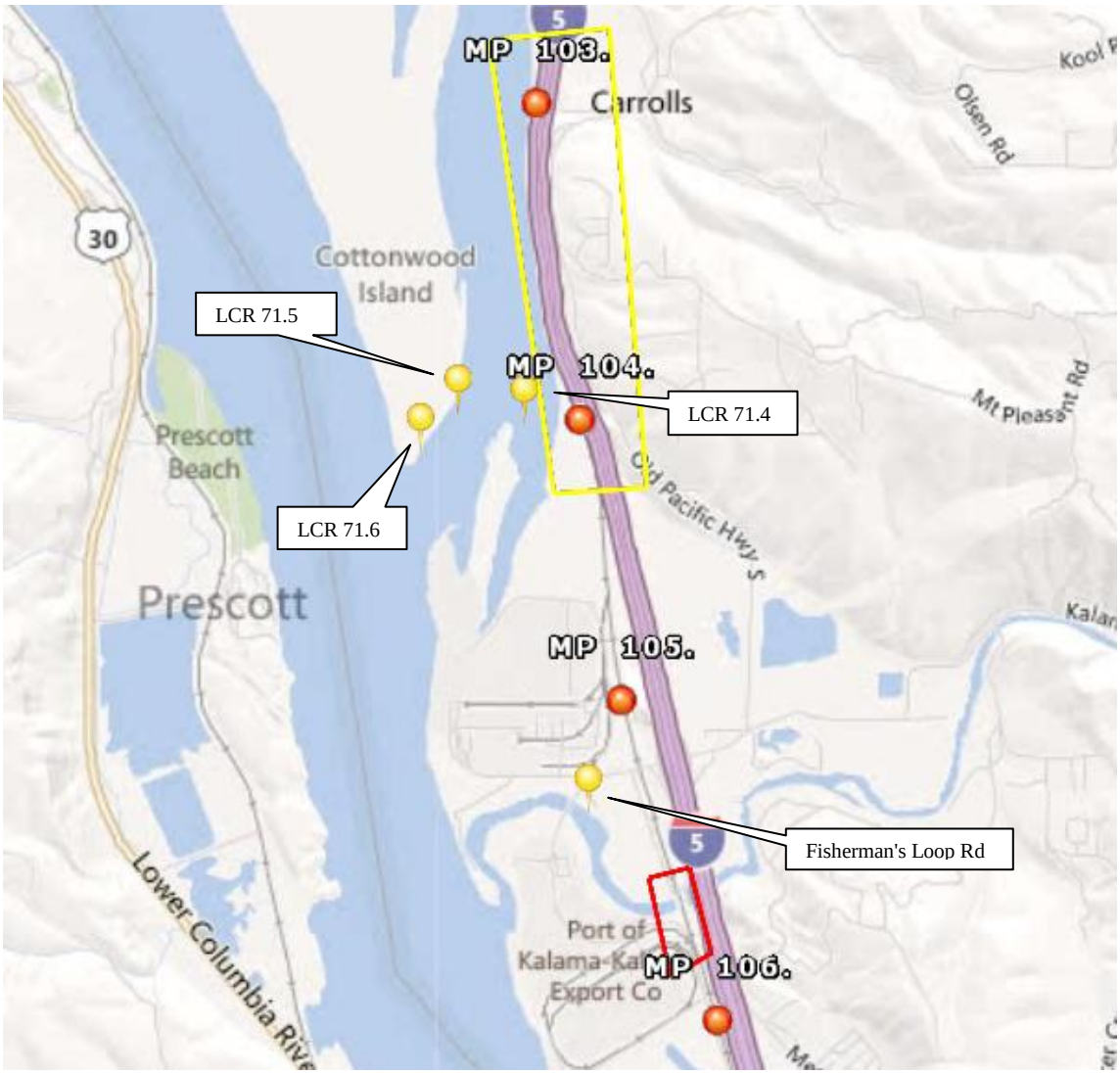
Seattle Subdivision MP 98. – 102.



Seattle Subdivision MP 98. – 102.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Cowlitz River, Gerhart Gardens Park	Cowlitz County, WA		2500 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Cowlitz River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
Coweeman River, Talley Way	Cowlitz County, WA		800 ft Containment Boom 200 ft Sorbent Boom	Deploy segments of containment boom across Coweeman River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
LCR-70.0	Cottonwood Island - east side slough (WA) 46º-04.915'N 122º-52.540'W	Exclusion - Keep oil out of slough.	500'	Close off mouth to the slough on east side of Cottonwood Island.

Seattle Subdivision MP 103. – 106.



Seattle Subdivision MP 103. – 106.

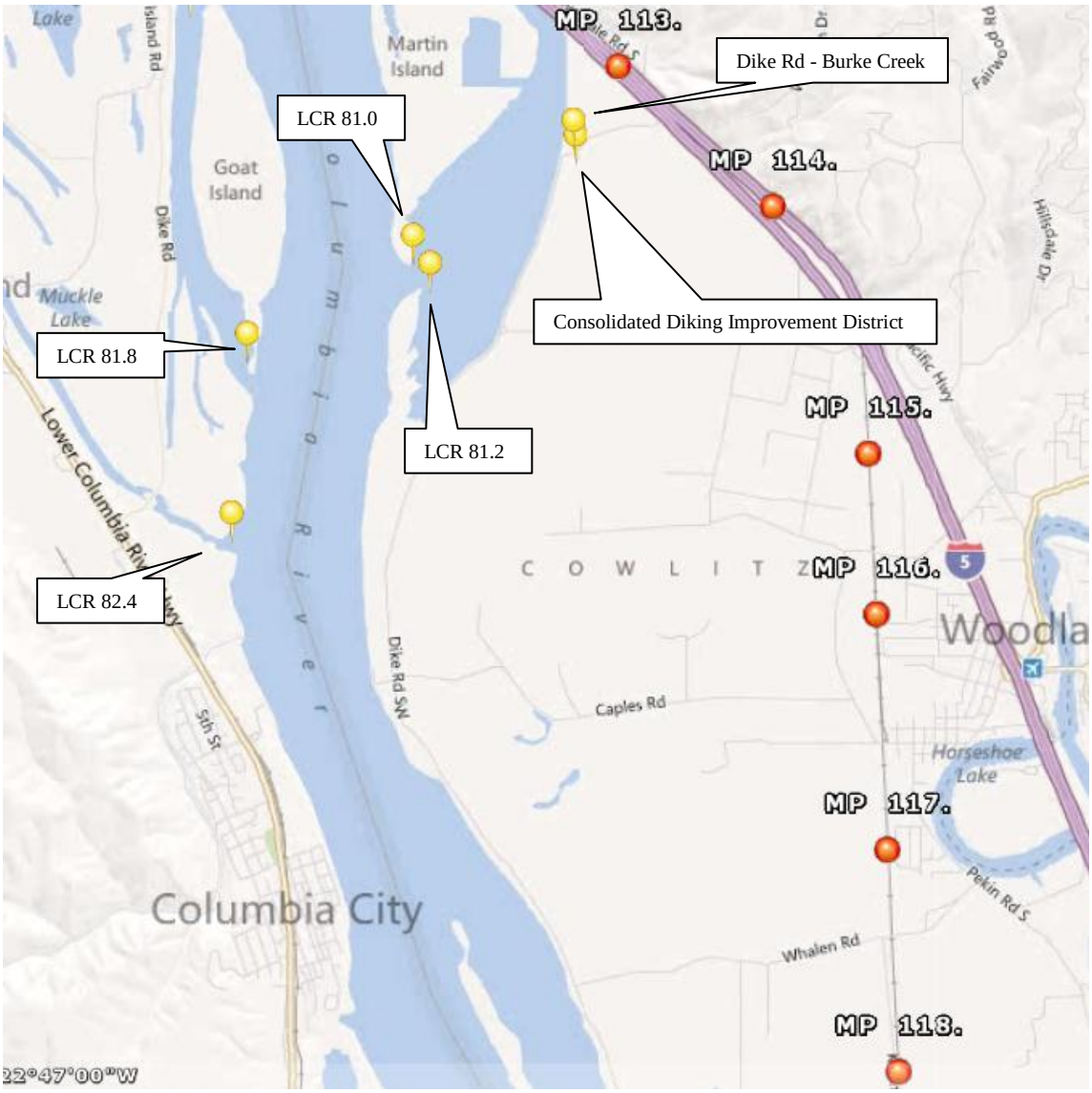
Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
LCR-71.4	Carrol's Channel -south end (WA) 46º-03.510'N 122º-52.040'W	Exclusion - Keep oil out of small inlet at the south end of the channel (east side).	1000'	Close off mouth of the small inlet at the south end of Carrol's Channel (on the east side).
LCR-71.5	Carrol's Channel -south end (WA) 46º-03.365'N 122º-52.333'W	Collection/ Exclusion - Natural collection area, prevent oil from moving up the channel.	1200'	Deploy boom across the south end of Carrol's Channel to direct collected oil to the east shore, and to prevent oil from moving through Carrol's Channel. Current may be too strong to deploy boom across channel. If so, deploy as much boom as possible to divert oil to the east shore for collection.
LCR-71.6	Carrol's Channel -south end (WA) 46º-03.345'N 122º-52.540'W	Collection - Enhance natural collection into south end of Carrol's Channel.	500'	Deploy boom from the south end of Cottonwood Island to enhance natural collection.
Kalama River, Fishermens Loop Road	Cowlitz County, WA		800 ft Containment Boom 200 ft Sorbent Boom	Deploy segments of containment boom across Kalama River using shoreline and bottom anchoring techniques to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom.

Seattle Subdivision MP 106. – 112.

Seattle Subdivision MP 106. – 112.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
LCR-73.7	Goble Creek (OR) 46º-01.250'N 122º-52.522'W	Exclusion - Keep oil out of the creek.	100'	Deploy boom across creek mouth.
LCR-76.0	Tide Creek (OR) 45º-59.660'N 122º-51.920'W	Exclusion - Keep oil out of the slough and creek.	1000'	Deploy boom across small slough at the creek mouth.
LCR-79.5	Martin Island - north end (WA) 45º-57.375'N 122º-47.985'W	Exclusion - Keep oil out of Martin Slough.	600'	Deploy boom across the north end of Martin Slough.
LCR-79.8	Goat Island - north end (OR) 45º-56.945'N 122º-49.168'W	Exclusion - Keep oil out of slough behind Goat Island.	600'	Deploy boom across the north end of the slough behind Goat Island.

Seattle Subdivision MP 113. – 118.



Seattle Subdivision MP 113. – 118.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Burke Creek, Dike Road	Cowlitz County, WA		500 ft Containment Boom 100 ft Sorbent Boom	Deploy segments of containment boom across Burke Creek using shoreline anchoring technique to divert product to the left descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
Burris Creek, Consolidated Diking Improvement District No 2	Cowlitz County, WA		500 ft Containment Boom 100 ft Sorbent Boom	Deploy segments of containment boom across Burris Creek using shoreline anchoring technique to divert product to the right descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
LCR-81.0	Martin Island - south end (WA) 45º-56.065'N 122º-47.850'W	Exclusion - Keep oil out of Martin Slough.	600'	Deploy boom across the south end of Martin Slough.
LCR-81.2	Burke Island - south end (WA) 45º-55.863'N 122º-47.823'W	Exclusion - Keep oil out of Burke Slough.	300'	Deploy boom across the south end of Burke Slough.
LCR-81.8	Goat Island - south end (OR) 45º-55.518'N 122º-48.865'W	Exclusion - Keep oil out of slough behind Goat Island.	500'	Deploy boom across the south end of the slough behind Goat Island.
LCR-82.4	Deer Island Slough (OR) 45º-54.860'N 122º-48.965'W	Exclusion - Keep oil out of slough.	300'	Deploy boom across the mouth of the slough on the south end. Ensure tide gates are closed at each end.

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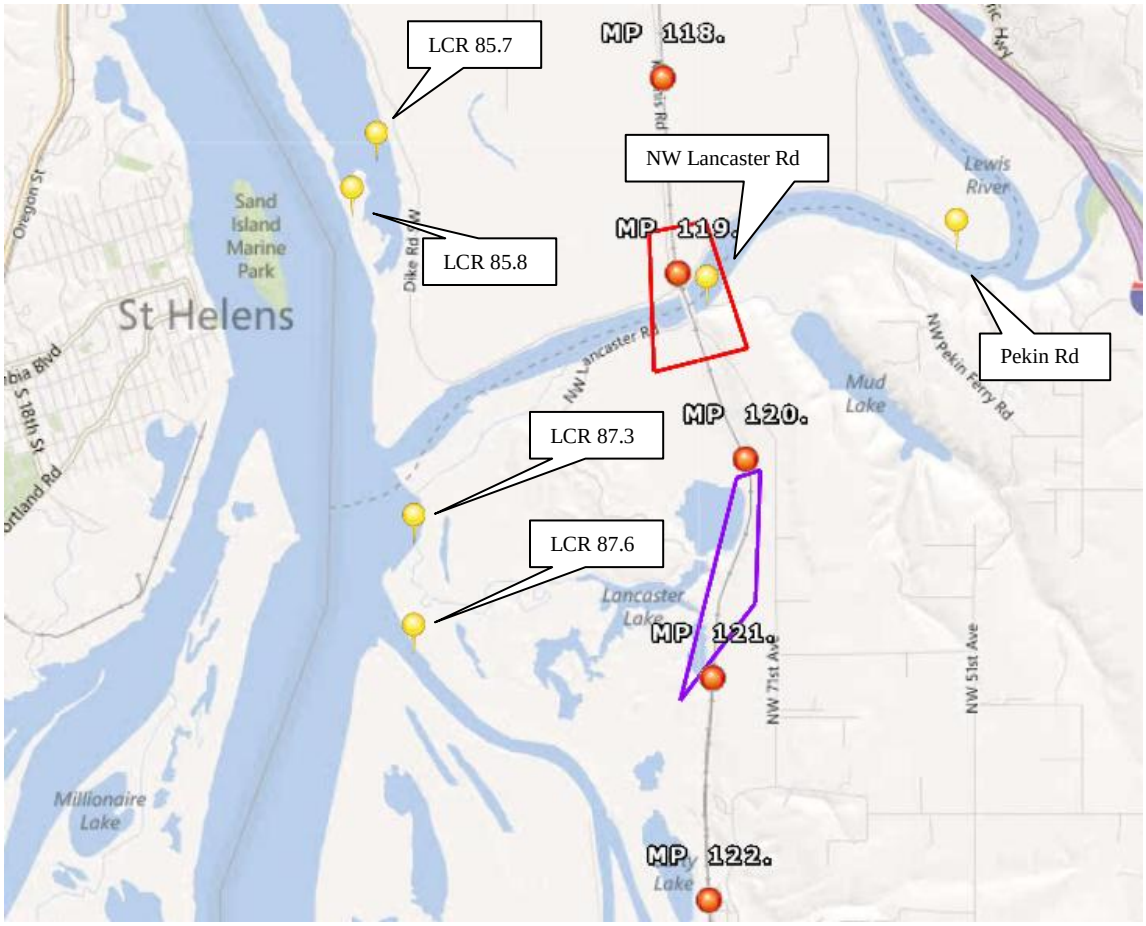
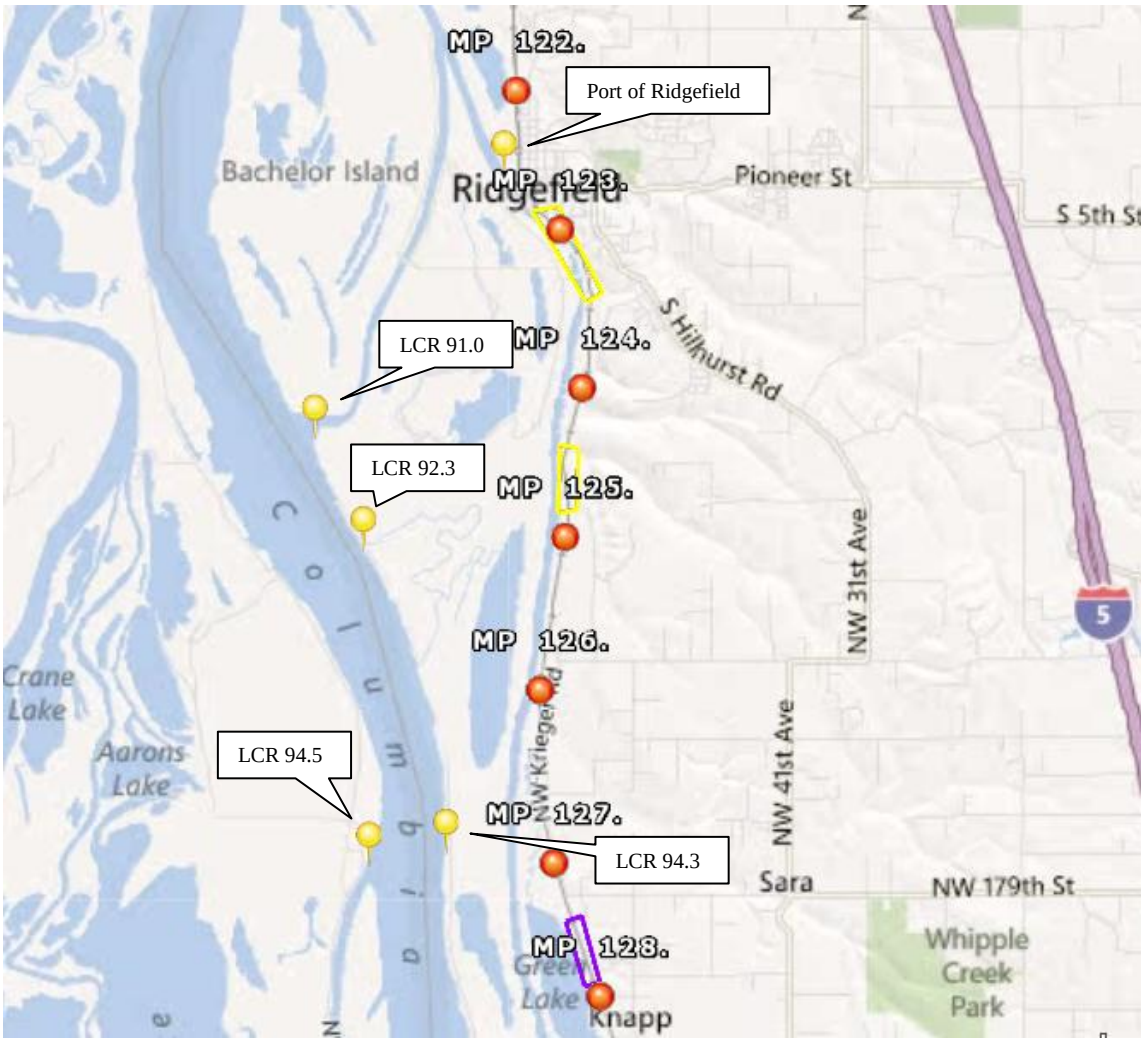


Seattle Subdivision MP 118. – 122.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Lewis River, S Pekin Road	Cowlitz County, WA		2000 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Lewis River using shoreline and bottom anchoring technique to divert product to the right descending bank, where skimming erations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
Lewis River, NW Lancaster Road	Clark County, WA		2000 ft Containment Boom 500 ft Sorbent Boom	Deploy segments of containment boom across Lewis River using shoreline and bottom anchoring technique to divert product to the left descending bank, where skimming operations can be performed. Deploy sorbent boom on downstream side of containment boom to seal collection area. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom. Consider excavating a sump to aid in recovery operations.
LCR-85.7	Goerig Slough - collection (WA) 45º-52.400'N 122º-46.725'W	Collection -Prevent oil from moving down stream.	1000'	Deploy boom from the southeast corner of the islands off Goerig Slough to the mainland shore for collection with a skimmer or vac truck.
LCR-85.8	Goerig Slough - diversion (WA) 45º-52.200'N 122º-46.905'W	Diversion - Prevent oil from moving down stream.	700'	Deploy boom at an angle from the southwest corner of the islands off Goerig Slough, up-stream into the main channel of the river to divert oil into the area behind the islands for collection.
LCR-87.3	Gee Creek (WA) 45º-50.895'N 122º-46.560'W	Exclusion - Keep oil out of the creek and slough upstream.	100'	Deploy boom across the mouth of the creek. Will likely require a shallow-draft boat.
LCR-87.6	Ridgefield NWR/ Bachelor Island Slough - north entrance (WA) 45º-50.540'N 122º-46.685'W	Exclusion - Keep oil out of slough	600'	Deploy boom across the down-river (north) end of Bachelor Island Slough. Note - oil may collect here naturally. Minimize disturbance of shoreline and back-beach areas. Use established roads only for vehicle access.

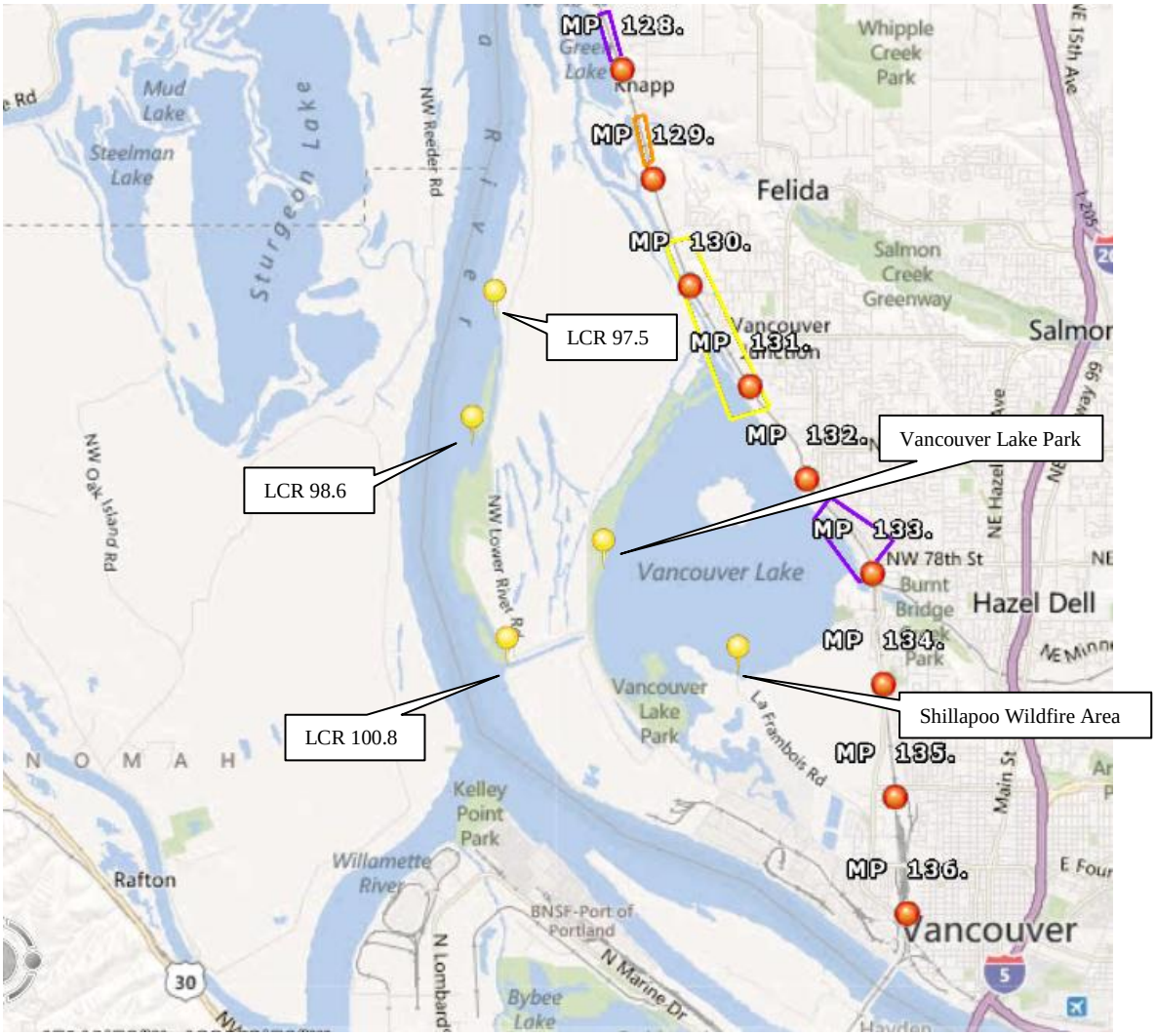
Seattle Subdivision MP 122. – 128.



Seattle Subdivision MP 122. – 128.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
Ridgefield Wildlife Refuge, Port of Ridgefield	Clark County, WA		200 ft Containment Boom	In the case of a spill that could impact the Ridgefield Wildlife Refuge immediately notify the Refuge to terminate use of water intakes. Utilize this site as a Staging Area to deploy personnel and equipment to protect Ridgefield Wildlife Management Area as needed
LCR-91.0	Ridgefield NWR/ Bachelor Island Slough - south entrance (WA) 45º-47.625'N 122º-46.385'W	Exclusion - Keep oil out of slough	600'	Deploy boom across the up-river (south) end of Bachelor Island Slough. Note - oil may collect here naturally. *Contact the USFWS to have 3 input pumps shut off - pager, 360-971-6000.*
LCR-92.3	Campbell Lake (WA) 45º-46.972'N 122º-46.083'W	Exclusion - Keep oil out of the lake.	300'	Deploy boom across the entrance to Campbell Lake.
LCR-94.3	Post Office Lake (WA) 45º-45.275'N 122º-45.303'W	Exclusion - Keep oil out of slough adjacent to lake.	200'	Deploy boom in a chevron configuration to enclose the entrance to the culvert that connects the river to the lake. The culvert entrance on the river side is a grated concrete structure about 20-30 feet from shore that is nearly flush with the river bottom. *The entrance on the lake side has stop-logs, contact the USFWS at 360-971-6000 (pager) to have someone install the stop-logs.*
LCR-94.5	Willow Bar Islands (OR) 45º-45.140'N 122º-46.060'W	Exclusion or Collection - Keep oil out of slough behind Willow Bar Islands or use for collection.	800'	Deploy boom in a chevron configuration by placing one section from the north tip of the primary Willow Bar Island to the small island to the north, and then continuing northwest to Sauvie Island. If no waterfowl are present in the slough, deploy 600' of boom to divert oil into the north end of the slough for collection; deploy 200' of boom across the slough to prevent oil from moving into the south end of the slough.

Seattle Subdivision MP 128. – 136.



Seattle Subdivision MP 128. – 136.

Strategy	Location	Response Strategy	Length of Boom	Strategy Implementation
LCR-97.5	Caterpillar Island - north end (WA) 45º-42.565'N 122º-45.555'W	Exclusion - Keep oil out of slough behind island.	500'	Deploy boom from the north tip of Caterpillar Island to the mainland shore.
LCR-98.6	Caterpillar Island - south end (WA) 45º-41.660'N 122º-45.815'W	Exclusion - Keep oil out of slough behind island.	500'	Deploy boom from the south tip of Caterpillar Island to the mainland shore.
LCR-100.8	Vancouver Lake/ Flushing Channel (WA) 45º-39.947'N 122º-45.528'W	Deflection/ Collection -Deflect oil into Flushing Channel for collection.	800'	Angle a 400' section SW into the river to deflect oil into a collection site in channel. Double boom channel with two 200' sections to protect Vancouver Lake. If necessary, valves can be closed at River Road to prevent oil from entering Vancouver Lake. This strategy is most effective with a south wind at slack water or when oil is moving along the north (east) shore. Sand bars at the mouth of the channel are dynamic and may require modification of the strategy.
Vancouver Lake, Vancouver Lake Park	Clark County, WA		3000 ft Containment Boom	Utilize open water recovery techniques. Deploy two crews, each with two boats and 350 ft. of containment boom. Prepare crews on shore to recover incoming product. Conduct aerial observation to update crews on movement of product and to divert them to pockets of product.
Vancouver Lake, Shillapoo Wildlife Area	Clark County, WA		3000 ft Containment Boom	Utilize open water recovery techniques. Deploy two crews, each with two boats and 350 ft. of containment boom. Prepare crews on shore to recover incoming product. Conduct aerial observation to update crews on movement of product and to divert them to pockets of product.