



State of Oregon
Department of
Environmental
Quality



DEPARTMENT OF
ECOLOGY
State of Washington



CLARK, COWLITZ, SW LEWIS

Geographic Response Plan

(CCSWL GRP)



CLARK, COWLITZ, SW LEWIS

Geographic Response Plan

(CCSWL GRP)

October 2015

SPILL RESPONSE CONTACT SHEET

Required Notifications for Oil Spills & Hazardous Substance Releases

Federal Notification - National Response Center	(800) 424-8802*
State Notification - Washington Emergency Management Division	(800) 258-5990*

- Other Contact Numbers -

U.S. Environmental Protection Agency	
Region 10 - Spill Response	(206) 553-1263*
- Washington Ops Office	(360) 753-9437
- RCRA/CERCLA Hotline	(800) 424-9346
- Public Affairs	(206) 553-1203

U.S. Coast Guard	
Sector Columbia River	
- Command Center	(503) 861-6211*
- Watchstander	(503) 861-2242*
- Incident Management Division	(503) 861-6477
- Marine Safety Unit Portland	(503) 240-9310
- MSU Portland Marine Env Response	(503) 240-9370
13th Coast Guard District	(800) 982-8813
National Strike Force Coordination Center	(252) 331-6000
- Pacific Strike Team	(415) 883-3311

National Oceanic Atmospheric Administration	
Scientific Support Coordinator	(206) 526-6829
Weather (NWS Portland)	(509) 244-0110

Other Federal Agencies	
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U.S. Department of Interior	(503) 326-2489

Pipeline Companies, Railroads, & Dams	
BP Olympic Pipeline	(888) 271-8880*
Burlington Northern Santa Fe Railway	(800) 832-5452*
Columbia and Cowlitz Railroad	(360) 636-6535
Lewis and Clark (Columbia Basin) Railroad	(509) 349-8102
Pacificorp (Merwin Dam)	(503) 813-6657
Tacoma Public Utilities (Mayfield Dam)	(253) 502-8530
Union Pacific Railroad	(888) 877-7267*

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Global Diving and Salvage	(206) 623-0621*
NRC Environmental Services	(800) 337-7455*

Washington State	
Dept Archaeology & Historic Preservation	(360) 586-3065
Dept of Ecology	
- Headquarters (Lacey)	(360) 407-6000
- Southwest Regional Office (Lacey)	(509) 454-7829
Dept of Fish and Wildlife	
- Oil Spill Team (24hour Pager)	(360) 534-8233*
- Region 5 (Vancouver)	(360) 696-6211
- Emergency HPA Assistance	(360) 902-2537*
Dept of Health (Drinking Water)	(800) 521-0323
- After normal business hours	(877) 481-4901
Dept of Natural Resources	(360) 902-1064
Dept of Transportation	(360) 705-7000
Washington State Parks and Recreation	(360) 902-8544
Washington State Patrol (District 5)	(360) 449-7909

Tribal Contacts	
Chehalis Confederated Tribes	(360) 273-5911
- Cultural Resources	Ext. 1304
- Natural Resources	Ext. 1606
- Public Safety	(360) 273-7051
Cowlitz Indian Tribe	(360) 575-3300
Grand Ronde Confederated Tribes	(503) 879-2424
Yakama Nation	(509) 865-5121 x6032

Local Government	
City of Castle Rock (Police)	(360) 274-4711
City of Kalama (Police)	(360) 673-2165
City of Kelso (Police)	(360) 423-1270
City of Longview (Fire)	(360) 442-5503
City of Winlock (Police)	(360) 785-3891
City of Woodland (Police)	(360) 225-6965
Clark County - CRESA	
- Police/Fire Dispatch (county-wide)	(360) 696-4461*
- Dispatch (non-emergency)	(360) 693-3111*
- CRESA Duty Officer	(360) 562-0130*
Cowlitz County (Emergency Services)	(360) 577-3130
Lewis County (Emergency Management)	(360) 740-1151

* Contact Numbers staffed 24-hour/day

Before you print this document

Chapter 4 with appendices (Pages [27-502](#)) and Appendix 6A (Pages [519-520](#)) of this document are provided in “landscape” page orientation; all other chapters and appendices are oriented in “portrait.” The appendices in Chapter 4 (Pages [127-502](#)) have been designed for duplex printing (front and back side of paper), “open to top” configuration.

Purpose and Use of this Plan

This Geographic Response Plan (GRP) constitutes the federal and state on-scene coordinators' orders during the initial phase of an oil spill: from the time a spill occurs until a Unified Command is established. Its main focus is sensitive resource protection. The plan prioritizes tactical response strategies based on locations where spills might occur and the proximity of those locations to natural, cultural, and economic resources at risk of injury. By using this document it's hoped that immediate and proper action can be taken to reduce spilled oil's impact on sensitive resources within the planning area.

After a spill occurs, control and containment at, or near, the spill source are top priorities. Beyond those efforts, the tactical response strategies provided in this plan should be implemented using the priority tables in Chapter 4, unless overflight observations, spill trajectory models, or unique circumstances dictate otherwise.

This plan also provides information about the type and location of natural and economic resources in the area. Specific information about the location of cultural sites were taken into consideration in the development of this plan but such information cannot be provided in this document due to the confidential nature of the resources.

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CHAPTER 1

INTRODUCTION

This plan focuses on sensitive resource protection after an oil spill occurs. It serves as the federal and state on-scene-coordinators' orders during the initial phase of an oil spill response in the GRP planning area. It has been approved by Regional Response Team 10 and the Chairs and Co-Chairs of the Northwest Area Committee. Changes to this document are expected as more testing is conducted through drills, site visits, and actual use in spill situations. We value your input and hope that you'll let us know how the plan might be improved. Please submit comments online at <http://www.rrt10nwac.com/Comment>. Comments may also be emailed to GRPs@ecy.wa.gov or submitted by mail using the form and information provided in the appendix of this chapter.

The GRP planning area fully resides within Clark, Cowlitz, and Lewis counties. It includes over 13 miles of the Coweman River, 51 miles of the Cowlitz River, 12 miles of the Kalama River, 17 miles of the Lewis River (including 16 miles of the East Fork), 2.6 miles of the Little Kalama River, and more than 8 miles of the Toutle River. Fully or partially, the cities of Castle Rock, Kalama, Kelso, Longview, Ridgefield, Vancouver, Winlock, and Woodland fall within the boundaries of this plan. The planning area also includes portions of Water Resource Inventory Area 23 (WRIA-23, Upper Chehalis), WRIA 25 (Grays/Elochoman), WRIA 26 (Cowlitz), WRIA 27 (Lewis), and WRIA 28 (Salmon-Washougal). The Clark, Cowlitz, and SW Lewis GRP planning area is bordered by the Chehalis GRP to the north and the Lower Columbia River GRP to the south and southwest.

The bulk of this plan is contained in Chapter 4. It provides information on tactical response strategies and the order they should be implemented, based on potential spill origin points and their proximity to sensitive resources. Area and sector maps and information on staging areas and boat launch locations are also provided in that chapter.

Control and Containment of an Oil Spill are a Higher Priority than the Implementation of GRP Response Strategies

If in the responder's best judgment, control and containment of an oil spill at or near the source of a spill isn't feasible, or if the source is controlled and contained but oil has spread out beyond initial containment, then the priorities laid out in Section 4.3 of this plan should take precedence until a Unified Command is formed. It's important to note that spill response priorities, beyond those described in this plan, should rely on aerial observations and spill trajectory modeling. A booming strategy listed as a high priority in Section 4.3 would not necessarily be implemented if a spill trajectory didn't warrant action in that area; however, the priority tables should be followed until spill trajectory information becomes available. During an incident, modifications to the deployment

priorities provided in Section 4.3 of this plan may be made if approved by the Incident Commander or Unified Command.

The downstream movement of oil and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting strategy implementation priorities. The strategies discussed in this plan have been designed for use with persistent oils that float on water and may not be suitable for other petroleum products or hazardous substances. For hazardous substance spills, refer to the [Northwest Area Contingency Plan](#) (NWACP), Chapter 7000.

Information meant to support initial Environmental Unit functions can be found in Chapter 6 (Resources at Risk). That chapter and its appendix provide specific information about the type and location of natural and economic resources in the area. Specific information about the location of cultural sites in the planning area were taken into consideration in the development of this plan but such information cannot be provided in this document due to the confidential nature of the resources.

1.1 GRP CHAPTERS AND APPENDICES

Chapter 1	Introduction
Appendix 1A	GRP Comment Form
Chapter 2	Site Description
Chapter 3	Response Options and Considerations
Chapter 4	Response Strategies and Priorities
Appendix 4A	Response Strategies (2-Pagers)
Appendix 4B	Notification Strategies (2-Pagers)
Appendix 4C	Staging Areas (2-Pagers)
Appendix 4D	Boat Launch Locations (2-Pagers)
Chapter 5	Reserved
Chapter 6	Resources at Risk
Appendix 6A	List of Economic Resources

1.2 GEOGRAPHIC RESPONSE PLAN DEVELOPMENT PROCESS

GRPs are part of the [Northwest Area Contingency Plan](#), revised and distributed separately. They've been developed for the marine and inland waters of Washington, Oregon, and Idaho. The plans are prepared through the efforts of, and in cooperation with, Washington Department of Ecology, Oregon Department of Environmental Quality, Idaho State Emergency Response Commission, U.S. Coast Guard, U.S. Environmental Protection Agency, as well as other state and federal agencies, tribal and local governments, response organizations, emergency responders, and communities. GRPs are developed through workshops and meetings with representatives of these organizations as well as local oil spill emergency response experts, industry, environmental and conservation organizations, ports, and pilots, among others. Participants identify resources that may be at risk of

injury from spills and attempt to develop oil spill response or notification strategies to reduce the chance of injury to those resources.

After compiling information on sensitive resources in the area, site visits are conducted to gather data and determine if spill response strategies near those resources should be added, modified, or deleted. In this, the anticipated effectiveness of existing strategies are reviewed, modifications made as determine necessary, potentially unsafe or ineffective strategies removed, and new strategies added to the plan. Unfortunately, the dynamics of marine and inland water environments and the present limitations of response technology make the development of strategies for all resource locations impracticable. A draft plan is produced after site visits are completed, and made available for public review and comment before a final version of the GRP is produced and published. A responsiveness summary is also published that addresses public comments received during the GRP update process.

1.3 STANDARDIZED RESPONSE LANGUAGE

In order to avoid confusion in response terminology, this plan uses standard National Interagency Incident Management System, Incident Command System (NIIMS ICS) terminology.

1.4 TERMINOLOGY AND DEFINITIONS

The glossary provided in Section 1910 of the [NWACP](#) and other sections of the area plan with glossaries independent of Section 1910 should be used when seeking the meaning of terms used in this plan.

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Appendix 1A

Comments, Corrections, or Suggestions

We value your input and hope that you'll submit comments on how this plan might be improved. If you have any questions or comments, suggestions for improvement, or find errors in this document please submit comments online at <http://www.rrt10nwac.com/Comment>, email them to us at GRPs@ecy.wa.gov, or forward them via U.S. Mail to the following agencies:

United States Environmental Protection Agency

Region 10
Office of Environmental Cleanup
1200 Sixth Avenue
Room ECL-116
Seattle, WA 98101

Washington State Department of Ecology

Spill Prevention, Preparedness, and Response (GRPs)
P.O. Box 47600
Olympia, WA 98504-7600

The form on the following page of this attachment can be used to submit comments by mail. Contact information is requested so that we can give you a call if more information or comment clarification is needed.

Please use the GRP Field Report Form for providing information on GRP strategy field visits or the testing of response strategies. The form is available online at <http://www.ecy.wa.gov/programs/spills/preparedness/GRP/Form-GRPFieldReport.pdf>. Additional information on Geographic Response Plans is available at <http://www.rrt10nwac.com/GRP>.

CHAPTER 2

SITE DESCRIPTION

2.1 CHAPTER INTRODUCTION

This chapter provides a description of the area's physical features, hydrology, climate and winds. It includes an overview of oil spill risks in vulnerable sections of Clark and Cowlitz Counties, and a portion of southwestern Lewis County. The planning area extends from Vancouver, WA to just north of Winlock (following the border of HWY 12) and inland of the Lower Columbia River from Longview southeastward to Battle Ground. In the northern half of the planning area, the GRP also follows the Cowlitz River from near its confluence with the Columbia River to the Mayfield Dam. North to South, the planning area includes the towns or cities of Winlock, Castle Rock, Kelso, Longview, Kalama, Woodland, La Center, Ridgefield, Battle Ground and Vancouver. Portions of Water Resource Inventory Area 23 (WRIA-23, Upper Chehalis), WRIA 25 (Grays/Elochoman), WRIA 26 (Cowlitz), WRIA 27 (Lewis), and WRIA 28 (Salmon-Washougal); and includes the Coweman, Cowlitz River, Kalama, Lewis, Little Kalama, and Toutle Rivers, as well as a number of smaller tributary streams. The Clark, Cowlitz, and SW Lewis GRP planning area is bordered by the Chehalis GRP to the north and the Lower Columbia River GRP to the south and southwest.

2.2 PHYSICAL FEATURES

The geographic features of the land in the Clark, Cowlitz, and SW Lewis planning area are defined by their location between the eastern flanks of the Willapa Hills/Columbia River and the western foothills of the Cascade Mountain Range. This geographic depression is a portion of the larger corridor that is part of the larger area known as the Willamette Valley-Puget Trough that runs north to British Columbia, Canada and south to Oregon.¹ Significant transportation systems in the corridor include highway, rail and pipelines routes, as well as ocean accessible ports on the Columbia River. The southern portion of the planning area is part of the greater Portland metropolitan area, other industrial centers include Longview and Kelso, surrounding industrial terrain is primarily forested with mixed farmland.

The Puget Lowland was shaped by the Cordilleran Ice Sheet, of which the Puget Lobe stretched to just south of Olympia. Since the extent of the glacier was located north of the planning area, the impacts of glacial retreat created a distinguishing mark between the planning area and the Puget

¹ Washington State Department of Natural Resources. *Geology of Washington*. Retrieved from: <http://www.dnr.wa.gov/ResearchScience/Topics/GeologyofWashington/Pages/geolofwa.aspx>

Lowland. This is predominately noted by the beginning of the glacially carved Puget Sound to the north.²

Glacial activity also played a prominent role in shaping the southern portion of the GRP area in the Portland Basin. The floods resulting from the breaking of the ice dam of ancient Lake Missoula 12,700 to 15,300 years ago (which carved out the Columbia River Gorge) also impacted the area. Through multiple cataclysmic flood events, water inundating the land and deposited large swaths of sand, clay and gravel.³ As a result, the topography of the land in this section of the planning area is made up of ancient flood plains, which are tiered from the multiple events.

Another major catalyst for geomorphology in the area is the historical impact of the volcanoes (in particular, Mount St. Helens). Volcanic events have resulted in much sediment distribution in the planning area through lahar flows along the rivers that run from the Cascades to the Columbia. The most recent example of this was the 1980 eruption of Mount St. Helens, of which the impacts of the alluvial deposits are still being mitigated.

2.3 HYDROLOGY

The planning area is predominantly rain-dependent, with the major river systems described below all being tributaries and sub-tributaries to the Columbia River.

Toutle River is a 17.2 mile long tributary of the Cowlitz. Beginning at the confluence of the North and South forks of the river at an elevation of 440 feet, it flows into the Cowlitz by Castle Rock having dropped to an elevation of 46 feet.⁴ The average discharge is 2,095 cubic feet/second.⁵ The river and its upstream headwaters were significantly impacted by the eruption of Mount St. Helens in 1980, which resulted in massive sediment displacement. A sediment retention dam was constructed by the U.S. Army Corps of Engineers following the eruption. This installation reduces alluvial deposits downstream and addresses the increased flood and navigational risks as a result of the deposits.⁶

Cowlitz River encompasses the northern half of the planning area, running on a north-south axis along the Interstate 5 corridor. The planning area for this GRP begins upstream of the river at the

² Washington State Department of Natural Resources. *Puget Lowland*. Retrieved from: <http://www.dnr.wa.gov/ResearchScience/Topics/GeologyofWashington/Pages/lowland.aspx>

³ Washington State Department of Natural Resources. *Portland Basin*. Retrieved from: <http://www.dnr.wa.gov/ResearchScience/Topics/GeologyofWashington/Pages/portland.aspx>

⁴ USGS Geographic Names Information System. *Toutle River*. Retrieved from: http://geonames.usgs.gov/apex/f?p=gnispq:3::NO::P3_FID:1509058

⁵ United States Geological Survey (2011). *14242580 TOUTLE RIVER AT TOWER ROAD, NEAR SILVER LAKE, WA*. Retrieved from: <http://wdr.water.usgs.gov/wy2011/pdfs/14242580.2011.pdf>

⁶ US Army Corps of Engineers. *Mount St. Helens*. Retrieved from: <http://www.nwp.usace.army.mil/Locations/MountStHelens.aspx>

Mayfield Dam. The water from the dam's reservoir (when full) starts at an elevation of 425 feet.⁷ After its confluence with the Toutle, the Cowlitz further drops to an elevation of 10 feet where it meets the Columbia River at Longview/Kelso.⁸ Average discharge at the Castle Rock monitoring station is at 9,122 cubic feet/second.⁹ As a tributary of the Cowlitz, sediment from the Toutle River creates a significant impact downstream. It was reported that after 33 years, 2013 marked the first year the Cowlitz flushed out more sediment than was introduced to it by the Toutle since the Mount St. Helens eruption. Despite this, sediment flow management will be an ongoing issue as the sediment loads are not expected to decline significantly in the future.¹⁰

Coweeman River is a tributary that joins the Cowlitz just upstream of its confluence with the Columbia. The headwaters for the river are at Coweeman Lake, located just to the west of Mount St. Helens at an elevation of 3,965 feet. At its confluence with the Cowlitz, the river's elevation is 23 feet.¹¹ The average discharge is 603 cubic feet/second. While the Coweeman is not sediment laden like the Toutle, its mouth has the potential to be impacted by sediment through its confluence with the Cowlitz.

Kalama River is a tributary of the Columbia. The river's confluence is located south of the Cowlitz's mouth and just north of the town of Kalama. Its headwaters originate in the Cascade Mountains in the Mount St. Helens National Volcanic Monument. Since the river originates at the Kalama Spring (elevation 2,890 ft) on the south side of Mount St. Helens, it does not experience the same sediment issues as the north side tributaries (due to impact from the north side lateral volcanic blast). The river's mouth meets the Columbia at an elevation of 10 feet.

Lewis River is a tributary of the Columbia originating in the Cascade Mountains. It drains into the Columbia north of Vancouver across the river from the town of St. Helens in Oregon. The GRP planning area covers the Lewis River upstream to the Merwin Dam. Just upstream of the confluence with the Columbia, the East Fork Lewis River meets the Lewis River. The East Fork heads upstream southeast towards Battle Ground. The Lewis River has an average discharge of 6,125 cubic feet/second.

⁷ Tacoma Public Utilities. *Mayfield Dam*. Retrieved from: <http://www.mytpu.org/tacomapower/about-tacoma-power/dams-power-sources/hydro-power/cowlitz-river-project/mayfield-dam.htm>

⁸ USGS Geographic Names Information System. *Cowlitz River*. Retrieved from: http://geonames.usgs.gov/apex/f?p=gnispq:3::NO::P3_FID:1518230

⁹ United States Geological Survey. *National Water Information System - USGS 14243000 COWLITZ RIVER AT CASTLE ROCK, WA*. Retrieved from: http://waterdata.usgs.gov/nwis/uv?site_no=14243000

¹⁰ Stepankowsky, Andre. (2014). *Cowlitz River Deepens Slightly for First Time since Mount St. Helens Eruption*. The Daily News Online. Retrieved from: http://tdn.com/news/local/cowlitz-river-deepens-slightly-for-first-time-since-mount-st/article_400a5b8c-bdd0-11e3-b2c9-001a4bcf887a.html

¹¹ USGS Geographic Names Information System. *Coweeman River*. Retrieved from: http://geonames.usgs.gov/apex/f?p=gnispq:3::NO::P3_FID:1533032

Water Resource Inventory Areas (WRIAs): Portions of WRIA 25 (Grays-Elochman), WRIA 26 (Cowlitz), WRIA 27 (Lewis), and WRIA 28 (Salmon-Washougal) fall within the planning area. Most of the precipitation within all four WRIAs arrives during the winter months, when water demands are the lowest. During the summer, the snowpack is gone, there is little rain, and naturally low stream flows are dependent on groundwater inflow. This means that groundwater and surface water are least available when water demands are the highest.

2.4 CLIMATE AND WINDS

The Clark, Cowlitz, and SW Lewis GRP planning area falls within the East Olympic-Cascade Foothills climate zone of the state. The average temperatures in January range from a high of 38 to 45 degrees (F) to a low of 25 to 32 degrees (F). In July, the average high ranges from 75 to 80 degrees (F) to a low of around 50 degrees (F). Snowfall is generally low, with an average of less than 10 inches annually in the valley. This total increases greatly with altitude in the surrounding foothills and mountains.¹⁶

Prevailing winds in the area are generally from the north to northwest in the summer, and south and south-southeast in the winter.¹² Average wind speed for the airports in the area is 4-5 mph. There is little variation throughout the year with monthly averages staying generally within a 1 mph gradation.¹³

2.5 TIDES AND CURRENTS

Flow in some sections of the rivers and streams in this plan are impacted by tides, such as the Kalama River which is tidally influenced up to Modrow Bridge (River Mile 2.8). The Lewis River and the East Fork Lewis River are also tidally influenced inland of Interstate-5. The Cowlitz and the Coweeman Rivers are tidally influenced from their mouths up through downtown Longview/Kelso.¹⁴ Currents for the rivers are dictated by the season, precipitation and flow control (as is the case of the dams on the Cowlitz, Toutle, and Lewis rivers).

¹² Western Region Climate Center. (n.d.). *Climate of Washington*. Retrieved from: <http://www.wrcc.dri.edu/narratives/WASHINGTON.htm>

¹³ Western Region Climate Center. (n.d.). *Average Wind Direction*. Retrieved from: <http://www.wrcc.dri.edu/htmlfiles/westwinddir.html>.

¹⁴ Cooney, Thomas D. and Holzer, Damon. *Lower Columbia Tule Chinook Populations: Estimating Intertidal Rearing Capacities and Survival Rates - Technical Review Draft*. National Fisheries Science Center. Pg. 9, Figure 4. Retrieved from: http://www.westcoast.fisheries.noaa.gov/publications/fishery_management/salmon_steelhead/tule-report-task-b.pdf

2.6 RISK ASSESSMENT

The Clark, Cowlitz, and SW Lewis planning area is plentiful in natural, cultural, and economic resources, all at risk of injury from oil spills. Potential oil spill risks include, but aren't limited to, road transportation, rail transportation, oil pipelines, aircraft, recreational boating, and other oil spill risks. This section briefly discusses these risks and how they could impact the area if a spill were to occur.

Road Transportation

Vehicle traffic on roadways pose an oil spill risk. Commercial trucks can contain hundreds to thousands of gallons of fuel and oil, and almost any kind of hazardous waste or material. An accident involving a fully loaded tank truck on Interstate-5 or on one of the numerous bridge crossings in the area could result in a substantial oil spill. Smaller vehicle accidents pose a similar risk, commensurate to the volume of fuel and oil they carry. Spills from vehicles onto roadways could cause fuel or oil to flow from ditches or harden surfaces into streams, creeks, wasteways, or storm water systems, ultimately impacting the local rivers and streams. Highway bridges, such as those on Interstate 5 in Centralia/Chehalis, pose the greatest risk of road spills due to the quantity of vehicles and speed of travel. However, accidents can also occur on smaller roads, particularly during extreme weather. In the upper watershed, logging and tanker truck accidents are the most likely source of a significant spill.

Rail Transportation

BNSF owns tracks that enter the planning area from the north and pass through Winlock, Vader, Castle Rock and Kelso, following and crossing the Cowlitz River. From the confluence of the Cowlitz and the Columbia Rivers, the tracks run along the Columbia through Kalama, Woodland, Ridgefield and Vancouver. This area is a section of a larger rail transportation corridor, which stretches between Canada to the north and Oregon to the south, generally parallel to Interstate 5. This area is at risk from trains carrying crude oil, refined oil and other hazardous materials.

Trains loaded with crude from the Bakken Formation in South Dakota or Alberta Oil Sands in Canada travel west from Spokane, along the Columbia River to Vancouver at the Oregon border before heading north along I-5 to refineries in Tacoma, Anacortes, Ferndale and Blaine. Trains carrying Alberta Tar Sands oil can also cross the Canadian border in Blaine and travel south to Tacoma or beyond. Each loaded tank car typically contains 30,000 gallons of crude oil. Unit trains typically carry 100 or more of these tank cars of crude. Therefore, each full unit train poses a spill risk of 3 million gallons of crude oil, and as much as 10,000 gallons of fuel for each diesel locomotive. Tanker cars carrying crude oil are also transported in smaller numbers, mixed among boxcars and tankers carrying other products. In May 2015, BNSF reported 8 to 12 trains carrying one million gallons or more of Bakken crude traversing Clark, Cowlitz and Lewis counties each week.¹³ Union Pacific and other railroads often have track-sharing rights and also run their trains along this length of track. In June 2014 Union Pacific reported that they do not run unit trains of crude in Washington State.

Oil Pipelines

Much of the Olympic Pipeline runs either through or along the extent of the planning area on its north-south axis. The pipeline carries a range of petroleum products including gasoline, diesel, and aviation turbine fuel. The pipeline has a pumping station in Castle Rock¹⁵ and several valve control structures in or near the planning area. If the pipeline were to leak or rupture, impact to sensitive resources in the area could be substantial. Oil spill control points previously identified by the Olympic Pipeline Company were visited during the GRP update process, and many are now included in this plan as GRP response strategies.

Aircraft

There is always a potential for aircraft failures during inbound and outbound flights that could result in fuel releases to water. State managed, general aviation airports within the planning area include: Ed Carlson Memorial Field - South Lewis (near Toledo), Southwest Washington Regional Airport (near Kelso), and Woodland State Airport. All three are immediately adjacent to either the Cowlitz or Lewis rivers. In addition, the planning area includes at least a dozen small, private, unpaved air strips which are frequently near or adjacent to waterways.

Recreational Boating

Accidents involving recreational boats and other craft on local rivers, creeks, or streams could result in spills of a few gallons of fuel to several dozen gallons. Accidents could include a vessel grounding, fire, sinking, or explosion. The unintentional discharge of oily bilge waste is also a concern and could impact sensitive resources in the planning area if released.

Other Spill Risks

Other potential oil spill risks in the area include road run-off during rain events, on-shore or near shore construction or farming activities where heavy equipment is being operated, and the migration of spilled oil through soil on lands adjacent to the rivers or along creek/stream banks.

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¹⁵ Olympic Pipeline Company (2013). Olympic Pipeline Company Spill Response Plan. Appendix C. Pg. C-29.

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CHAPTER 3

RESPONSE OPTIONS AND CONSIDERATIONS

Location							
Vancouver	Ridgefield	Woodland	Kalama	Longview/Kelso	Castle Rock	Toledo	Winlock

Waterbody	Rivers
	Creeks
	Lakes
	Pool Area formed by Dam
	Tidally Influenced Areas
	Wetland Area(s)
	Intermittent Streams (Seasonal Flow)

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Potential Response Options	Source Control and Containment Activities
	Aerial / Vessel Surveillance Activities
	Wildlife Rescue and Rehabilitation Activities
	Air Boat Use (Areas Recommended)
	Collection for Skimming Operations <i>(Note:1)</i>
	Vessel Based Skimming Operations <i>(Note:2)</i>
	Shore Based Skimming Operations <i>(Note:3)</i>
	Shoreside Protection Booming <i>(Note:4)</i>
	Shoreside Cleanup Activities <i>(Note: 5)</i>
	In-Situ Burning <i>(Note: 8)</i>
Dispersant Use <i>(Note: 9)</i>	

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Considerations	Shoreside Access can be Limited by Geography
	Shoreside Access can be Limited by Private
	State or National Wildlife Refuge / Recreation
	Threatened/Endangered Terrestrial Species <i>(Note: 5)</i>
	Public or Commercial Marina(s) in Area
	Commercial Vessel Movement / Port Area
	Recreational Boat Traffic
	Tribal Lands or U and A Interests <i>(Note: 7)</i>
	Historic / Cultural District(s) in Area
	Dam(s) in Area
	Interstate Highway Corridor
	Oil Movement by Rail in Area
	Oil Pipeline(s) in Area

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See the Northwest Area Contingency Plan (NWACP - Section 1900) for more information on the terminology used on this sheet. The NWACP is available online at <http://www.rrt10nwac.com/NWACP/Default.aspx>.

Note 1: Collection for Skimming Operations response options should include use of enhanced skimming using a U-boom, V – boom, or J – boom configuration in waters large enough for boats to maneuver (e.g., lake, large river).

Note 2: Vessel Based Skimming Operations response options should include use of advancing skimmers: weir, belt, brush, drum, or other skimmer types.

Note 3: Shore Based Skimming Operations response options should include use of fixed skimmers: weir, belt, brush, drum, or other skimmer types.

Note 4: Shoreline Protection should include the deployment of response strategies (boom) to divert and collect oil off of the water before shoreline areas are impacted, or deflect and exclude oil away from shoreline areas. These strategies include those published in this document (GRP response strategies), those provided in other plans (e.g., facility contingency plans), and “ad-hoc” strategies developed during the spill itself. A culvert block or underflow dam might be installed to aid in the recovery of spilled oil in small streams or those with intermittent flow.

Note 5: Shoreside Cleanup options depend on safe and efficient access to locations and the type of river, creek, or stream bank present. Potential activities could include flooding, flushing, manual removal, vacuum, mechanical removal, sorbents, vegetation cutting, mechanical tilling/aeration, and/or sediment reworking/surf washing.

Note 6: More information available in Chapter 6. Response and cleanup in these areas may require coordination with Federal or State Fish and Wildlife staff to reduce disturbances to upland species.

Note 7: This sheet doesn’t represent all locations where Tribes and Tribal Nations have lands or areas of specific interest (including lands established by treaty or rights to Usual and Accustom areas). Early coordination with tribal governments is highly recommended during a response, regardless of the spill location or potential impact areas.

Note 8: No pre-approved locations for in-situ burning fall within this GRP area.

Note 9: No pre-approved locations for use of dispersants fall within this GRP area.

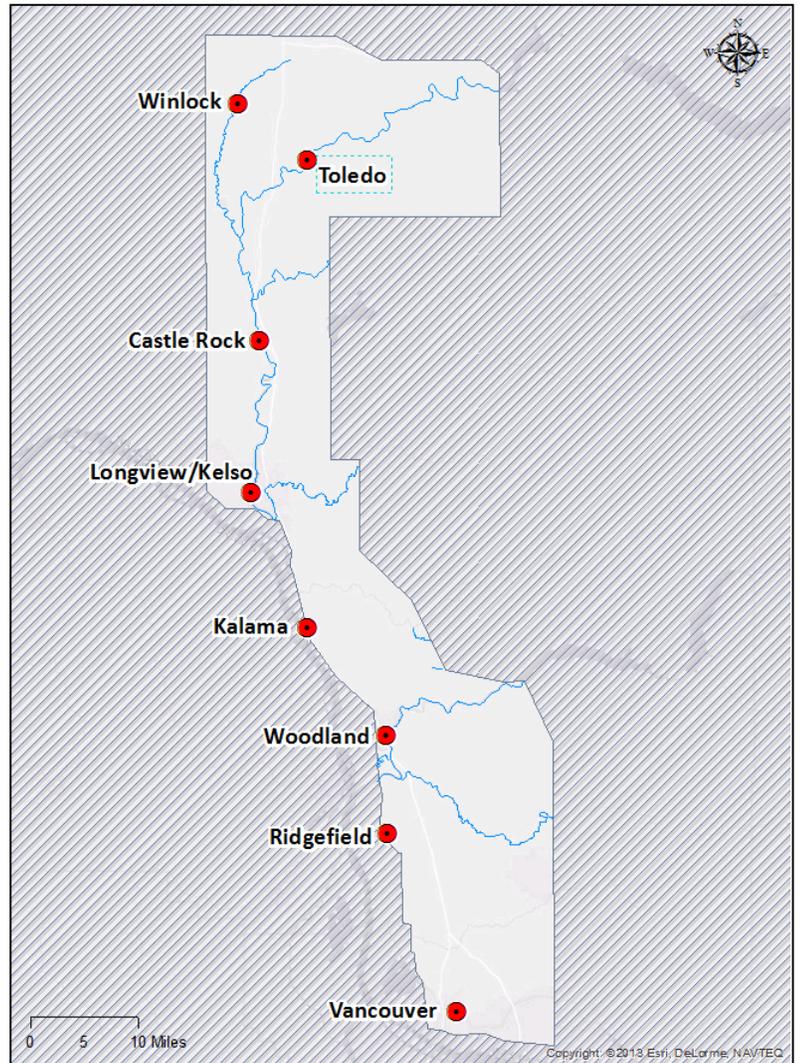


Figure 3-1: Response Options and Considerations Area

CLARK / COWLITZ
GEOGRAPHIC RESPONSE PLAN

(CCSWL GRP)

CHAPTER 4

RESPONSE STRATEGIES AND PRIORITIES

October 2015

4.1 CHAPTER INTRODUCTION

This chapter provides information on GRP response strategies and the order (priority) they should be implemented based on Potential Oil Spill Origin Points (POSOPs), and the proximity of sensitive resources to them. Area maps, sector maps, and information on staging areas and boat launch locations are also provided in this chapter. During a spill incident, GRP response strategies should be implemented as soon as possible. Unless circumstances unique to a particular spill situation dictate otherwise, the priority tables in Section 4.3 should be used to decide the order that GRP strategies are deployed. The movement of oil and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting implementation priorities. Response equipment type and location information can be found on the Western Response Resource List (WRRL). The WRRL is available online at <http://www.wrri.us>. Information on shoreline countermeasures can be found in the Northwest Area Shoreline Countermeasures Manual (NWACP Section 9420). The Northwest Area Contingency Plan (NWACP) is available online at <http://www.rrt10nwac.com/NWACP/Default.aspx>.

The GRP strategies provided in this chapter have been created to reduce spilled oil's impact on sensitive resources. They are not everything that should or could be done during a response to lessen the chance of injury to natural, cultural, and economic resources at risk from oil spills. Although designed to be implemented during the initial phase of an oil spill, GRP strategies may continue to be used throughout a response at the discretion of the Incident Commander or Unified Command.

4.1.1 On-site Considerations:

Before Deploying a GRP Strategy: (Questions to Ask)

- Are conditions safe? Response managers and responders must first determine if efforts to implement a response strategy would pose an undue risk to worker safety or the public, based on conditions present during the time of the emergency. No strategy should be implemented if doing so would threaten public safety or present an unreasonable risk to the safety of responders.
- Has initial control and containment been sufficiently achieved? Source control and containment of the spill at or near the source of a spill are always higher priorities than the deployment of GRP response strategies, especially when concurrent response activities are not possible.
- How far downstream or out into the lake or marine environment is the spilled oil likely to travel before response personnel will be ready and able to deploy GRP response strategies?

- Are emergency permits required? Consult the Northwest Area Contingency Plan Permit Summary Table ([NWACP Section 9401](#)) for information specific to your location and circumstance.
- Will equipment or vehicles need to be staged on or near a roadway? If so, traffic control may be required. Contact the Washington State Patrol or local, county, municipality, or tribal police for assistance. At minimum, [Washington Department of Transportation \(WADOT\) guidelines](#) for work zone traffic control should be followed when working on or near a roadway.
 - Washington State Patrol (District 5 - Vancouver): (360) 449-7909
 - Washington State Patrol (Chehalis Detachment): (360) 748-2194
 - Washington State Patrol (Kelso Detachment): (360) 578-4147
 - Clark County Emergency Services (CRESA) (360) 696-4461 *(Emergency Dispatch for all of Clark County and Vancouver)*
 - Cowlitz County Sheriff: (360) 577-3092
 - Lewis County Sheriff: (360) 748-9286
 - City of Castle Rock Police (360) 274-4711
 - City of Kalama Police (360) 673-2165
 - City of Kelso Police (360) 423-1270
 - City of Longview Police (360) 442-5800
 - City of Winlock Police (360) 785-3891
 - City of Woodland Police (360) 225-6965

During Strategy Implementation (Things to Remember)

- On-scene conditions (weather, currents, tides, waves, river speed, and debris) may require that strategies be modified in order to be effective. There is a significant chance that weather and conditions experienced at a particular strategy location during an actual spill event will be different from that when data was gathered during field visits. Response managers and responders must remain flexible and modify the strategies provided in this chapter as needed to meet the challenges experienced during an actual response.
- Certain strategies may call for access points or staging areas that are not easily reached at all times of the year or in all conditions.
- Oil containment boom must be free of twists, gaps, and debris in order to remain effective.
- The GRP response strategies provided in this chapter were designed for use with persistent heavy oils that float on water and may not be suitable for other petroleum products or hazardous substances.

After Strategy Implementation (Things to Understand)

- Oil containment boom should be maintained and periodically monitored to ensure its effectiveness. Changes in river or current speed will likely require modifications to boom deflection angles (see Table 4-9). Depending on conditions, some booming strategies may require around-the-clock tending.
- Although designed for implementation during the initial phase of an oil spill, GRP strategies may continue to be deployed and implemented throughout the entire lifespan of a response, as determined appropriate and necessary by the Incident Commander or Unified Command.

Water Speed and Boom Deflection Angle

Measure the speed that water is moving by anchoring a line with two floating markers/buoys attached that are spaced 100 feet apart. Time the movement of floating debris between the two buoys, and then use Table 4.1 to estimate the water speed based on the travel time of the debris between the two buoys. You can also measure 100 feet along a straight portion of river bank or shoreline, and time the movement of debris between those points, but this method is generally less accurate than using the buoys. The maximum boom deflection angle is also provided in the table, based on the water speed measurements.

4.1.2 Historical River Streamflow Ranges:

Streamflow data from U.S. Geological Survey (USGS) was used to determine the mean monthly discharge for rivers and streams in the planning area. Stream discharge is recorded in cubic feet per second (cfs); velocities in miles per hour (mph) or nautical miles per hour (knots) are not available. Table 4.1 provides information that can be used to calculate local river velocities on-site, based on the time it takes a floating object to drift 100 feet downstream from any given point in a river or creek. Additional information for USGS gage stations in the planning area are provided below (hyperlinked column headers), and may include real-time or near real-time streamflow data. The USGS National Water System Mapper is useful for locating gage stations of interest, and is available online at <http://maps.waterdata.usgs.gov/mapper/index.html>.

Table 4-1: Water Speed Drift Measurement Table

Time to Drift 100 Feet (seconds)	Velocity (ft/sec)	Velocity (m/sec)	Velocity (knots)	Max Boom Deflection Angle (degrees)	Boom required for 100-foot Profile to Current (feet)	Anchors needed if Placed Every 50 feet (number)
6	16.7	5.1	10.00	4.0	1,429	30
8	12.5	3.8	7.50	5.4	1,071	22
10	10.0	3.1	6.00	6.7	857	18
12	8.3	2.5	5.00	8.0	714	15
14	7.1	2.2	4.29	9.4	612	13
17	5.9	1.8	3.53	11.4	504	11
20	5.0	1.5	3.00	13.5	429	10
24	4.2	1.3	2.50	16.3	357	8
30	3.3	1.0	2.00	20.5	286	7
40	2.5	0.8	1.50	27.8	214	5
60	1.7	0.5	1.00	44.4	143	4
>86	≤1.2	≤0.35	≤0.70	90.0	100	3

Source: *Oil Spill Response in Fast Currents. A Field Guide. U.S. Coast Guard Research and Development Center. October, 2001*

Table 4-2: Historic stream flow for Cowlitz, Lewis, and Toutle Rivers

<i>Monthly average flow in Cubic Feet per Second (cfs)</i>				
	Toutle River at Tower Road USGS 14242580	Lewis River at Ariel USGS 14220500	Cowlitz River at Castle Rock USGS 14243000	Cowlitz River below Mayfield Dam USGS 14238000
Jan	3,630	7,700	14,400	8,850
Feb	3,180	7,150	12,800	8,000
Mar	3,050	6,210	10,900	6,540
Apr	2,760	5,320	10,400	6,690
May	2,270	4,900	10,600	7,360
Jun	1,710	3,700	9,540	7,110
Jul	840	1,950	5,420	4,360
Aug	513	1,320	3,140	2,680
Sep	498	1,920	3,050	2,610
Oct	924	3,030	4,880	3,730
Nov	2,830	6,250	11,000	7,410
Dec	3,330	7,850	15,100	9,720

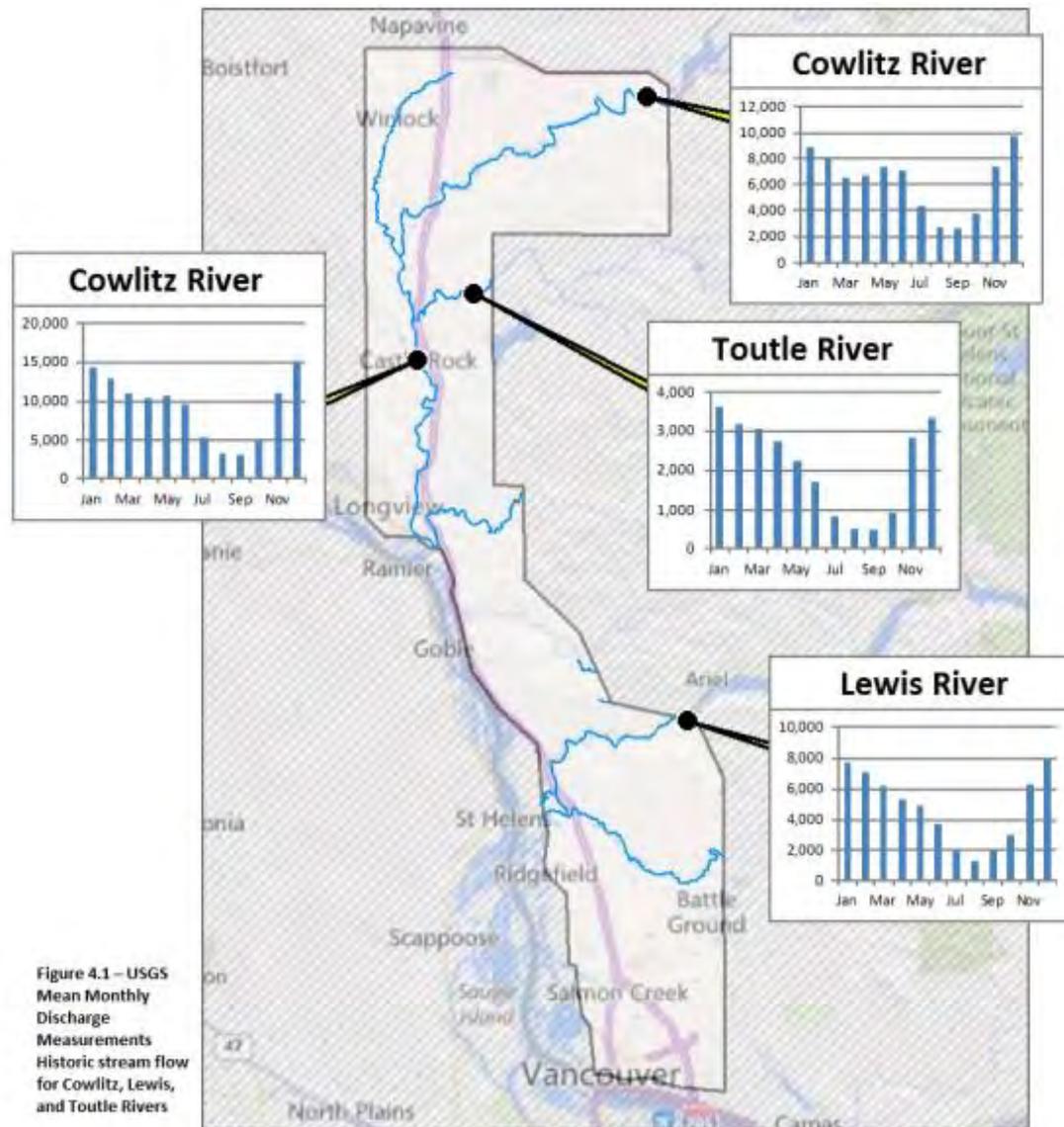


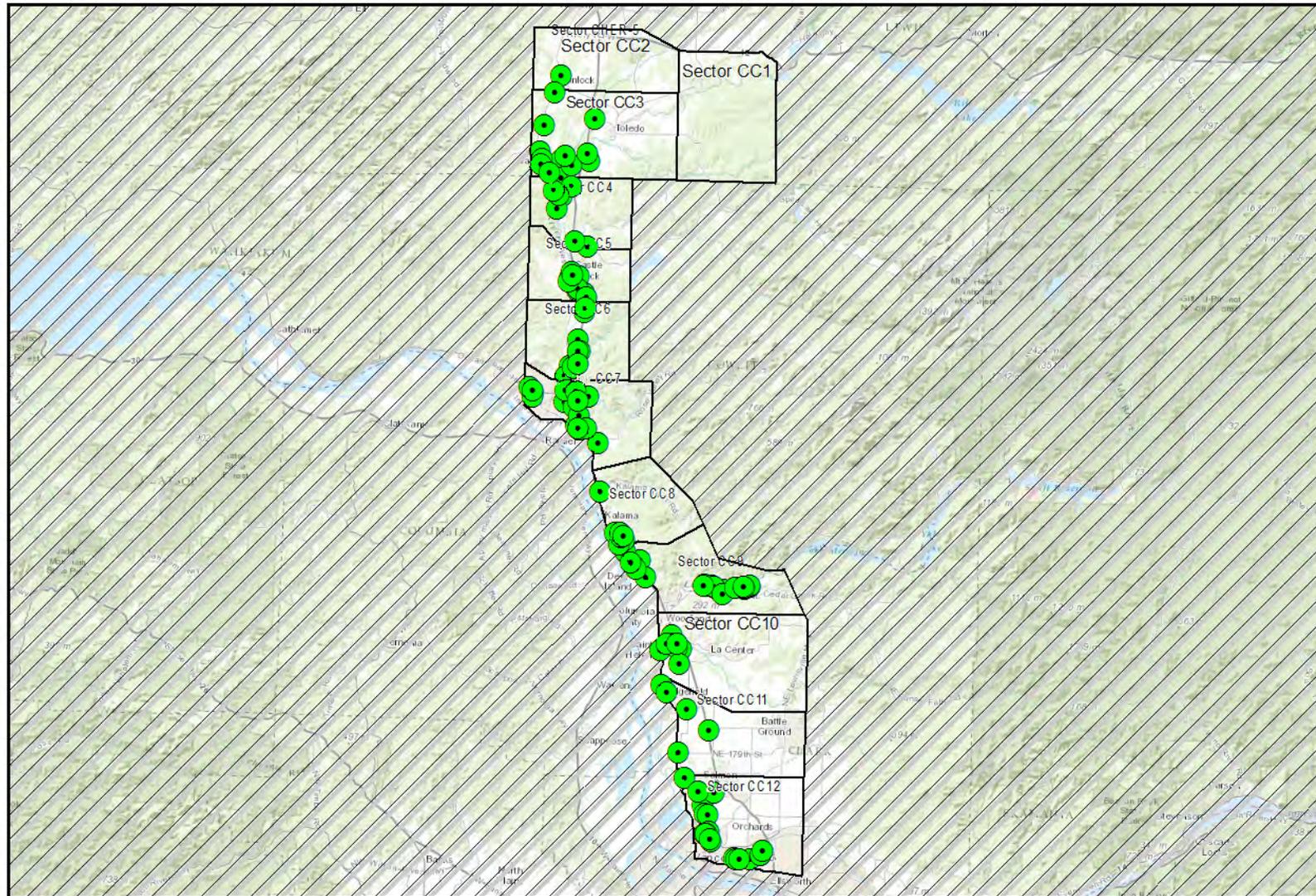
Figure 4-1: Historic Streamflow for Cowlitz, Lewis, and Toutle Rivers

4.2 AREA OVERVIEW MAPS

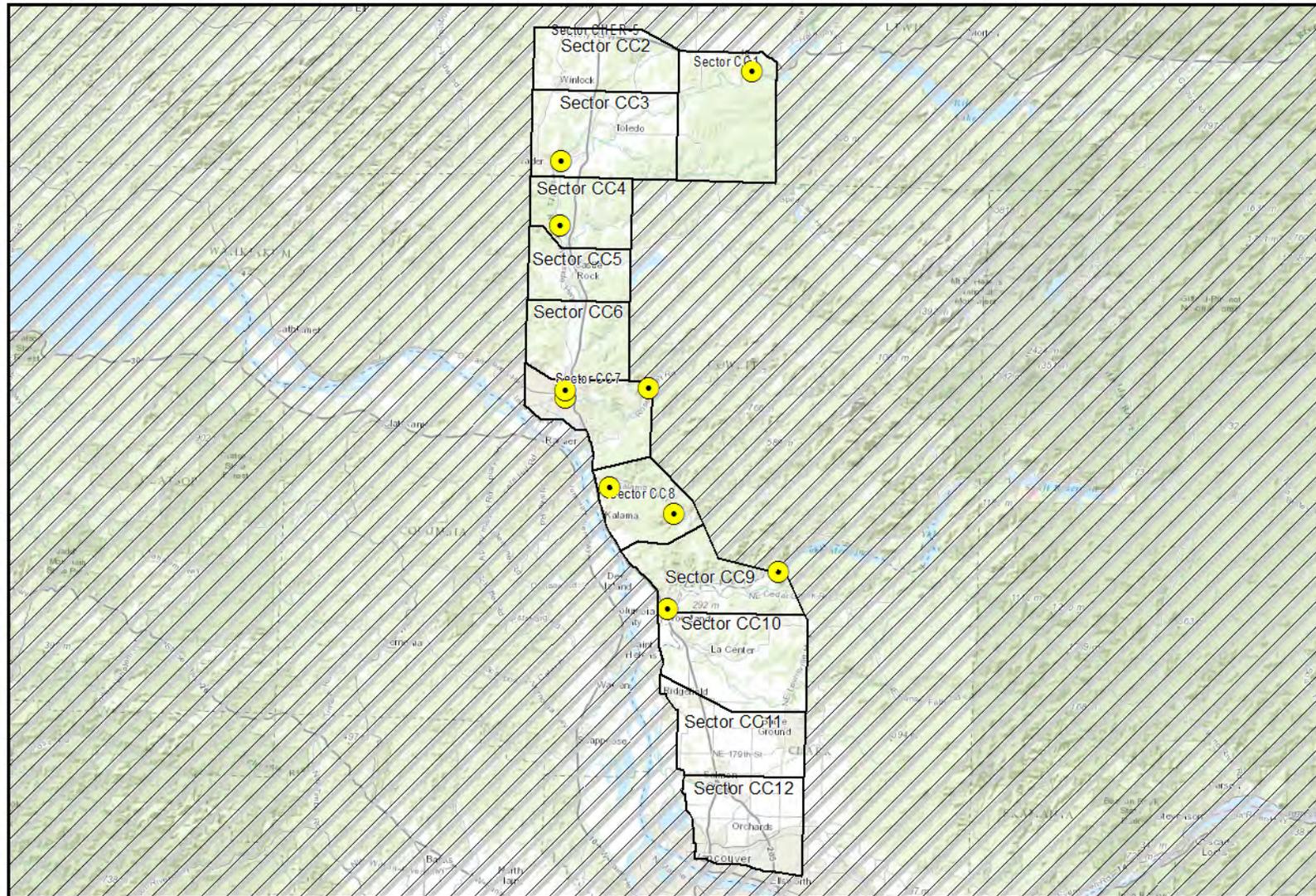
The following maps provide a geographic overview of the Clark, Cowlitz, and SW Lewis GRP area. Sector maps in Section 4.4 of this chapter provide more detail on the location of response strategies, notification strategies, staging areas, boat launch locations, and POSOPs. Detailed information for each location can be found in the matrices of Section 4.5 or in the chapter appendices. Priority tables for potential oil spill origin points can be found in Section 4.3.2.

The following area maps are provided for reference:

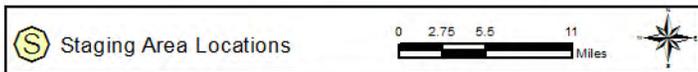
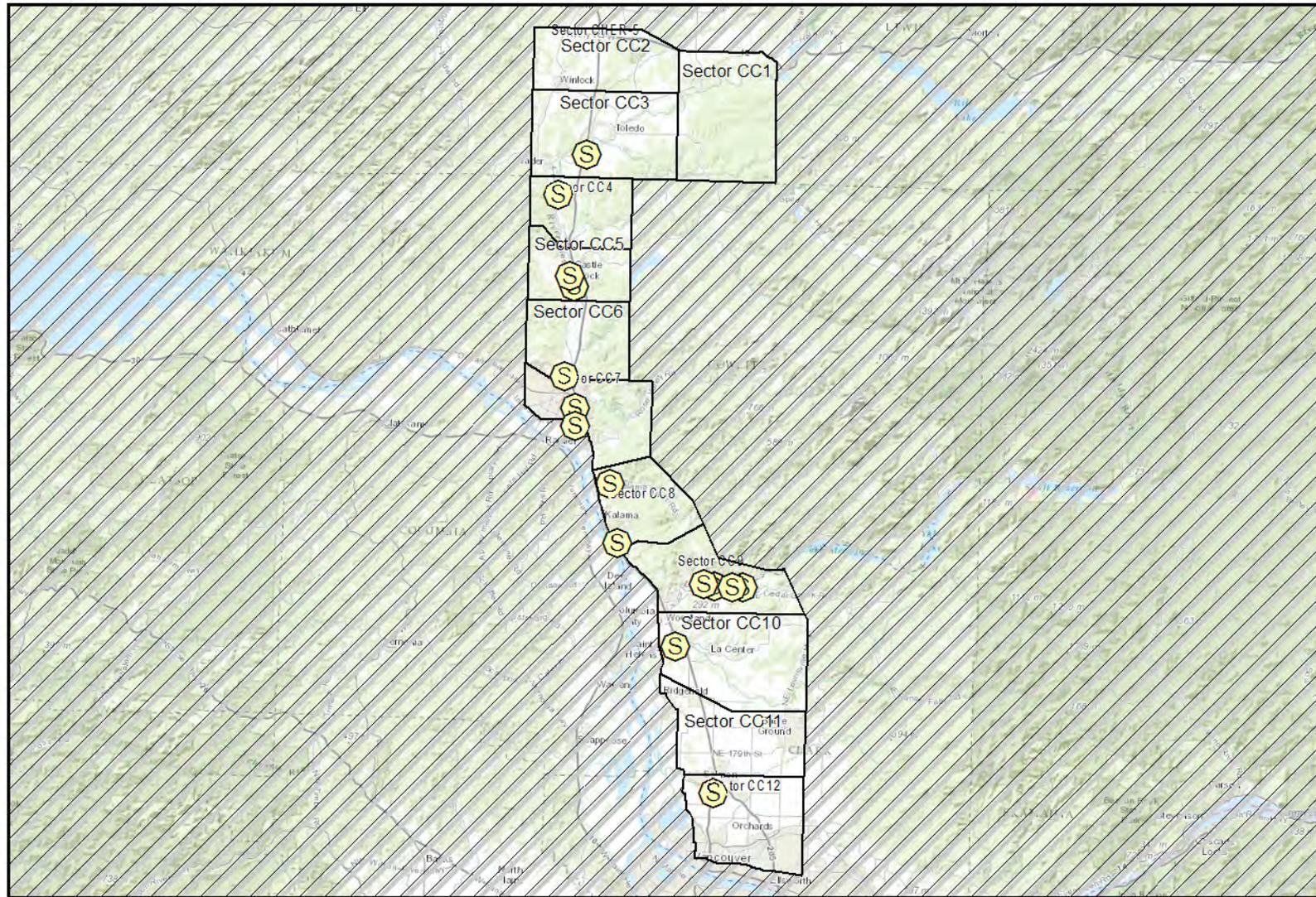
- Response Strategy Locations
- Notification Strategy Locations
- Staging Areas
- Boat Launch Locations
- Potential Oil Spill Origin Points



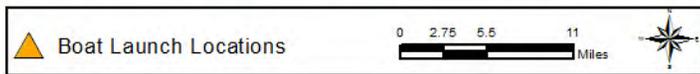
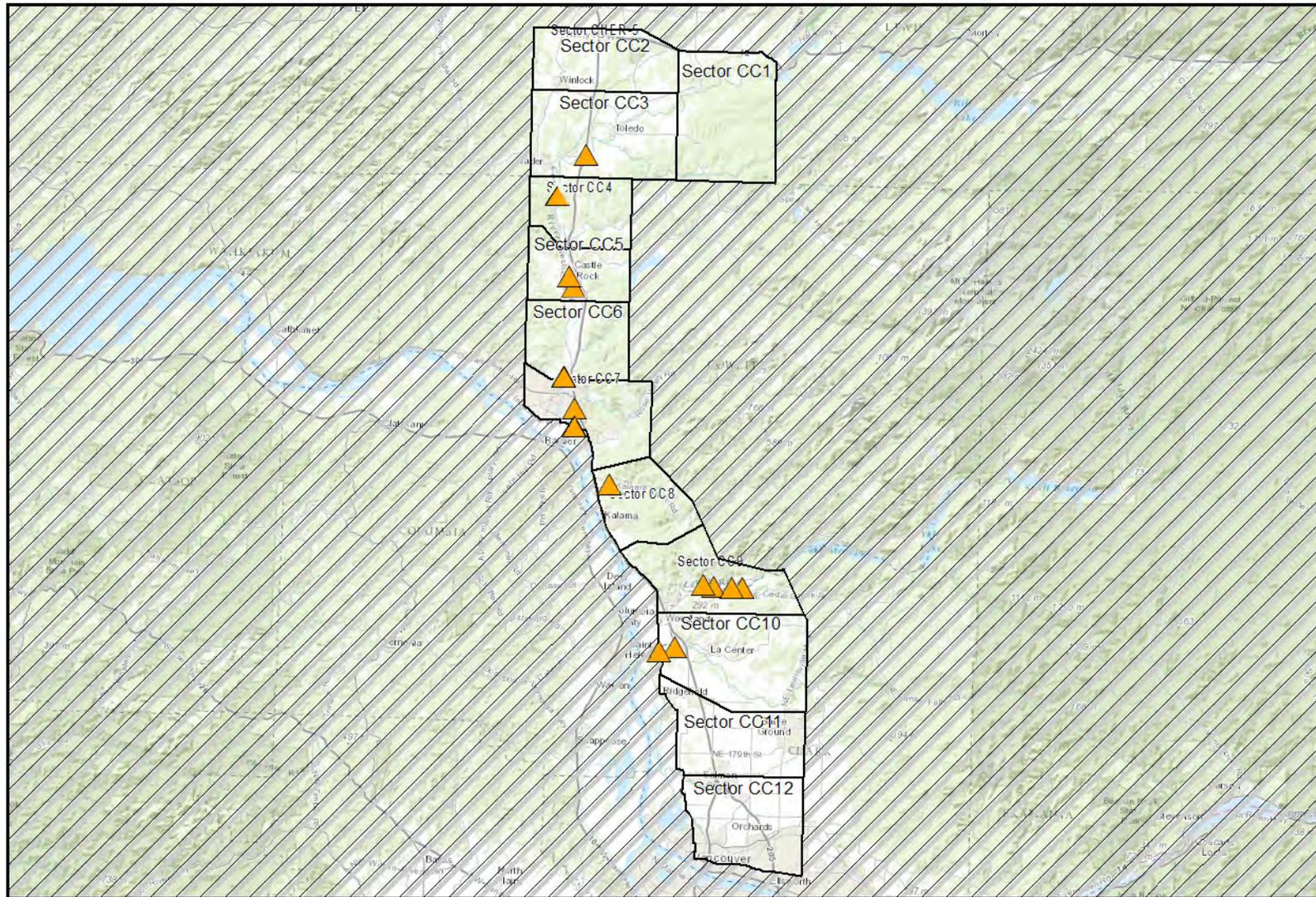
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,



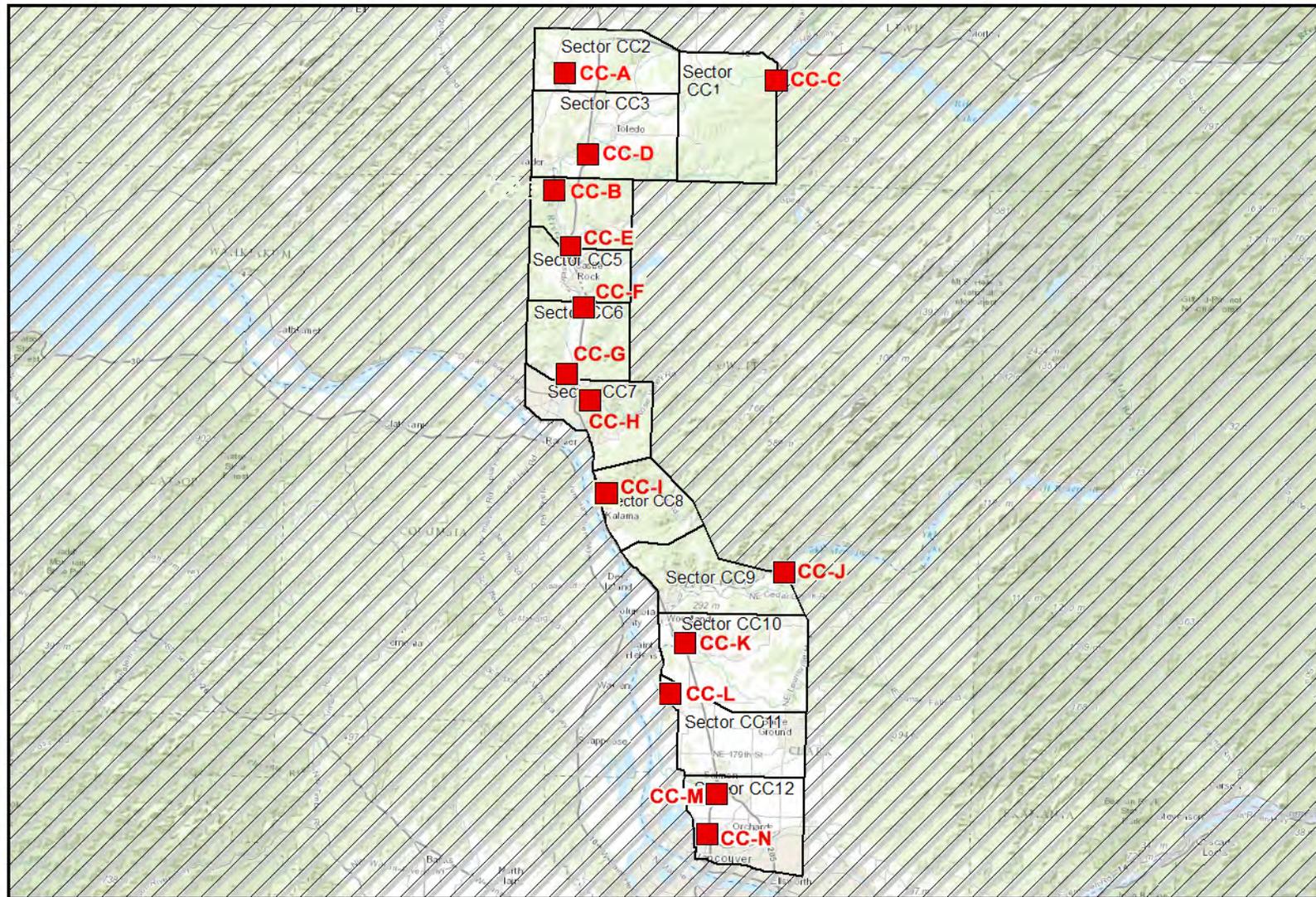
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,

4.3 STRATEGY AND RESPONSE PRIORITIES

4.3.1 General Response Priorities

The following list provides the order of response priorities after an oil spill.

1. Safety is always the number one priority. Do not implement GRP strategies or take actions that will unduly jeopardize public, worker, or personal safety.
2. Notify local public health and safety personnel.
3. Control and contain the source of the spill; mobilize resources to the spill location. Source control and containment are always a higher priority than the implementation of GRP strategies.
4. Determine the priority or order GRP strategies should be implemented based on the location of the spill or affected area. Priorities based on POSOPs are included in this chapter and should be used unless the situation or circumstances dictate otherwise (see Section 4.3.2).
5. As response resources become available, implement the GRP Strategies in order of priority.
6. In Washington State, if strategy implementation reduces, interrupts, or diverts the flow of water in streams, including the installation of a culvert block or underflow dam, an Emergency HPA must be obtained from WDFW (24-hour pager: (360) 534-8233). Other permits may also be required; see the [Northwest Area Contingency Plan \(Section 9401\) Permit Summary Table](#) for information.

4.3.2 Strategy Priorities based on Potential Oil Spill Origin Points

The following tables provide the strategy implementation order for Potential Oil Spill Origin Points (POSOPs) in the planning area. These points are displayed on area overview and sector maps as red boxes. In establishing response priorities, or selecting an appropriate POSOP, the downstream movement of spilled oil and the time it takes to mobilize and deploy response resources must be considered. Generally, GRP strategies should first be implemented downstream, well beyond the furthest extent of the spill, and then continued upstream towards the spill source.

Source control and containment are a higher priority than GRP strategy implementation

Table 4-3: Strategy Implementation Priorities for Point "CC-A"

"CC-A" (<i>Olequa Creek in Winlock</i>)				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	OLQAC-4.8	<u>57</u>	<u>105</u>	<u>359</u>
2	OLQAC-7.9	<u>57</u>	<u>106</u>	<u>361</u>
3	OLQAC-10.9	<u>57</u>	<u>106</u>	<u>363</u>
4	OLQAC-12.4	<u>56</u>	<u>106</u>	<u>365</u>
5	OLQAC-3.7	<u>57</u>	<u>105</u>	<u>357</u>
6	OLQAC-2.6	<u>57</u>	<u>105</u>	<u>355</u>
7	OLQAC-0.5	<u>58</u>	<u>104</u>	<u>353</u>
8	CWLZR-23.6	<u>58</u>	<u>86</u>	<u>221</u>

Table 4-4: Strategy Implementation Priorities for Point "CC-B"

"CC-B" <i>(Olequa Creek at Westside Highway - Hwy 411)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	CWLZR-17.2	59	84	213
2	CWLZR-17.4	59	85	215
3	CWLZR-17.75	59	85	217
4	CWLZR-18.0	59	85	219
5	CWLZR-23.6	58	86	221
6	OLQAC-0.5	58	104	353
7	CWLZR-15.9	59	84	211
8	CWLZR-15.8L	59	84	207
9	CWLZR-15.8R	59	84	209

Table 4-5: Strategy Implementation Priorities for Point "CC-C"

"CC-C" <i>(Cowlitz River below Mayfield Dam)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	CWLZR-29.9	57	88	233
2	CWLZR-28.4	57	87	231
3	CWLZR-27.4	57	87	229
4	CWLZR-26.5	57	87	227
5	CWLZR-26.0	58	86	225
6	CWLZR-24.7	58	86	223
7	CWLZR-23.6	58	86	221

Table 4-6: Strategy Implementation Priorities for Point "CC-D"

"CC-D" <i>(Cowlitz River at Interstate-5)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	CWLZR-18.0	59	85	219
2	CWLZR-23.6	58	86	221
3	CWLZR-24.7	58	86	223
4	CWLZR-26.0	58	86	225
5	CWLZR-26.5	57	87	227
6	CWLZR-27.4	57	87	229
7	CWLZR-28.4	57	87	231
8	CWLZR-29.9	57	88	233
9	CWLZR-17.75	59	85	217

Table 4-7: Strategy Implementation Priorities for Point "CC-E"

"CC-E" <i>(Toutle River at Interstate-5)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	CWLZR-14.1	60	83	205
2	CWLZR-15.8L	59	84	207
3	CWLZR-15.8R	59	84	209
4	CWLZR-15.9	59	84	211
5	CWLZR-17.2	59	84	213
6	CWLZR-17.4	59	85	215
7	CWLZR-17.75	59	85	217
8	CWLZR-18.0	59	85	219
9	CWLZR-7.4	60	83	203

Table 4-8: Strategy Implementation Priorities for Point "CC-F"

"CC-F" <i>(Cowlitz River downstream from Castle Rock)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	CWLZR-7.4	60	83	203
2	CWLZR-14.1	60	83	205
3	CWLZR-7.25	60	83	201
4	CWLZR-6.3	60	83	199
5	CWLZR-5.6	61	82	197
6	CWLZR-5.2	61	82	195
7	CWLZR-4.3	61	81	193

Table 4-9: Strategy Implementation Priorities for Point "CC-G"

"CC-G" <i>(Cowlitz River at Railroad Bridge - Longview / Kelso)</i>					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	CWLZR-1.0	NA	NA	185	Lower Columbia River GRP
2	CWLZR-1.65	62	81	191	
3	CWLZR-4.3	61	81	193	
4	CWLZR-5.6	61	82	197	
5	CWLZR-6.3	60	83	199	
6	CWLZR-1.3	61	81	187	
7	CWLZR-1.45	62	81	189	
8	CWMR-0.02	62	89	241	

Table 4-10: Strategy Implementation Priorities for Point "CC-H"

"CC-H" <i>(Coweeman River upstream from Interstate-5)</i>					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	CWLZR-1.0	NA	NA	185	Lower Columbia River GRP
2	CWLZR-1.3	61	81	187	
3	CWMR-0.02	62	89	241	
4	CWMR-0.1	62	89	243	
5	CWMR-0.15	62	89	245	
6	CWMR-0.2	62	89	247	
7	CWMR-0.35	62	90	249	
8	CWMR-0.5	62	90	251	
9	CWMR-1.15	62	90	253	

Table 4-11: Strategy Implementation Priorities for Point "CC-I"

"CC-I" <i>(Kalama River upstream from Interstate-5)</i>					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	KLMAR-0.7	NA	NA	287	Lower Columbia River GRP
2	KLMAR-1.5	63	96	289	
3	LCR-71.5M	NA	NA	295	Lower Columbia River GRP
4	LCR-71.6R	NA	NA	297	Lower Columbia River GRP
5	LCR-73.7L	NA	NA	299	Lower Columbia River GRP

Table 4-12: Strategy Implementation Priorities for Point "CC-J"

"CC-J" <i>(Lewis River below Merwin Dam)</i>				
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
1	LEWR-16.1b	65	103	343
2	LEWR-15.5a	65	101	333
3	LEWR-12.5	65	100	325
4	LEWR-12.3b	65	100	323
5	LEWR-12.2	65	99	319
6	LEWR-13.3	65	101	327
7	LEWR-13.8	65	101	329
8	LEWR-14.9	65	101	331

Table 4-13: Strategy Implementation Priorities for Point "CC-K"

"CC-K" <i>(Lewis River East Fork at Interstate-5)</i>					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	LEWR-0.4	NA	NA	301	Lower Columbia River GRP
2	LEWR-1.9	67	303	303	
3	LEWR-2.3	67	305	305	
4	LEWR-3.4	67	307	307	
5	ELEWR-0.2	67	271	271	

Table 4-14: Strategy Implementation Priorities for Point "CC-L"

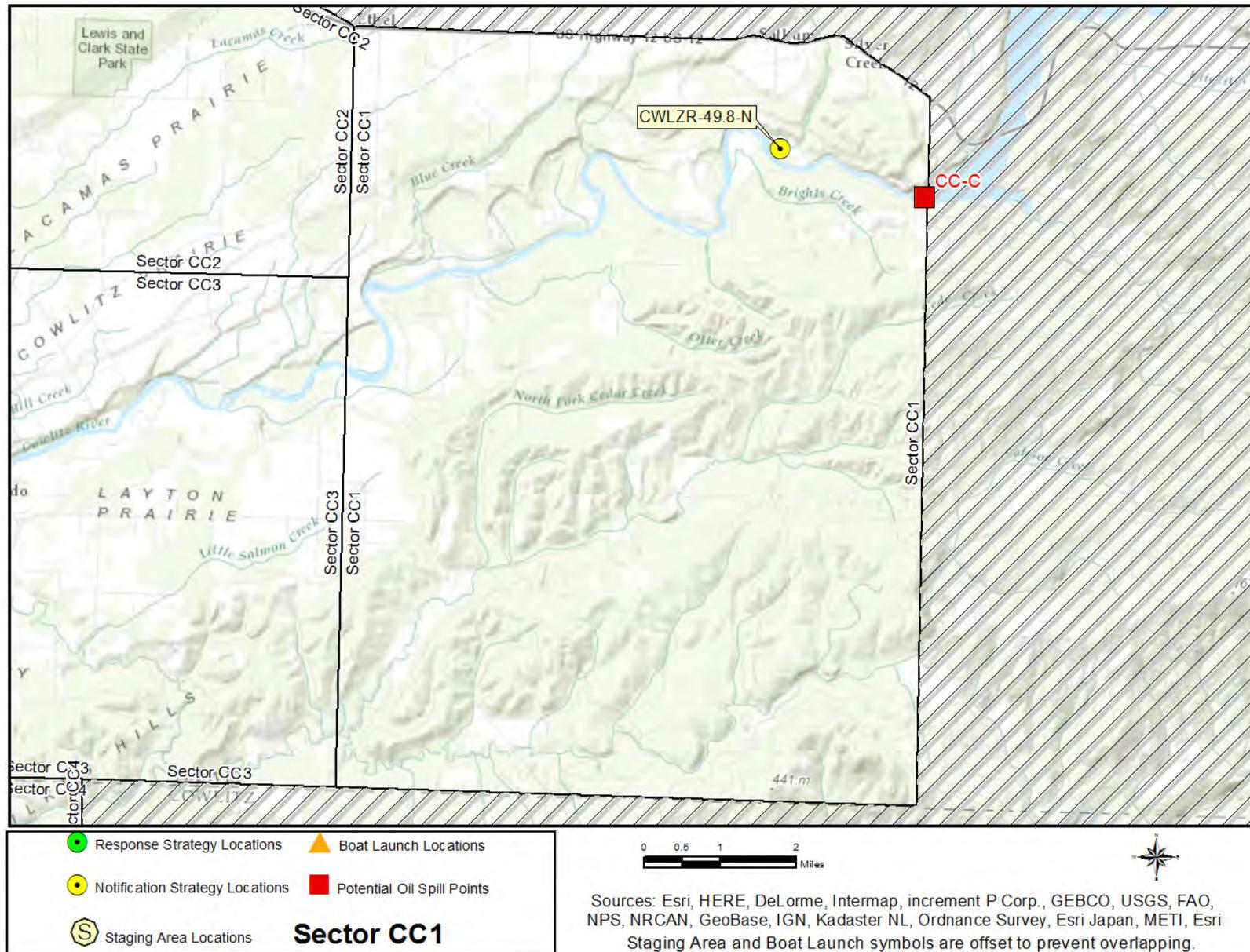
"CC-L" (Gee Creek in Ridgefield)					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	GEEC-3.8	68	275	275	
2	GEEC-4.7	68	277	277	

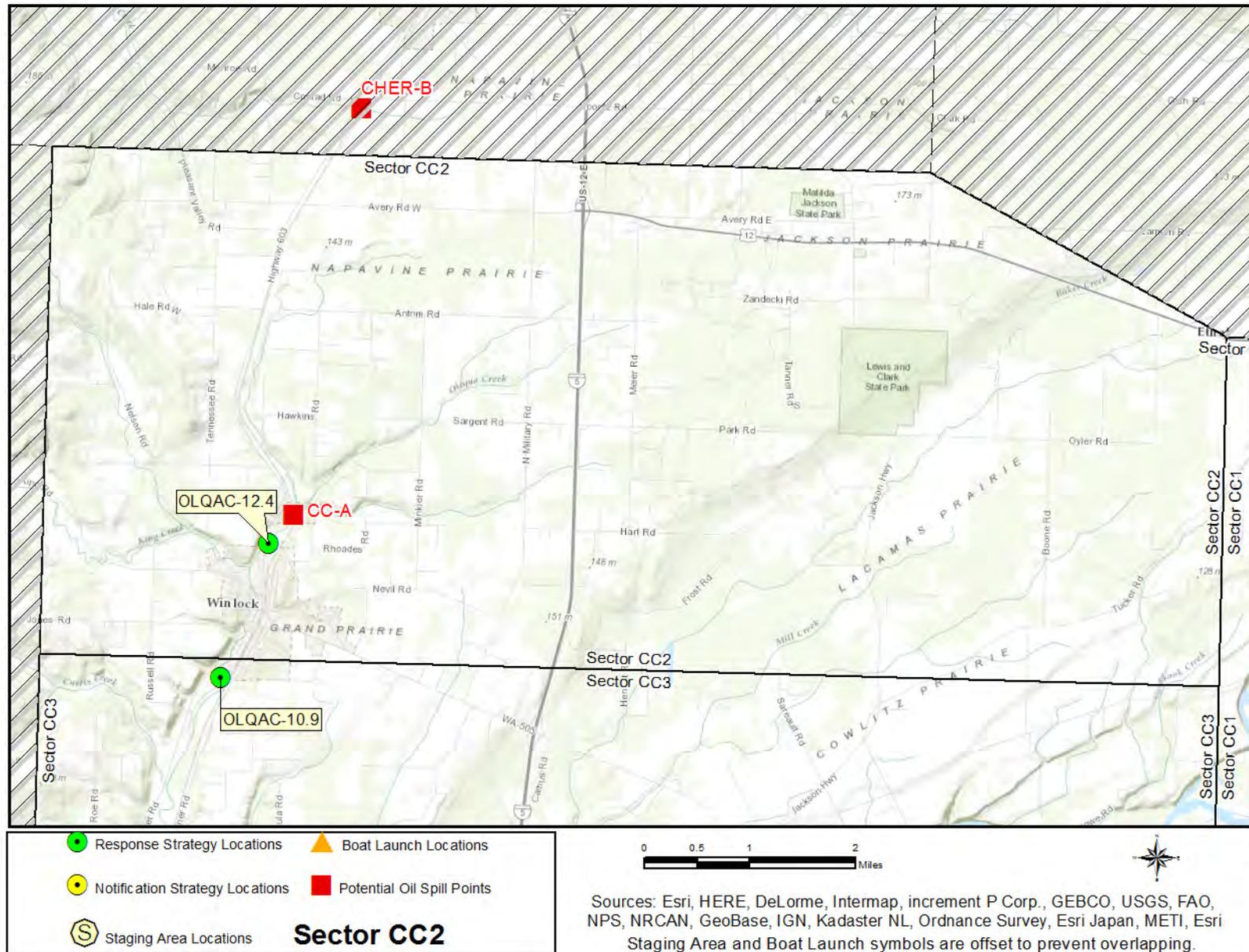
Table 4-15: Strategy Implementation Priorities for Point "CC-M"

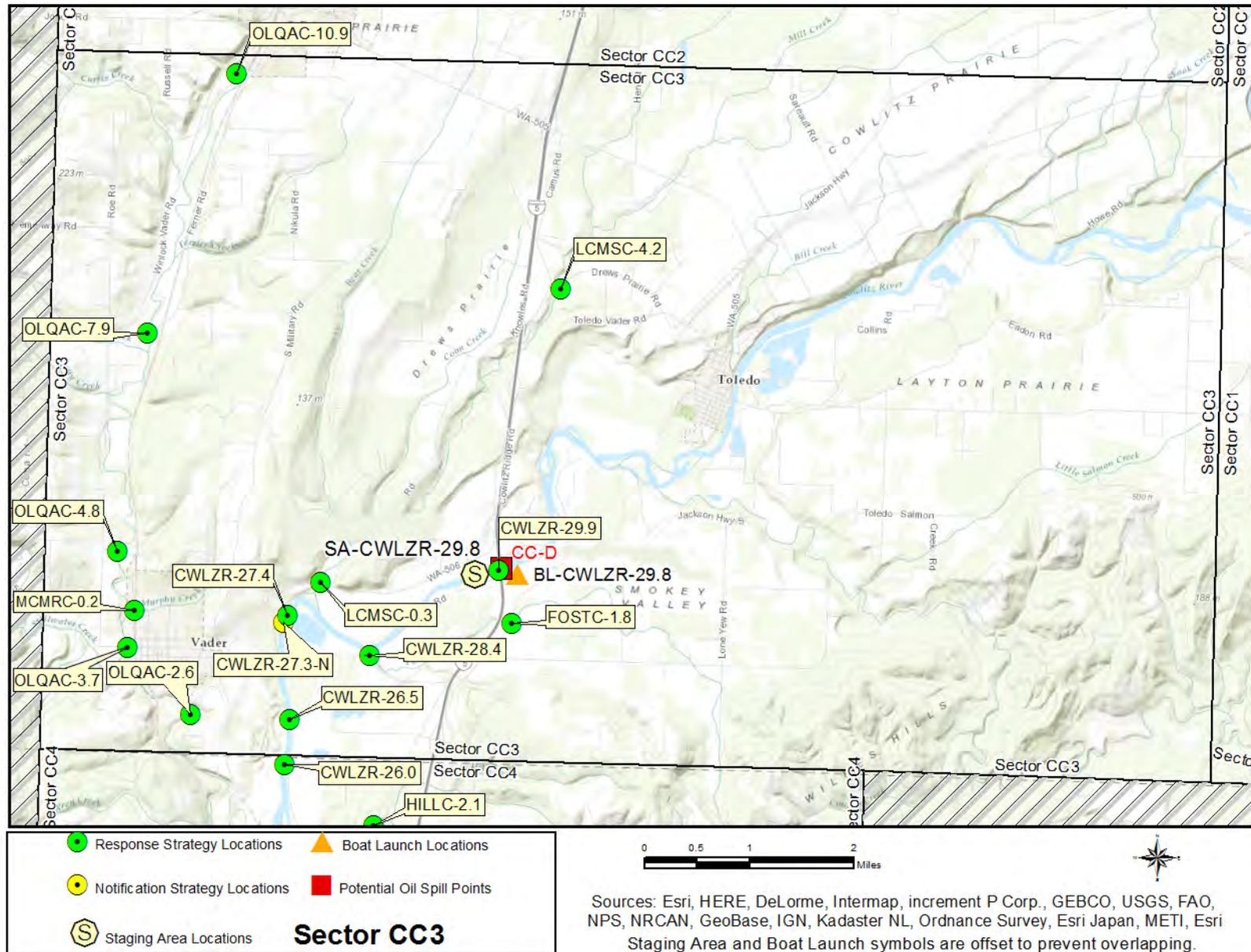
"CC-M" <i>(Salmon Creek at Interstate-5)</i>					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	SALMC-2.2	69	107	373	
2	SALMC-5.6	69	107	375	
3	LKRVR-10.8	NA	NA	345	Lower Columbia River GRP

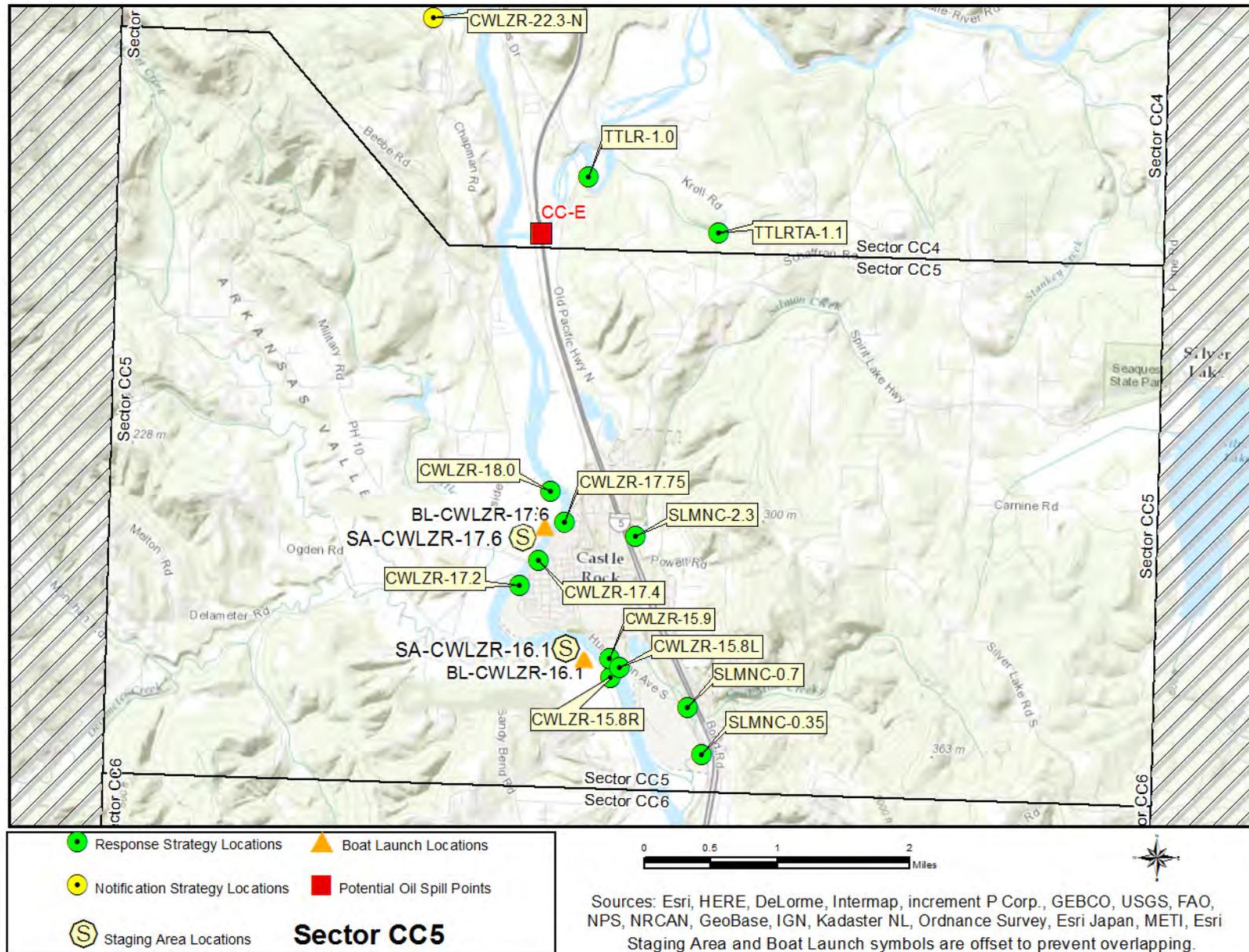
Table 4-16: Strategy Implementation Priorities for Point "CC-N"

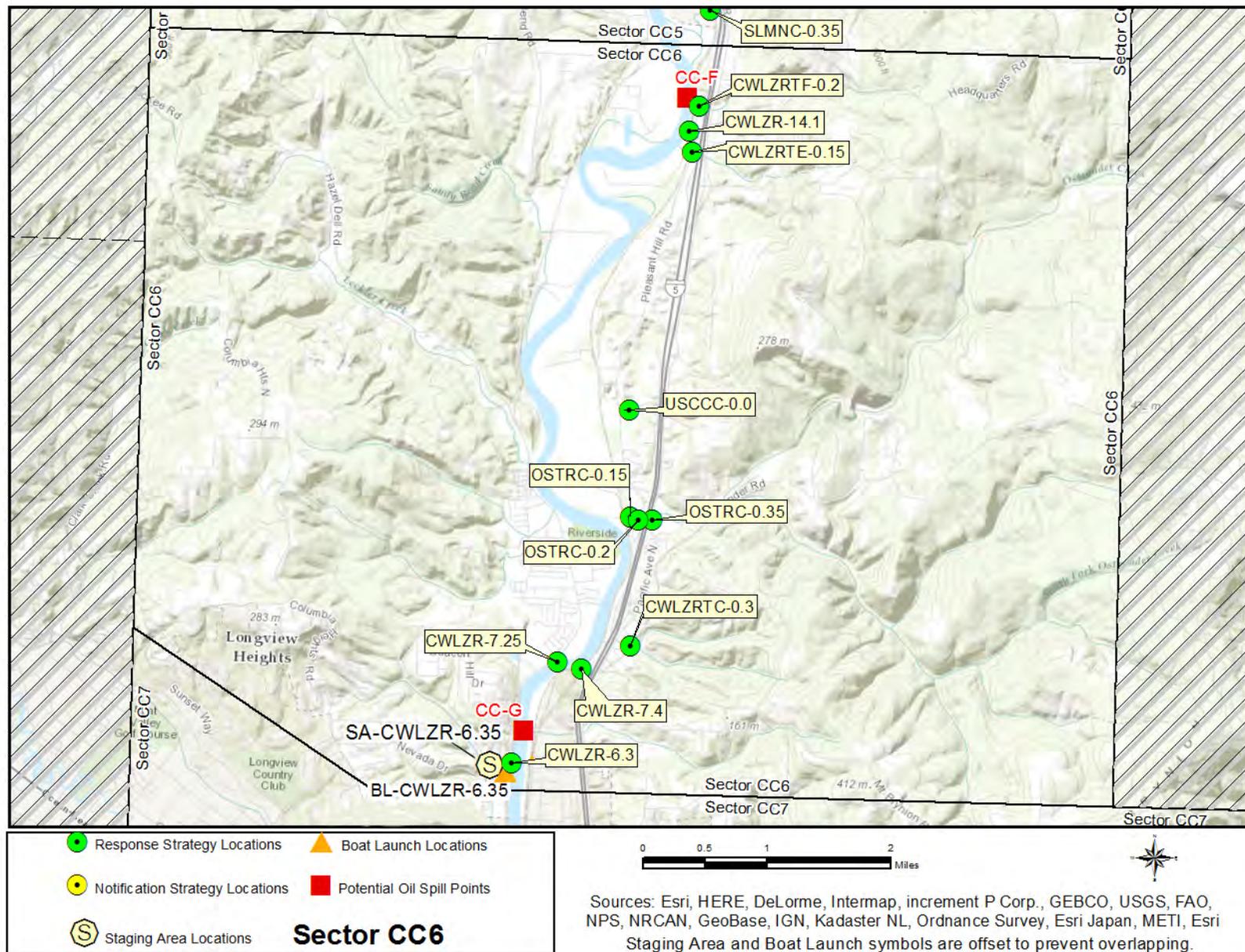
"CC-N" (<i>Burnt Bridge Creek downstream from Interstate-5</i>)					
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Remarks
1	BRBRC-6.2	69	71	131	
2	BRBRC-6.3	69	72	133	
3	BRBRC-6.4	69	72	135	
4	BRBRC-6.5	69	73	137	

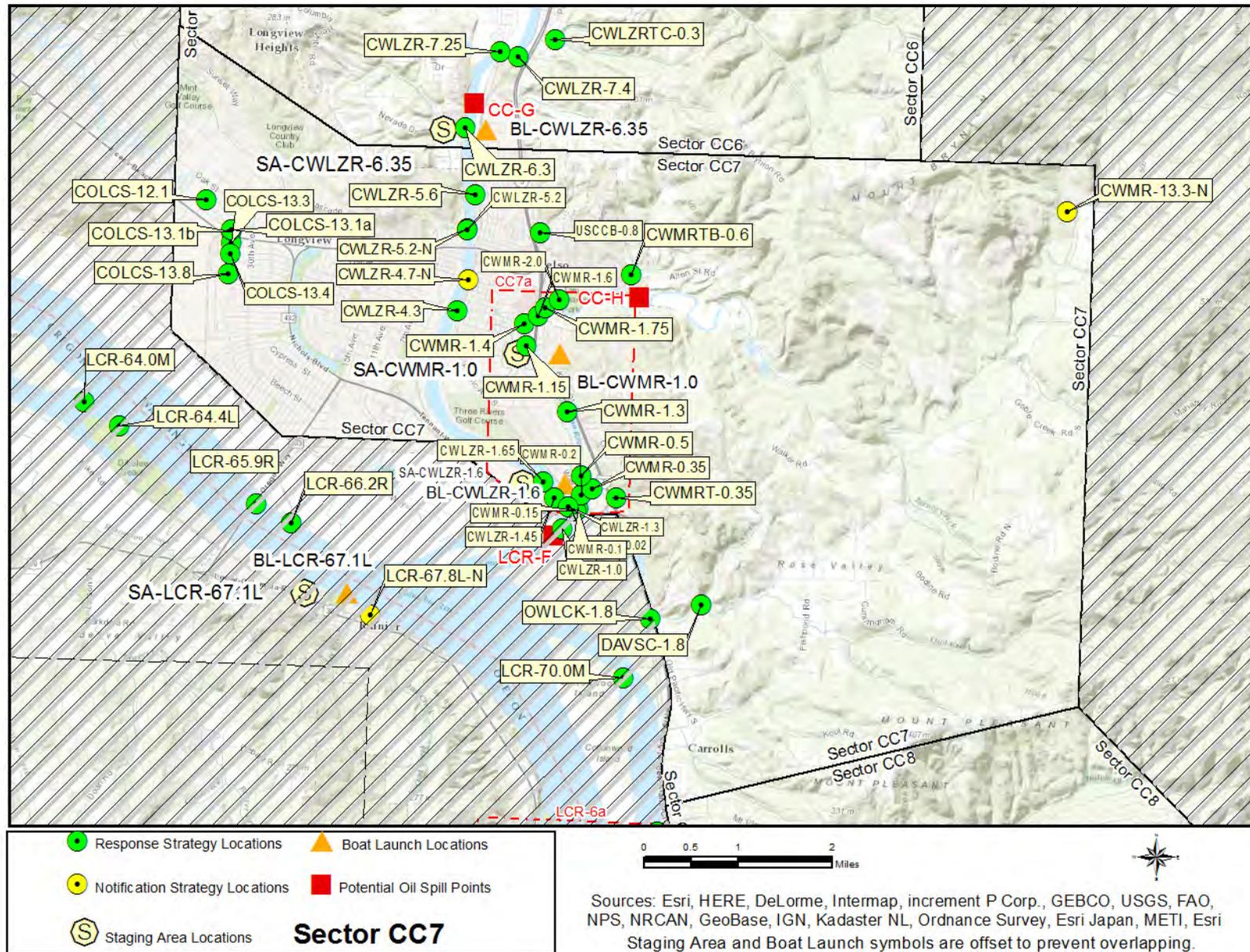


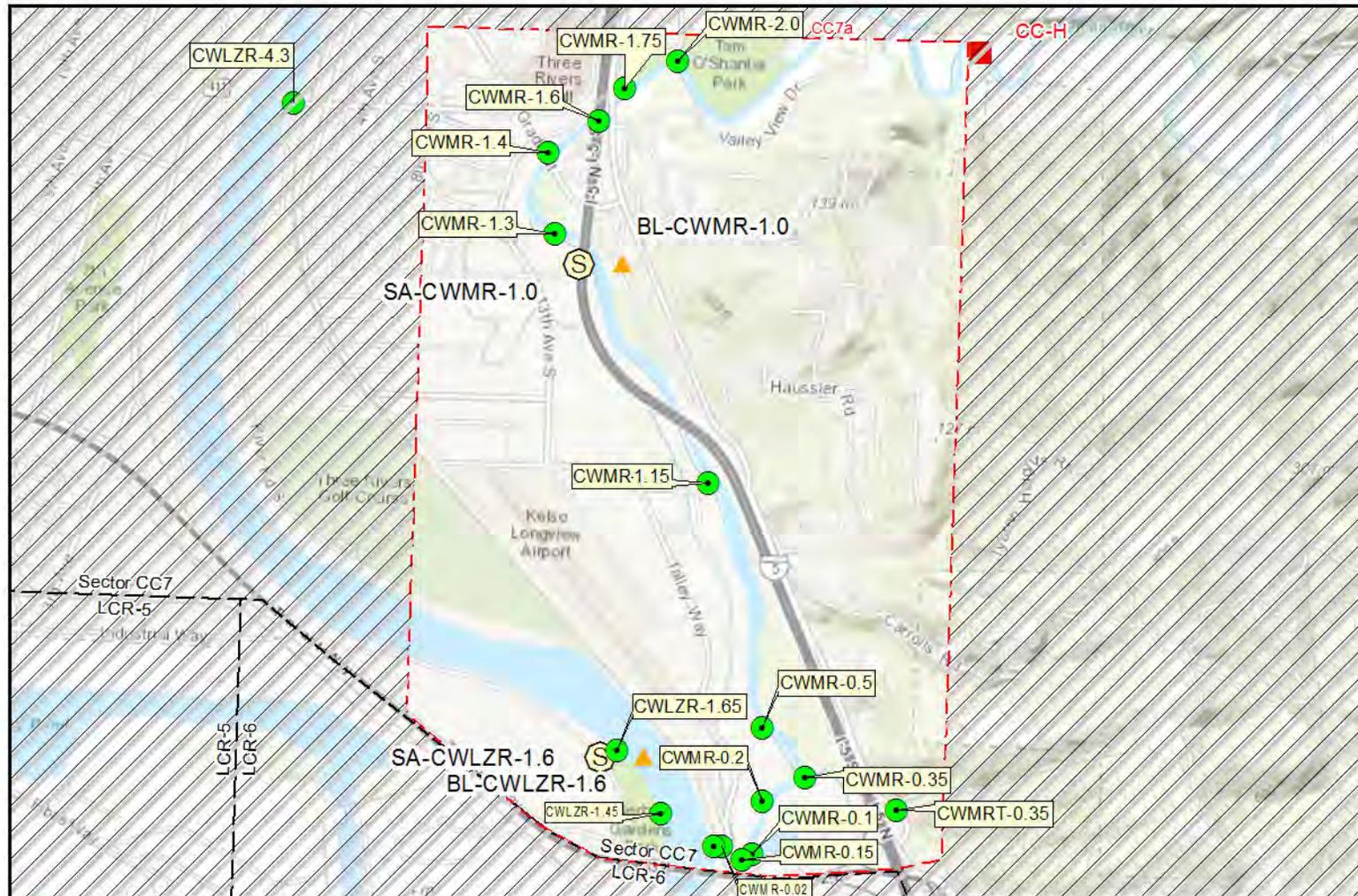










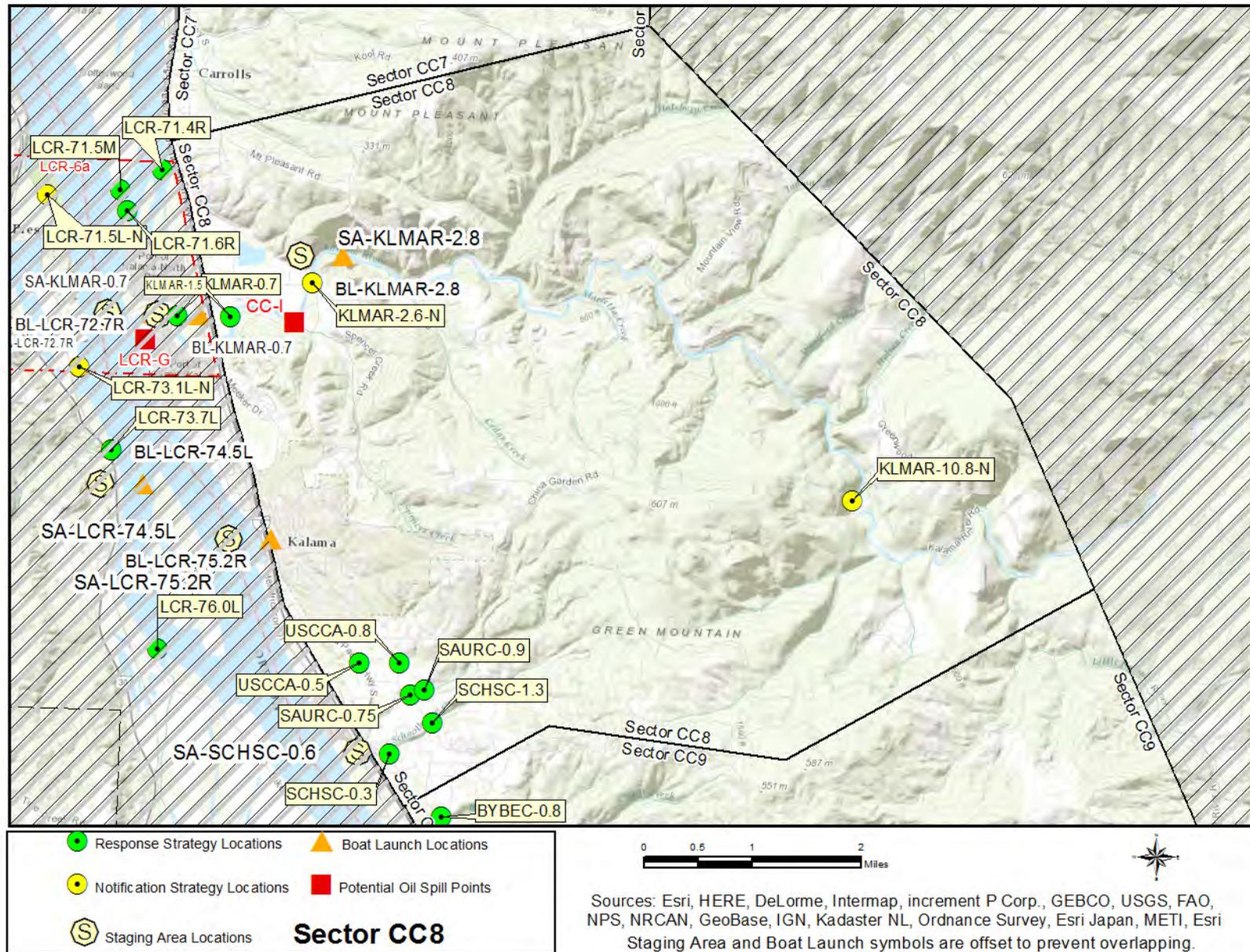


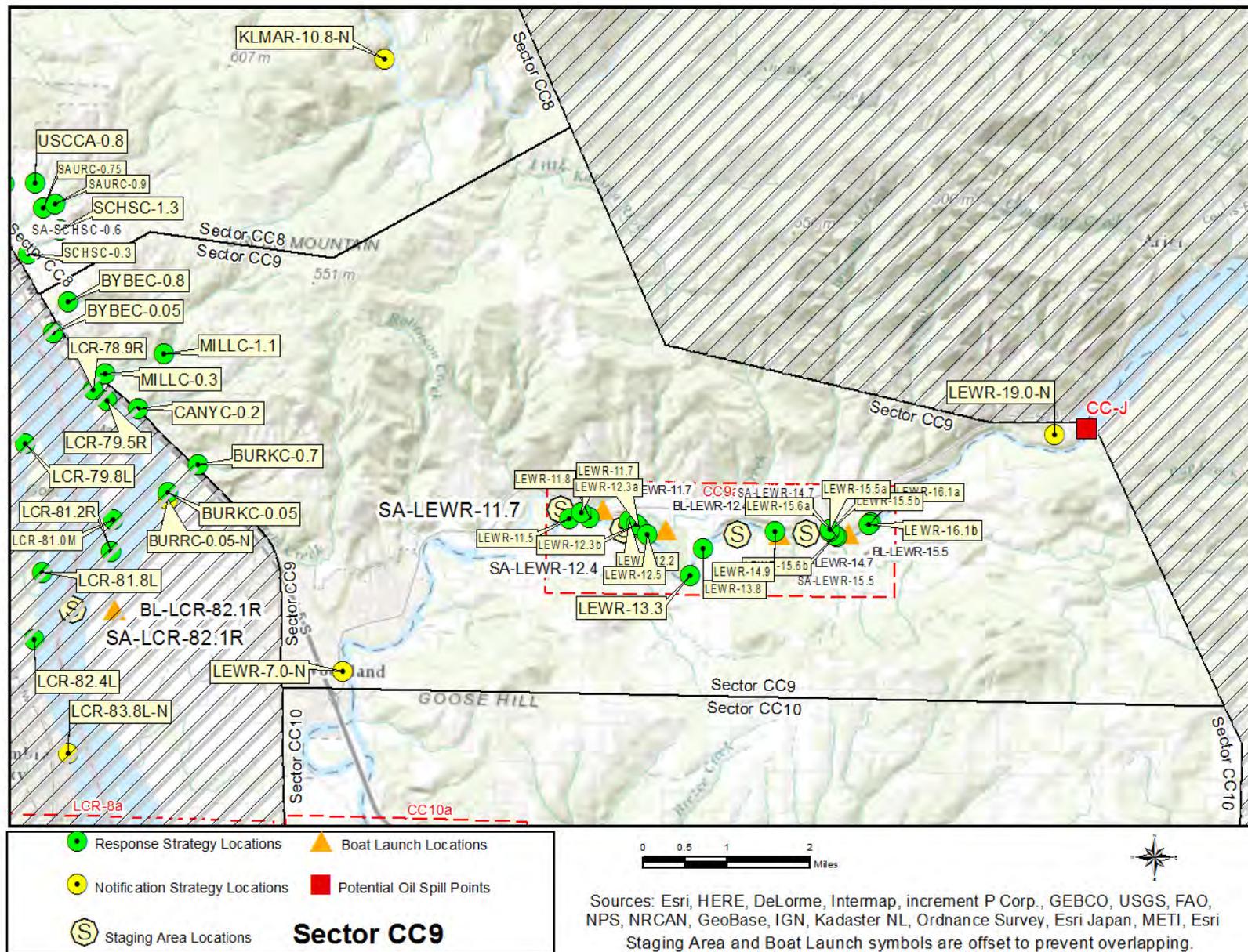
	Response Strategy Locations		Boat Launch Locations
	Notification Strategy Locations		Potential Oil Spill Locations
	Staging Area Locations	CC7a	

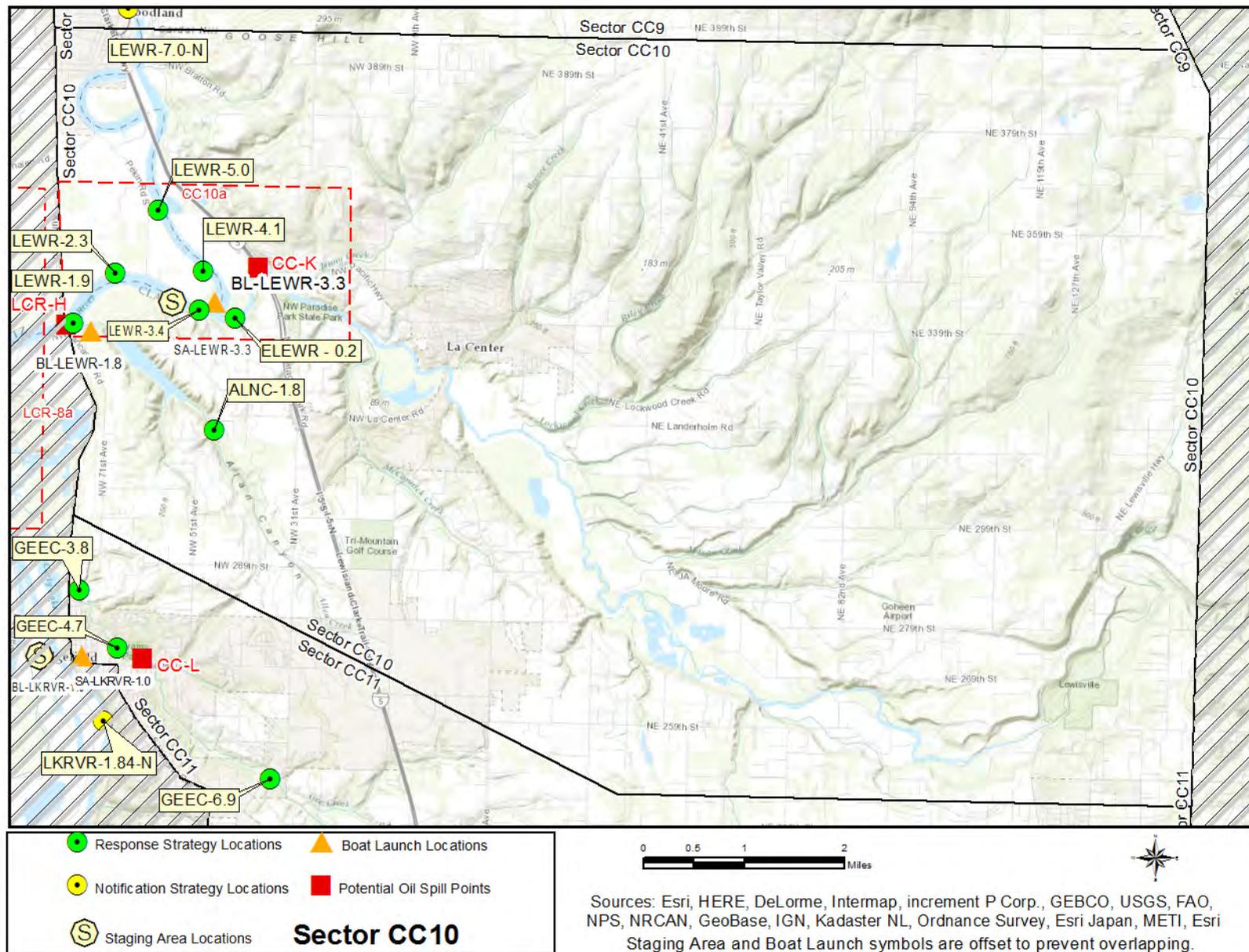


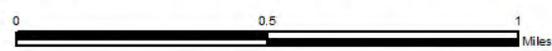
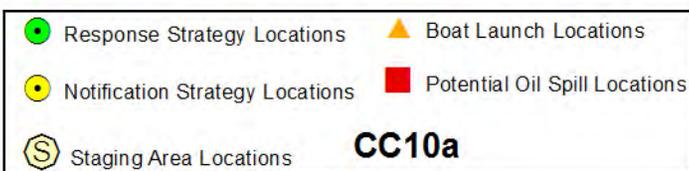
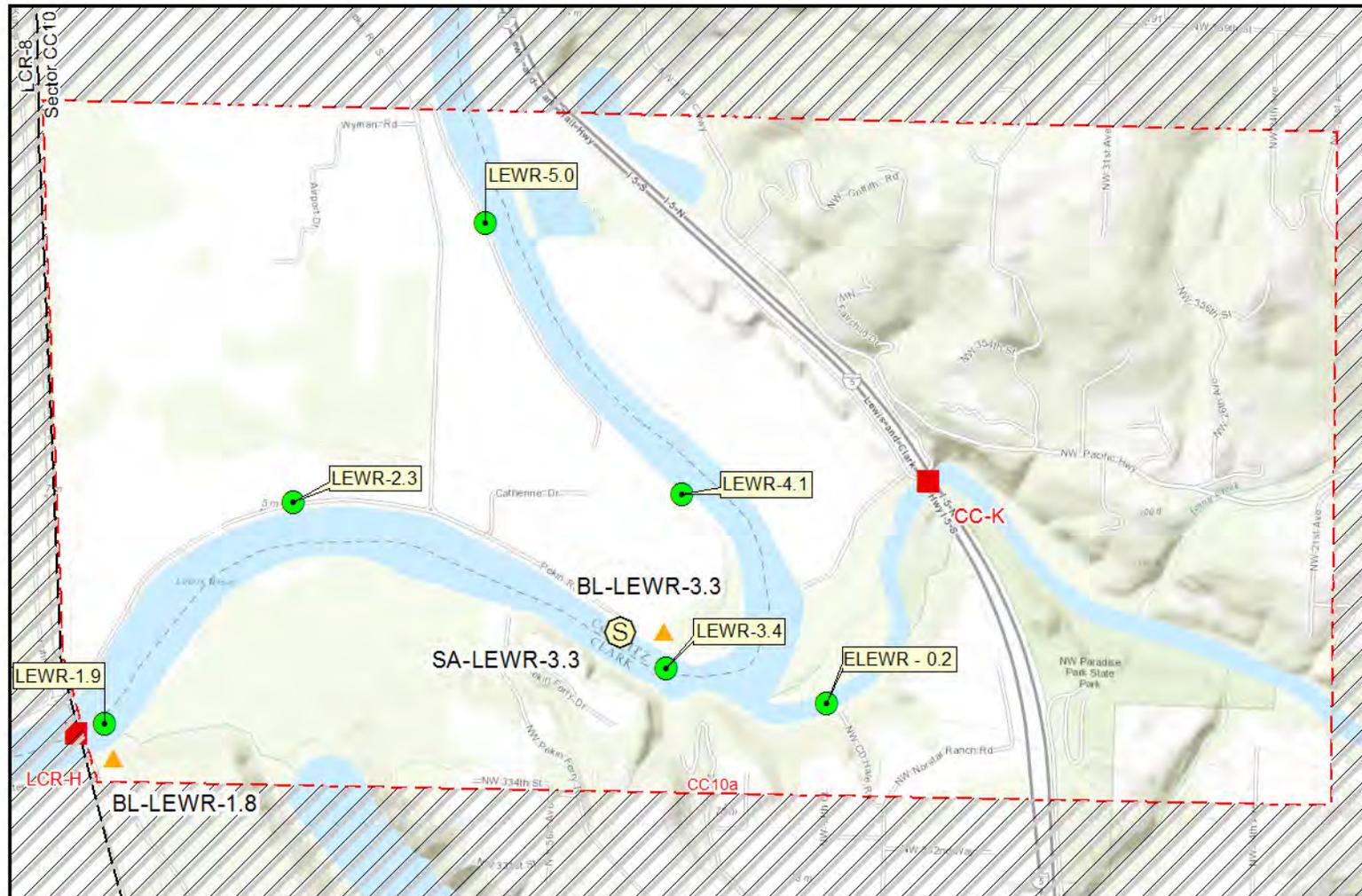
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri

DRAFT. Staging Area and Boat Launch symbols are offset to prevent overlapping.



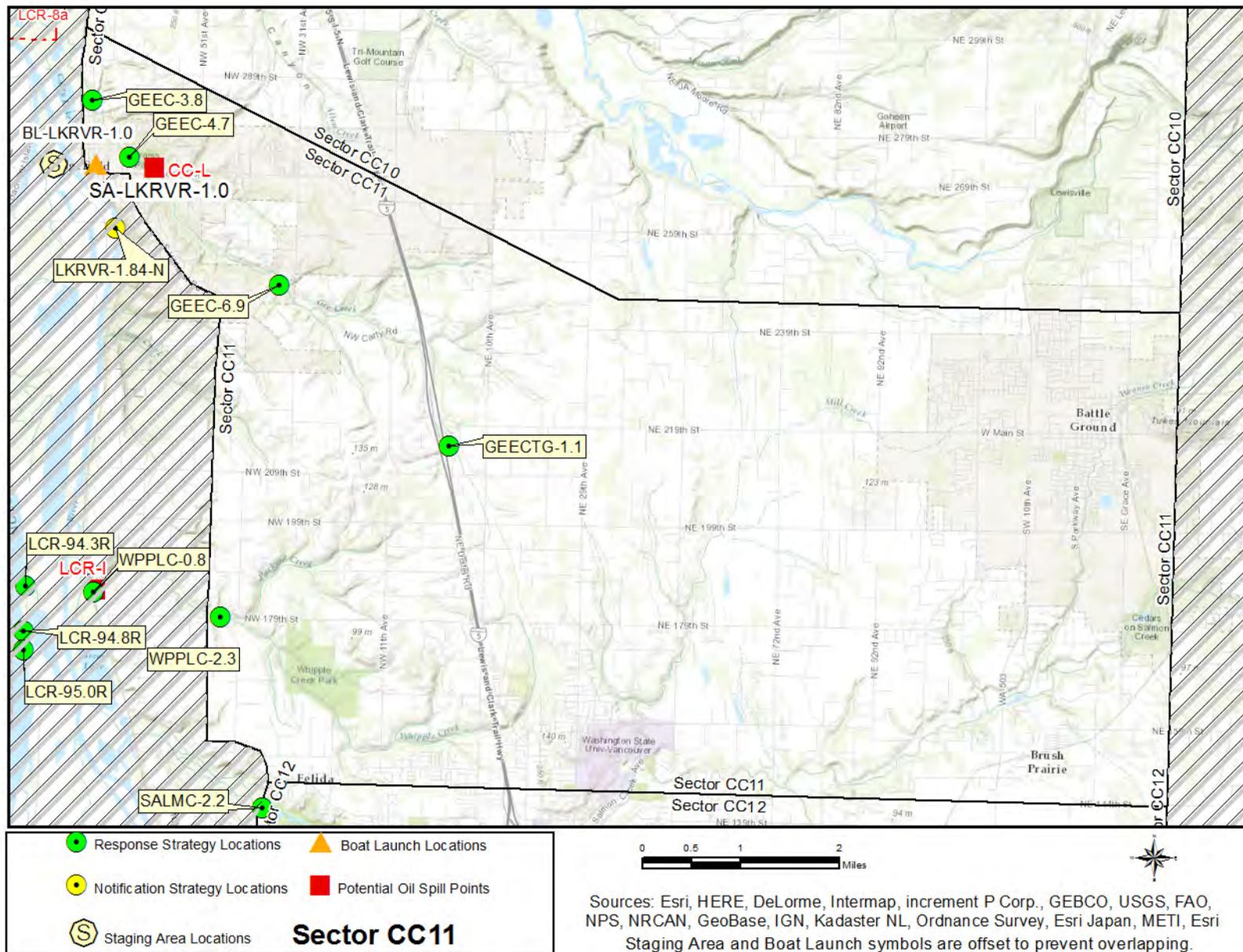


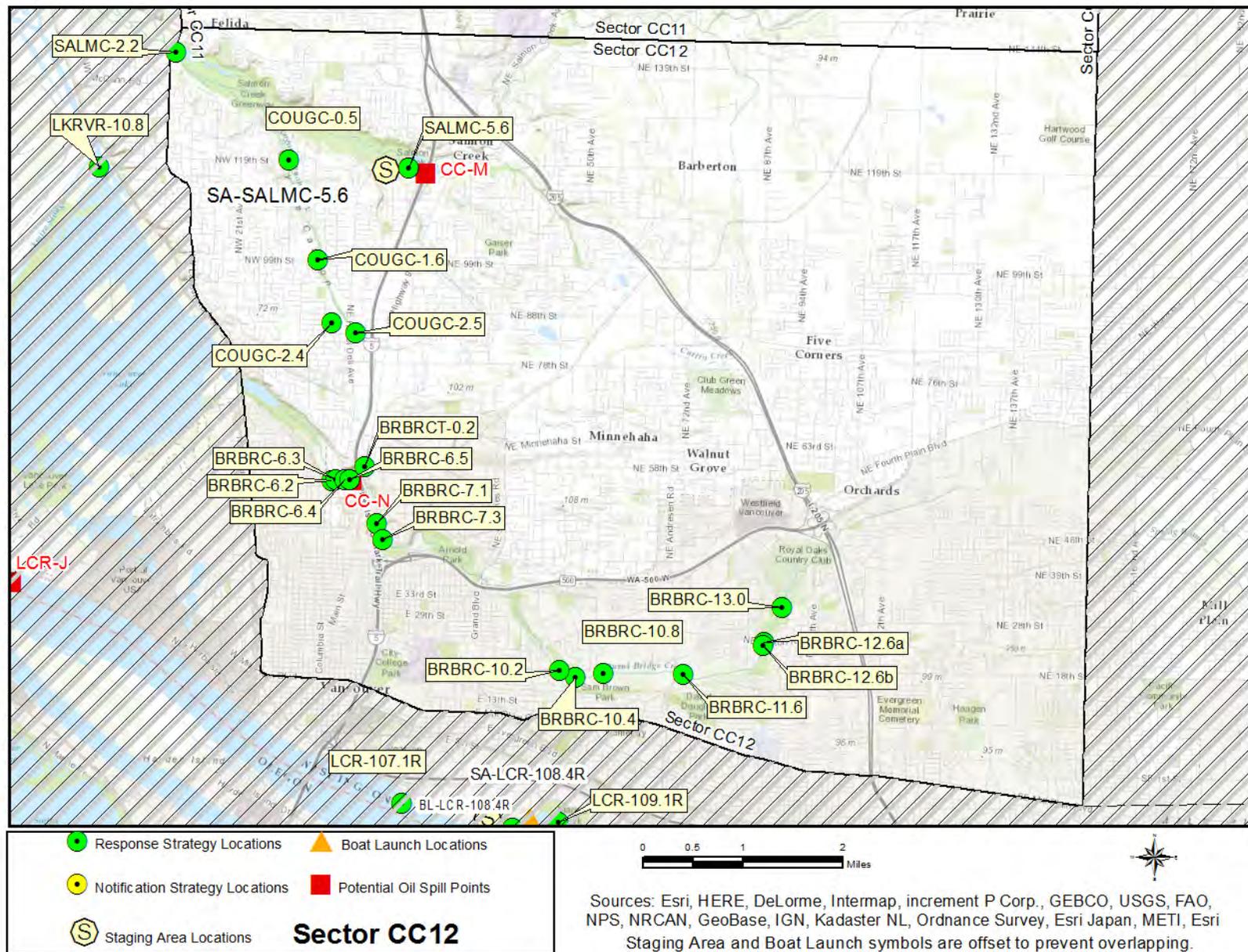




Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri

DRAFT. Staging Area and Boat Launch symbols are offset to prevent overlapping.





4.5.2 Response Strategy Matrices

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
ALNC-1.8	Allen Creek - NW Allen Canyon Road 45.84972 -122.72007	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage work truck on shoulder of roadway; Space limited - NO TRAILERS	Downstream Resources, Freshwater Wildlife, Salmon - Chinook, Salmon - Coho, Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is very limited at this location and on the shoulder of the roadway - DO NOT BRING AN EQUIPMENT TRAILER to this site.	66	129
BRBRC-6.2	Burnt Bridge Creek at Alki Road 45.66129 -122.67218	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on dirt road SW of bridge over creek off Alki Road - NO TRAILERS	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693- 1474 or email jwigen@ prestigecare.com.	69	131

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BRBRC-6.3	Burnt Bridge Creek Greenway Bridge 45.66140 -122.67137	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on dirt road SW of bridge over creek off Alki Road - NO TRAILERS	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693- 1474 or email jwigen@ prestigecare.com.	69	133
BRBRC-6.4	Burnt Bridge Creek at NE 2nd Avenue 45.66150 -122.66945	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage in grassy area to the right (east side of road) before the creek/trail - NO TRAILERS.	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693- 1474 or email jwigen@ prestigecare.com.	69	135

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BRBRC-6.5	Burnt Bridge Creek at NE Hazel Dell Avenue 45.66143 -122.66853	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on NE 2nd Avenue in grassy area before the creek/trail - NO TRAILERS.	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693-1474 or email jwigen@prestigecare.com.	69	137
BRBRC-7.1	Burnt Bridge Creek at NE Leverich Park Way 45.65530 -122.66269	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage in cul-de-sac immediately west of strategy location	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	69	139
BRBRC-7.3	Burnt Bridge Creek at Leverich Park 45.65295 -122.66141	Collection	Boom 300ft, Sorbent 400ft	No	Onsite Stage in Park's lower parking area off Leverich Park Way	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Upper parking area is too high for vac-truck to effectively pull suction - use lower parking area off Leverich Park Way instead. Notify Parks at 360-487-8337 before staging; inform CRESA dispatch after-hours at 360-693-3111.	69	141

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BRBRC-10.2	Burnt Bridge Creek at E 18th Street 45.63464 -122.62408	Collection, Underflow Dam	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of E 18th Street (south side of roadway east of creek) or in Unitarian Church Parking Lot	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	The aggressive use of sorbents may be an adequate enough for smaller spills. May be able to stage equipment at Unitarian Church immediately east of creek; call 360-695-1891.	69	143
BRBRC-10.4	Burnt Bridge Creek at Thunderbird Village 45.63379 -122.62076	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage along east side of roadway before the bridge (near walking trail)	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	VAC-TRUCKS SHOULD NOT CROSS BRIDGE due to weight restrictions. Inform/coordinate response activities with nearby property owners as needed. The aggressive use of sorbents may be an adequate enough response for smaller spills to creek at this site.	69	145

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BRBRC-10.8	Burnt Bridge Creek at N Devine Road 45.63443 -122.61513	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder or on pull-off near SW corner of the bridge structure.	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	69	147
BRBRC-11.6	Burnt Bridge Creek near NE Andresen Road 45.63454 -122.59860	Sorbent	Sorbent 200ft	No	Onsite Stage in small parking area off NE Andresen Road, immediately south of bridge over creek on west side.	Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Notify Vancouver Parks Department before implementation; call 360-487-8337 or CRESA dispatch after-hours at 360-693-3111.	69	149
BRBRC-12.6a	Burnt Bridge Creek at NE Burton Road 45.63957 -122.58206	Collection, Sorbent	Boom 100ft, Sorbent 500ft	No	Onsite Stage on gated property immediately SW of NE Burton Road Bridge over creek (City Property)	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	No Information	69	151

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BRBRC-12.6b	Burnt Bridge Creek downstream of NE Burton Road 45.63914 -122.58220	Collection, Sorbent	Boom 100ft, Sorbent 200ft	No	Onsite Stage off road in front of PUD substation on SW Corner of NE Burton Road at NE 90th Avenue	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Alternative staging is at NE 19th Circle, ~0.3mi south of NE Burton Road on NE 92nd Avenue.	69	153
BRBRC-13.0	Burnt Bridge Creek west of NE 93rd Avenue 45.64467 -122.57844	Collection, Sorbent	Boom 100ft, Sorbent 200ft	No	Onsite Stage at turnaround at end of at end of NE 93rd Avenue in front of closed park gate.	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	Strategy location is across field to the NW at confluence of unnamed tributary with Burnt Bridge Creek.	69	155
BRBRCT-0.2	Burnt Bridge Creek Tributary at Hwy 99 45.66336 -122.66555	Sorbent	Sorbent 200ft	No	Onsite Stage on east side shoulder/grassy area of NE Highway 99 about 150ft south of rail overpass.	Freshwater Wildlife, Salmon - Coho, Steelhead	Use caution crossing busy roadway. Be alert to occupied camp sites in woods near strategy location. Don't encroach on federal property along east side of Hwy 99. Waders or hip boots recommended.	69	157

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
BURKC-0.7	Burke Creek at South Cloverdale and Burke Roads 45.94537 -122.77774	Collection	Boom 100ft, Sorbent 400ft	No	Onsite Stage at pull out (circle) at intersection of South Cloverdale and Burke Roads	Downstream Resources, Salmon - Coho	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Cowlitz County Public Works may be able to provide support if underflow dam needed; call 360-673-2175.	64	159
BYBEC-0.8	Bybee Creek at South Cloverdale Road 45.97281 -122.81118	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.	Salmon - Coho, Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6.	64	161
CANYC-0.2	Canyon Creek at South Cloverdale Road 45.95471 -122.79287	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage on shoulder of roadway near culvert.	Downstream Resources, Steelhead	Wide gravel shoulder at this location. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	64	163

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
COLCS-12.1	Coal Creek Slough at 34th Avenue 46.15348 -122.97261	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage on grassy area near SW corner of roadway at slough or on roadway shoulder.	Downstream Resources, Freshwater Wildlife, Waterfowl	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	61	165
COLCS-13.1a	Coal Creek Slough near 32nd Avenue 46.14906 -122.96675	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage on grassy area on north side of railroad tracks or along roadway shoulder. Parking lot also nearby.	Downstream Resources, Freshwater Wildlife, Waterfowl	Rail line is operated by Columbia and Cowlitz Railway; notify them at 360-501-2182 or 855-258-4514 before strategy implementation; reference Longview Washington at 32nd Avenue.	61	167
COLCS-13.1b	Coal Creek Slough near Ocean Beach Highway 46.14869 -122.96679	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage in parking lot at NW corner of Ocean Beach Hwy and 32nd Avenue or on grassy area next to waterway.	Downstream Resources, Freshwater Wildlife, Waterfowl	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	61	169

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
COLCS-13.3	Coal Creek Slough at Michigan Street 46.14704 -122.96683	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of Michigan Street near waterway or on grassy area adjacent to waterway.	Downstream Resources, Freshwater Wildlife, Waterfowl	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	61	171
COLCS-13.4	Coal Creek Slough at Maple Street 46.14525 -122.96681	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of Maple Street west of waterway or on grassy area adjacent to waterway.	Downstream Resources, Freshwater Wildlife	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	61	173
COLCS-13.8	Coal Creek Slough at William Street 46.14225 -122.96730	Collection, Exclusion	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of William Street near waterway	Downstream Resources, Freshwater Wildlife	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	61	175
COUGC-0.5	Cougar Canyon Creek at NW 119th Street 45.70750 -122.68289	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of NW 119th Street near strategy location. Can also use Salmon Creek Regional Park (SA-SALMC-5.6)	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead	Strategy location is adjacent to Salmon Creek Trail - Contact Clark County Parks and Recreation for access support; call 360-737-6118 or 360-397-2285.	69	177

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
COUGC-1.6	Cougar Canyon Creek at Columbia River High School 45.69319 -122.67627	Sorbent	Sorbent 100ft	No	Onsite Stage at Columbia River High School; SE corner of parking lot near creek.	Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead	Creek property and fish ladders maintained by Clark County; call public works at 360-397-6118 x4944. Inform Columbia River High School if parking lot used for staging during school hours; call 360-313-3900.	69	179
COUGC-2.4	Cougar Canyon Creek at NE Hazel Dell Avenue 45.68404 -122.67314	Sorbent	Sorbent 100ft	No	Onsite Stage at Fire Station located ~600ft north of strategy location (call 360-576-1195) or at Target across street.	Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead	There is no on-street parking at or near this strategy location. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	69	181
COUGC-2.5	Cougar Canyon Creek at NE 83rd Street 45.68275 -122.66801	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on side of NE 83rd Street near creek or in private driveway adjacent creek's west side.	Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead	Strategy is on private property - coordinate with local property owner before strategy implementation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	69	183

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-1.3	Cowlitz River at the mouth of the Coweeman River 46.10786 -122.89014	Exclusion	Boom 300ft	Yes	Onsite Stage equipment in gravel lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Launch boat upstream and tow boom to site	62	187
CWLZR-1.45	Gerhardt Gardens 46.10914 -122.89327	Deflection	Boom 800ft	Yes	Onsite Stage in old parking area at Gerhardt Gardens Park.	Downstream Resources	Site is an old boat ramp at Gerhardt Gardens Dog Park.	62	189
CWLZR-1.65	Cowlitz River at north end of Gerhart Gardens Park 46.11163 -122.89597	Collection	Boom 300ft	Yes	Onsite Stage equipment at Gerhart Gardens Park	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Collection strategy just north of the boat ramp.	62	191
CWLZR-4.3	Cowlitz River near Mill St 46.13756 -122.91603	Collection	Boom 300ft	Yes	Onsite Stage equipment outside of the ecology blocks	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Boat and boom can be launched at a nearby boat launch. A portable skimmer could be	61	193

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-5.2	Cowlitz River - Longview Pump Station 46.15021 -122.91446	Exclusion	Boom 200ft	Yes	Onsite Stage in grassy area on north side of pump house or across street at Longview Regional Water Plant	Economic Resource, Water Intakes	Nearest suitable boat launch is 3.6mi downstream at Gerhart Gardens Park (BL-CWLZR-1.6). Once implemented, notify City of Longview Stormwater Division at 360-442-5299, 360-957-2720, or 360-442-5209. After hours call 360-578-0900.	61	195
CWLZR-5.6	Cowlitz River at Division St 46.15560 -122.91296	Collection	Boom 800ft	Yes	Onsite Stage equipment in gravel field	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Access from the north at Cowlitz Garden Road through a gate, which was not locked but had a pin for a padlock, and onto a narrow gravel road. Follow this for a mile until you see a small two story building surrounded by a fence. GRP site is on a sand beach on the opposite side of an abandoned building.	61	197

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-6.3	Cowlitz River at SR 411 46.16595 -122.91558	Collection	Boom 600ft	Yes	Onsite Stage equipment in gravel lot. Approximately 190'x60'	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Access is from a gravel parking lot off a main paved road.	60	199
CWLZR-7.25	Cowlitz river along Westside Hwy 46.17780 -122.90843	Collection	Boom 300ft	Yes	Onsite Stage equipment on gravel lot; approximately 12,000sqft.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Gravel lot of to the side of a busy road. Easy access and lots of room for parking. Down to the river was a steep bank with gravel and vegetation.	60	201
CWLZR-7.4	Cowlitz River near Pacific Ave N 46.17717 -122.90430	Collection	Boom 500ft	Yes	Onsite Stage equipment in grass field adjacent to railroad track.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Chained off entrance to road leading down to a field near a railroad track.	60	203
CWLZR-14.1	Cowlitz River at Pleasant Hill Rd 46.24025 -122.88892	Collection	Boom 300ft	Yes	Onsite Stage equipment on gravel road leading to river	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	There is a small sand beach that could be reached by boat. It is possible to get down to the river, but would be a safety hazard trying to carry equipment down.	60	205

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-15.8L	Cowlitz River at Lions Pride Park S 46.26365 -122.89933	Collection	Boom 500ft	Yes	Onsite Stage equipment in gravel lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead		59	207
CWLZR-15.8R	Cowlitz River near Cook Ferry Rd 46.26261 -122.90073	Collection	Boom 300ft	Yes	Onsite Staging available onsite	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead		59	209
CWLZR-15.9	Cowlitz River near Huntington Ave S 46.26466 -122.90097	Collection	Boom 400ft	Yes	Onsite Stage equipment in parking lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Large gravel lot (apx. 40,000sqft) with bathroom, rv dump, and lots of parking.	59	211
CWLZR-17.2	Cowlitz River along Castle Rock bike path 46.27234 -122.91555	Collection	Boom 300ft	Yes	Onsite Stage equipment along bike path	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Bike path runs along levee. Steep bank to the river. Inform/coordinate response activities with nearby property owners as needed.	59	213

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-17.4	Cowlitz River near A St Bridge 46.27512 -122.91265	Collection	Boom 400ft	Yes	Onsite Stage equipment onsite	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Must navigate a steep turn up a gravel road and up onto the jogging path. It would be very difficult for larger trucks to make this turn. Transport boom by water	59	215
CWLZR-17.75	Cowlitz River near Front Ave NW 46.27938 -122.90883	Collection	Boom 500ft	Yes	Onsite Stage equipment in parking lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Rip-rap bank poses difficulties in launching equipment. Transport boom by water and use a vacuum truck at the top of the dike to collect product. Due to the length and height of the dike, an inline pump may be needed.	59	217
CWLZR-18.0	Cowlitz River near North County Sports Complex 46.28265 -122.91108	Collection	Boom 500ft	Yes	Onsite Stage equipment at sports complex onsite (SA-CWLZR-17.6)	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Steep bank poses safety issue, bring equipment over by boat.	59	219

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-23.6	Cowlitz River - Westside Highway Downstream of RR 46.35284 -122.93655	Collection	Boom 600ft	Yes	Onsite Stage off roadway near top of vacant lot south of bridge over Rock Creek	Downstream Resources, Freshwater Wetlands, Salmon (Coho, Chinook and Chum), Steelhead	Launch jet-boat from BL-CWLZR-24.7 (located ~1.1mi upstream) to support strategy implementation. Nearest downstream launch is BL-CWLZR-17.6 (~6.0mi away). Boat operator must know the river well in order to avoid sandbars and other obstructions.	58	221
CWLZR-24.7	Cowlitz River - WDFW Water Access Site 46.36833 -122.93466	Collection	Boom 500ft	Yes	Onsite Location is at WDFW Water Access Site "Olequa Creek" and is open year round; for more information contact WDFW Regi	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Location is at WDFW Water Access Site "Olequa Creek" and is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	58	223
CWLZR-26.0	Cowlitz River near Imboden Road 46.38647 -122.93217	Collection	Boom 500ft	Yes	Onsite Stage on dirt roadway/pullout off Imboden Road (~250ft from strategy) or on shoulder of road closer to site.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Stage equipment on-site but launch work boat (jet drive) from BL-CWLZR-24.7 (~1.3mi downstream). Follow WSDOT work zone traffic control guidelines when working on or near roadway.	58	225

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-26.5	Cowlitz River near Mandy Road 46.39269 -122.93151	Collection	Boom 500ft	Yes	Onsite Stage on dirt roadway/pullout adjacent to the river off Mandy Road	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Stage equipment on-site but launch work boat (jet drive) from BL-CWLZR-24.7 (~1.8mi downstream). Follow WSDOT work zone traffic control guidelines when working on or near roadway.	57	227
CWLZR-27.4	Cowlitz River - Upstream of Vader Water Intakes 46.40710 -122.93261	Collection	Boom 700ft	Yes	Onsite Stage on site at bottom of hill, >1100ft beyond gated entry off Hwy WA-506.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead, Water Intakes	For access assistance or permission to cut lock and enter, call Lewis County Public Works at 360-740-1123, Emergency Management at 360-740-1151, or the Sheriff's Office at 360-748-9286.	57	229
CWLZR-28.4	Cowlitz River at Mouth of Foster Creek 46.40182 -122.91587	Exclusion, Sorbent	Boom 100ft, Sorbent 200ft	No	Onsite Stage work truck on shoulder of roadway; space limited - NO TRAILERS.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on/near roadway. Shoulder very limited - NO TRAILERS. If needed, trailers can be staged at SA-CWLZR-29.8 (WDFW I-5 Water Access).	57	231

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-29.9	Cowlitz River at Interstate-5 46.41422 -122.89060	Collection	Boom 500ft	Yes	Onsite Staging Area SA-CWLZR-29.8 is on-site. Stage in parking area near boat ramp.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Location is at WDFW Water Access Site "I-5" and is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	57	233
CWLZRTC-0.3	Unnamed tributary to Cowlitz River at Evergreen Rd 46.17996 -122.89628	Underflow Dam	Boom 300ft, Sorbent 200ft	No	Onsite Stage equipment on shoulder of Evergreen Rd	Freshwater Wildlife	Culvert off of the side of the road leads north under the road and along the side of a private driveway.	60	235
CWLZRTE-0.15	Unnamed Creek along Pleasant Hill Rd 46.23776 -122.88829	Underflow Dam	Boom 100ft, Sorbent 200ft	No	Remote No room to stage equipment.	Freshwater Wildlife, Salmon - Coho	Follow WSDOT work zone traffic control guidelines when working on or near roadway.	60	237
CWLZRTE-0.2	Unnamed tributary to Cowlitz River at Pleasant Hill Rd 46.24316 -122.88729	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment in gravel lots on both sides of road. Contact property owner before staging.	Freshwater Wildlife, Salmon - Coho, Steelhead	Steep hill with vegetation leading down to creek and culvert	60	239

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWMR-0.02	Coweeman River at mouth 46.10787 -122.88967	Collection	Boom 300ft	Yes	Onsite Stage equipment along gravel road	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Deploy strategy by a boat launched at a different	62	241
CWMR-0.1	Coweeman River at Coweeman Park Drive 46.10758 -122.88791	Exclusion	Boom 300ft, Sorbent 300ft	Yes	Remote Stage equipment in parking lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Marshy conditions around booming location. The site is not easily accessible by foot/truck.	62	243
CWMR-0.15	Coweeman River at Talley Way 46.10735 -122.88845	Collection	Boom 300ft	Yes	Onsite Stage equipment in gravel lot	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Gain access to the dike path by unlocking the gate at the gravel lot	62	245
CWMR-0.2	Coweeman River along dike path 46.10975 -122.88738	Collection	Boom 300ft	Yes	Onsite Stage equipment along dike path	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead		62	247

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWMR-0.35	Coweeman River near Coweeman Park Drive 46.11077 -122.88495	Exclusion	Boom 200ft	Yes	Onsite Stage equipment on river right along dike path	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Use workboat to tow boom to site	62	249
CWMR-0.5	Coweeman River along dike trail 46.11275 -122.88750	Collection	Boom 300ft	Yes	Onsite Stage equipment along dike trail	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	It would be possible to hand launch boom and/or small skiff. To collect product a skimmer could be carried by hand to the collection point on the river.	62	251
CWMR-1.15	Coweeman River along Dike path 46.12261 -122.89111	Collection	Boom 300ft	Yes	Onsite Stage equipment along dike trail	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Inform/coordinate response activities with nearby property owners as needed.	62	253
CWMR-1.3	Coweeman River near Grade St 46.13258 -122.90053	Collection	Boom 200ft	Yes	Onsite Stage equipment at pump house	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Access from a paved jogging path. Steep bank with grass and/or rip-rap	62	255

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWMR-1.4	Coweeman River at 13th Ave 46.13587 -122.90106	Collection	Boom 300ft, Sorbent 400ft	Yes	Onsite Stage equipment in parking lot on the north side of the road	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Access via jogging path. Site is located off a well-used public road. Possible to secure boom to a tree on the east bank, might need to pound stakes or some sort of ground anchor to secure boom on the west bank.	62	257
CWMR-1.6	Coweeman River at Coweeman Drive 46.13719 -122.89817	Collection	Boom 300ft	Yes	Onsite Room for a vacuum truck or other equipment to collect product.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Gravel parking area under the bridge is large enough to stage some trucks and equipment.	62	259
CWMR-1.75	Coweeman River near Manasco Drive 46.13856 -122.89668	Collection	Boom 300ft	Yes	Onsite Stage equipment in parking lot approximately 400ft north.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	62	261

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWMR-2.0	Coweeman River at O'Shanter Park 46.13975 -122.89362	Collection	Boom 300ft	Yes	Onsite Stage equipment in park	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Duckbill water discharges on the shore, river right, with signs warning of sudden discharge.	62	263
CWMRT-0.35	Unnamed Tributary to Coweeman River 46.10956 -122.87953	Culvert Block	Sorbent 100ft	No	Onsite Very limited room for equipment. Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.	Freshwater Wildlife	Road is busy, not much room. Culvert is accessible.	62	265
CWMRTB-0.6	Tributary to Coweeman River near Allen Street Road 46.14398 -122.87780	Culvert Block	Boom 200ft, Sorbent 400ft	No	Onsite Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway. Culvert hard to access due to high water.	61	267

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
DAVSC-1.8	Davis Creek on Rose Valley Rd 46.09332 -122.86004	Underflow Dam	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on the side of the road. Can park several trucks.	Freshwater Wildlife	Creek has a relatively strong current here. With a strong current you would want to make an underflow dam. Easiest spot to make a dam was approximately 100ft upstream from culvert where depth and current is less.	61	269
ELEWR-0.2	East Fork Lewis River mouth 45.86585 -122.71621	Collection	Boom 400ft	Yes	Onsite Stage equipment at small parking lot at site.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Inform/coordinate response activities with nearby property owners as needed.	67	271
FOSTC-1.8	Foster Creek at Jackson Highway South 46.40690 -122.88765	Collection, Sorbent	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of roadway (NE corner has small pullout) - Work Truck Only - NO TRAILERS.	Downstream Resources, Salmon - Coho, Steelhead	Fiber Optic Cable crosses Foster Creek on upstream/east side of roadway. Contact Sprint before digging in area; call 1-800-521-0579. Limited shoulder - NO TRAILERS; if needed, stage trailer at WDFW "I-5" Water Access Site (SA-CWLZR-29.8).	57	273

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
GEEC-3.8	Gee Creek - N Main Avenue 45.82608 -122.74685	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage on small pull-out on east side of roadway near site at start of private driveway.	Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Chinook	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is very limited at this location and on the shoulder of the roadway - DO NOT BRING AN EQUIPMENT TRAILER to this site.	68	275
GEEC-4.7	Gee Creek - Abrams Park 45.81791 -122.73870	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage in parking area near entrance of Abrams Park (near bridge)	Downstream Resources, Freshwater Wildlife, Salmon - Chinook	Contact City of Ridgefield for After-Hours Access: call 360-518-8146	68	277
GEEC-6.9	Gee Creek at NW Royle Road 45.79969 -122.70632	Sorbent	Sorbent 100ft	No	Onsite Stage on shoulder of road or field access dirt road (just west of strategy site) - NO TRAILERS	Downstream Resources, Freshwater Wildlife, Salmon - Chinook	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is extremely limited at this location and on the shoulder of the roadway - DO NOT BRING AN EQUIPMENT TRAILER to this site.	68	279

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
GEECTG-1.1	Gee Creek Tributary - Interstate-5 Rest Area (North) 45.77667 -122.66966	Sorbent	Sorbent 200ft	No	Onsite Stage in west side/automobile parking lot at Interstate-5 Gee Creek Rest Area off Exit 11 (North Bound)	Downstream Resources, Freshwater Wildlife, Salmon - Chinook	Rest Area maintained by WSDOT Southwest Region - Maintenance (Area 1); 360-905-2240 or 360-905-2136. WSDOT Environmental/Hazmat at 360-905-2186	68	281
HILLC-0.9	Hill Creek at Miekler Road 46.36731 -122.92933	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage work truck on shoulder of roadway before or after bridge; NO TRAILERS.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Limited shoulder area - DO NOT BRING AN EQUIPMENT TRAILER to this site; stage trailers at SA-CWLZR-24.7 (end of Miekler Rd). Follow WSDOT work zone traffic control guidelines.	58	283
HILLC-2.1	Hill Creek at Barnes Drive 46.37829 -122.91412	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage work truck on shoulder of roadway before or after bridge; NO TRAILERS.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines - limited shoulder area, DO NOT BRING AN EQUIPMENT TRAILER to this site; they can be staged at corner of Barnes Drive and Rogers Road (1.0mi NE of site).	58	285

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
KLMAR-1.5	Kalama River near Camp Kalama RV Park 46.03886 -122.85442	Collection	Boom 300ft	Yes	Onsite Large grass field, but on private property.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead, Waterfowl, Winter Steelhead	Charlene DesRosier. 360.673.2456. Camp Kalama RV Park	63	289
LCMSC-0.3	Lacamas Creek at Highway 506 46.41175 -122.92610	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage work truck on north shoulder of roadway before or after bridge; limited shoulder space - NO TRAILERS.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited. Slope down to creek left is steep; use 1/2" line for safe descent if needed.	57	291
LCMSC-4.2	Lacamas Creek at Drews Prairie Road 46.45339 -122.87984	Collection, Sorbent	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of road before bridge.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Waders or hip boots recommended. Depending on flow, equipment can be lower to creek left from bridge using line or crane truck, but must follow WSDOT work zone traffic control guidelines for lane closure.	57	293

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-1.9	Lewis River - NW Lancaster Road 45.86454 -122.74977	Collection	Boom 700ft	Yes	Onsite Stage equipment at end of roadway near top of boat ramp (BL-LEWR-1.8)	Downstream Resources, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead, Wetland Habitat	Entry is gated and may be locked (or appear locked); If locked, notify BNSF at 800-832-5452 before entry. This site is located below RR Bridge on south side of Lewis River in Washington State at BNSF Rail Mile 119 on the Seattle Line (52).	67	303
LEWR-2.3	Lewis River along Dike road 45.87190 -122.74127	Collection	Boom 400ft	Yes	Onsite Stage equipment along dike path.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Use workboat to tow boom to site	67	305
LEWR-3.4	Lewis River - WDFW Water Access Site "Martin" 45.86686 -122.72372	Collection	Boom 900ft	Yes	Onsite Stage in parking lot of WDFW Water Access Site "Martin" near boat ramp (SA-LEWR-3.3)	Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead	Upstream side of strategy is along "Two Rivers" development off NW Pekin Ferry Road. Downstream side of strategy lands on upstream side of boat ramp at WDFW Water Access Site "Martin" (open year round).	67	307

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-4.1	Lewis River 45.87252 -122.72324	Collection	Boom 300ft	Yes	Remote Stage equipment along dike trail	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Use workboat to tow boom to site. Lots of open farmland on the west side of the bank. Room to park equipment	67	309
LEWR-5.0	Lewis River along dike path 45.88114 -122.73274	Collection	Boom 400ft	Yes	Onsite Stage equipment on dike path	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Inform/coordinate response activities with nearby property owners as needed.	67	311
LEWR-11.5	Lewis River - North of NW 15th Avenue 45.93779 -122.68492	Exclusion	Boom 200ft, Sorbent 200ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)	Habitat and Waterfowl, Salmon, Steelhead	Strategy location is on river left at entrance to side channel about ~0.9mi downstream from Lewis River Golf Club Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4). Use caution - pilings present at side channel entrance.	65	313

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-11.7	Lewis River at WDFW Water Access Site "Island" 45.93895 -122.68205	Collection	Boom 400ft	Yes	Onsite Stage in parking area of WDFW Water Access Site "Island" (SA-LEWR-11.7 / BL-LEWR-11.7)	Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead	Site located at WDFW "Island" Water Access Site. Location is open year round; for more information contact WDFW Region 5 at 360-696-6211 or TeamVancouver@dfw.wa.gov.	65	315
LEWR-11.8	Lewis River - Northwest of NW Polar Drive 45.93804 -122.68008	Deflection	Boom 200ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)	Habitat and Waterfowl, Salmon, Steelhead	Strategy location is on river right at entrance to side channel about ~0.6mi downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4).	65	317
LEWR-12.2	Lewis River - Fish Pens at Side Channel Entrance 45.93773 -122.67012	Deflection	Boom 300ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)	Fish Pens	Strategy location is on river right about ~200ft upstream of fish pens, ~0.2mi downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4).	65	319

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-12.3a	Lewis River - Downstream from Lewis River Golf Course 45.93652 -122.66736	Collection	Boom 300ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR- 12.4 / BL-LEWR-12.4)	Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead	Strategy shoreside location (Point B) is on river right about ~400ft downstream from Lewis River Golf Course Boat Ramp (SA- LEWR-12.4, BL-LEWR- 12.4). Dirt road that leads NW from ramp will take you to strategy shoreside location.	65	321
LEWR-12.3b	Lewis River - Downstream from Lewis River Golf Course 45.93700 -122.66833	Deflection	Boom 300ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR- 12.4 / BL-LEWR-12.4)	Fish Pens	Strategy shoreside location (Point A) is on river right about ~500ft downstream from Lewis River Golf Course Boat Ramp (SA- LEWR-12.4, BL-LEWR- 12.4). Trail at end of dirt road that leads NW from ramp will take you to strategy shoreside location.	65	323
LEWR-12.5	Lewis River at the Lewis River Golf Course 45.93533 -122.66541	Collection	Boom 300ft	Yes	Remote Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR- 12.4 / BL-LEWR-12.4)	Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead	Site is located about 275ft down slope from parking lot at Club House for Lewis River Golf Course; with a 26ft drop. Use of vac- truck from parking area not recommended.	65	325

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-13.3	Lewis River - East of NE 12th Avenue 45.92843 -122.65439	Exclusion	Boom 100ft, Sorbent 200ft	Yes	Remote Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)	Habitat and Waterfowl, Salmon, Steelhead	Strategy is located on river left about ~1.4mi downstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).	65	327
LEWR-13.8	Lewis River - West of 434th Street 45.93323 -122.65155	Exclusion	Boom 100ft, Sorbent 200ft	Yes	Remote Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)	Habitat and Waterfowl, Salmon, Steelhead	Strategy is located on river left about ~0.9mi downstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).	65	329
LEWR-14.9	Lewis River - Upstream from Happa Boat Launch 45.93655 -122.63367	Deflection	Boom 300ft	Yes	Remote Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)	Habitat and Waterfowl, Salmon, Steelhead	Strategy is located on river right about ~0.2mi upstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).	65	331
LEWR-15.5a	Lewis River Fish Hatchery - Downstream Water Intake 45.93707 -122.62012	Exclusion	Boom 200ft, Sorbent 200ft	Yes	Remote Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5). Use boat launch BL-LEWR-15.5.	Water Intakes	Strategy location is at downstream water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Call 360-225-4390.	65	333

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-15.5b	Lewis River at WDFW Water Access Site "Cedar Creek 45.93668 -122.61998	Collection	Boom 300ft	Yes	Onsite Staging Area and Boat Launch SA-LEWR-15.5 and BL-LEWR-15.5 are onsite	Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead	Site located at WDFW "Cedar Creek" Water Access Site. Location is open year round; for more information contact WDFW Region 5 at 360-696-6211 or TeamVancouver@dfw.wa.gov.	65	335
LEWR-15.6a	Lewis River off NE Etna Road 45.93585 -122.61815	Exclusion	Boom 100ft, Sorbent 200ft	Yes	Remote Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5); use boat launch at same location.	Habitat and Waterfowl, Salmon, Steelhead	Site is located about ~700ft upstream from boat launch BL-LEWR-15.5; backwater area just upstream from Cedar Creek Fork entrance across from Lewis River Fish Hatchery.	65	337
LEWR-15.6b	Lewis River - Cedar Creek Fork 45.93609 -122.61875	Exclusion	Boom 100ft, Sorbent 200ft	Yes	Remote Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5). Use boat launch BL-LEWR-15.5.	Habitat and Waterfowl, Salmon, Steelhead	Site is located about ~500ft upstream from boat launch BL-LEWR-15.5, downstream of Etna Road Bridge over Cedar Creek Fork.	65	339

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LEWR-16.1a	Lewis River at Old Lewis River Road 45.93845 -122.60995	Collection	Boom 300ft	Yes	Remote Stage equipment on-site. Launch work boat from Cedar Creek Boat Launch (BL-LEWR-15.5)	Downstream Resources, Fish Hatchery, Habitat and Waterfowl, Salmon, Steelhead	Strategy location is immediately upstream of water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Call 360-225-4390.	65	341
LEWR-16.1b	Lewis River Fish Hatchery - Upstream Water Intakes 45.93815 -122.61042	Exclusion	Boom 200ft, Sorbent 200ft	Yes	Onsite Stage equipment on-site. Launch work boat from Cedar Creek Boat Launch (BL-LEWR-15.5)	Water Intakes	Strategy location is at upstream water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Call 360-225-4390.	65	343
MCMRC-0.2	McMurphy Creek at Annonen Road 46.40714 -122.96321	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage work truck on partial shoulder and roadway; NO TRAILERS.	Salmon - Chum, Steelhead	Follow WSDOT work zone traffic control guidelines must be followed. If needed, underflow dam on private property (west of roadway) may be installed but access/activity must be coordinated with property owner.	57	347

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
MILLC-0.3	Mill Creek at South Cloverdale Road 45.96056 -122.80147	Collection	Boom 100ft, Sorbent 100ft	No	Remote Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.	Freshwater Wildlife, Salmon - Coho, Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6 .	64	349
MILLC-1.1	Mill Creek at Martins Bluff Road 45.96428 -122.78683	Sorbent	Sorbent 100ft	No	Onsite Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.	Freshwater Wildlife, Salmon - Coho, Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6 .	64	351
OLQAC-0.5	Olequa Creek off Old Olequa Crossing Road 46.37295 -122.94271	Collection	Boom 200ft, Sorbent 300ft	Yes	Onsite Stage at end of unnamed roadway off Ol Olequa Crossing Road near WDFW fish barrier		Fish barrier is part of WDFW-Cowlitz Evaluation Project; inform WDFW before strategy implementation; call 360-864-6133, 360-623-0622, 360-791-4690, or 206-245-9971.	58	353

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
OLQAC-2.6	Olequa Creek at Enchanted Valley Country Club 46.39289 -122.95130	Collection	Boom 200ft	Yes	Onsite Stage equipment in cul-de-sac at end of Olequa Place, adjacent to the creek.	Downstream Resources, Salmon, Steelhead	Notify property owner in advance of strategy implementation; call/leave message at 509-995-5439, 509-990-0925, or email ralphchilders@yahoo.com.	57	355
OLQAC-3.7	Olequa Creek at 7th Street (Highway 506) 46.40192 -122.96446	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of 7th Street (Highway 506) near bridge over creek	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Waders or hip boots recommended. Access creek right from trail behind guardrail near SW corner of bridge.	57	357
OLQAC-4.8	Olequa Creek at Annonen Road 46.41527 -122.96706	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage behind guardrail before or after bridge on NE/upstream side of roadway.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Slope down to creek right under bridge is steep; use 1/2" line for safe descent if needed.	57	359

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
OLQAC-7.9	Olequa Creek at Ferrier Road 46.44560 -122.96232	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of roadway before NE corner of bridge - NO TRAILERS	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site. Waders or hip boots recommended.	57	361
OLQAC-10.9	Olequa Creek at near Winlock Wastewater Treatment 46.48183 -122.94612	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage in parking area for Winlock Wastewater Treatment Plant adjacent to creek	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow trail along south fence line for Winlock Waste Water Treatment Plant to trail leading down to creek left. Waders or hip boots recommended.	57	363
OLQAC-12.4	Olequa Creek at NW Kerron Street 46.50036 -122.93725	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage on shoulder of highway north of bridge over creek on east/northbound side of roadway.	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Waders or hip boots recommended.	56	365
OSTRC-0.15	Ostrander Creek culvert under W Stock Road 46.19499 -122.89687	Collection	Sorbent 200ft	No	Onsite Stage equipment on side of road	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Follow WSDOT work zone traffic control guidelines when working on or near roadway	60	367

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
OSTRC-0.2	Ostrander Creek 46.19474 -122.89546	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on side of road	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Culvert has two channels, both approximately 8ft wide	60	369
OSTRC-0.35	Ostrander Creek at Pacific Highway N 46.19471 -122.89311	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on side of road.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Heavy vegetation and steep bank	60	371
SALMC-2.2	Salmon Creek at NW 36th Avenue (Hwy-501) 45.72262 -122.70678	Collection	Boom 200ft, Sorbent 300ft	Yes	Onsite Stage on wide shoulder of roadway near SE corner of NW 36th Avenue Bridge.	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead	In-line booster pump needed if using Vac- Truck from roadway shoulder. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	69	373
SALMC-5.6	Salmon Creek - Klineline Pond (Salmon Creek Park) 45.70684 -122.65798	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage in parking lot of Salmon Creek Park near the pedestrian bridge over creek (SA-SALMC- 5.6).	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead	Contact Clark County Parks and Recreation for access support, and notify them before implementation; call 360-737-6118 or 360- 397-2285; If spill/sheen impacts observed on Klineline Pond notify WDFW at 360-902-2700.	69	375

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
SAURC-0.75	Sauer Creek at Cloverdale Rd 45.98902 -122.81790	Culvert Block	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on side of road	Freshwater Wildlife	Modify strategy as needed, based on stream flow conditions. Downstream side of the culvert is most easily accessible, SW side of road.	63	377
SAURC-0.9	Sauer Creek at Paradise Acres Road 45.98975 -122.81510	Collection	Boom 100ft, Sorbent 200ft	No	Remote Ask permission to stage equipment from property owners	Freshwater Wildlife, Salmon - Coho, Steelhead	Follow WSDOT Traffic Safety Guidelines	63	379
SCHSC-0.3	Schoolhouse Creek at Robb Rd 45.98102 -122.82142	Underflow Dam		No	Onsite Roadway near strategy location		Dirt road, surrounded by private property, parking on the side of the road only	63	381
SCHSC-1.3	Schoolhouse Creek near Cloverdale Road 45.98539 -122.81352	Collection, Underflow Dam	Boom 100ft, Sorbent 200ft	No	Remote Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.	Freshwater Wildlife, Salmon - Coho, Steelhead	Access culvert from grass field (private property). Coordinate access with property owner before implementation if possible.	63	383

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
SLMNC-0.35	Salmon Creek at Pleasant Hill Rd 46.25445 -122.88603	Collection	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on grassy field	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Down a paved road to private property, then through a gate and onto a grass field that leads to the creek. Grass field gets very muddy. 4x4 with good tires recommended.	59	385
SLMNC-0.7	Salmon Creek near Huntington Ave S 46.25960 -122.88844	Sorbent	Sorbent 100ft	No	Onsite Stage equipment on grass field north of culvert.	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Bank leading down to the culvert is very steep and covered in overgrown vegetation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	59	387
SLMNC-2.3	Salmon Creek along Dougherty Drive 46.27806 -122.89755	Collection	Boom 100ft, Sorbent 100ft	No	Remote Stage equipment on shoulder of Dougherty Drive	Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead	Bank leading down to the culvert is very steep and covered in overgrown vegetation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	59	389

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
TTLR-1.0	Toutle River off Old Pacific Hwy N 46.31715 -122.90667	Collection	Boom 500ft	Yes	Onsite Stage in upper dirt/gravel lot at strategy location	Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead	If needed, launch jet-boat from BL-CWLZR-17.6 (located about ~3.4m downstream) to support the implementation of this strategy - but boat operator must know the river well in order to avoid sandbars and other obstructions.	58	391
TTLRTA-1.1	Toutle River - Unnamed Tributary at Kroll Road 46.31150 -122.88589	Collection	Boom 100ft, Sorbent 100ft	No	Onsite Stage work truck on shoulder of roadway; Space limited - NO TRAILERS	Downstream Resources	Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder parking is very limited at this location - DO NOT BRING AN EQUIPMENT TRAILER to this site.	58	393

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
USCCA-0.5	Unnamed Creek at Old Pacific Highway S 45.99306 -122.82783	Collection, Underflow Dam	Boom 100ft, Sorbent 200ft	No	Onsite Very limited area on the side of the road, enough for 2 or 3 small trucks.	Freshwater Wildlife	Culvert under paved road. Limited parking. The creek is approximately 10 ft in width but will vary seasonally. Stream is mostly dry in the summer. Shoreline composition is mostly grass with some mud, river rock. Downstream side of the culvert is most easily accessible, SW side of road.	63	395
USCCA-0.8	Unnamed Creek at Cloverdale Road 45.99325 -122.82007	Culvert Block, Sorbent	Boom 100ft, Sorbent 100ft	No	Onsite Stage equipment on side of the road. Large grass fields in the area are privately owned.	Freshwater Wildlife	Culvert under paved road. Limited parking. Shoreline composition is mostly grass with vegetation. Robert Palmer is the property owner on the west side of the culvert and was very cooperative. Culvert has easy access off the side of the road but has a wire fence around it. Robert (Ken) Palmer, 360.673.2200	63	397

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
USCCB-0.8	Unnamed Stream at Burcham Street 46.15007 -122.89821	Culvert Block	Boom 100ft, Sorbent 200ft	No	Onsite Stage equipment on hill above the site. Follow WSDOT Traffic Safety Guidelines.	Freshwater Wildlife	Creek has intermittent flow. Modify strategy as needed, based on stream flow conditions. Install Underflow Dam if time allows.	61	399
USCCC-0.0	Unnamed Creek at Washburn Rd 46.20753 -122.89756	Collection	Boom 100ft, Sorbent 200ft	No	Remote No staging onsite.	Freshwater Wildlife, Salmon - Coho, Steelhead	Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.	60	401
WPPLC-2.3	Whipple Creek near NW 179th Street (Wood Bridge) 45.75049 -122.71678	Sorbent	Sorbent 100ft	No	Onsite Stage off NW 179th Street before wooden bridge on unnamed roadway.	Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead	May be able to temporarily park equipment trailer at Clark County Sheriff's Office (West Precinct), 505 NW 179th Street, ~2mi east of strategy site (before I-5) on south side of roadway; call 360-397-2211.	68	403

4.5.3 Notification Strategy Matrices

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-4.7-N	Cowlitz River - Kelso Ranney Collector (Water Intakes) 46.14238 -122.91383	Notification	Water Intakes	During Normal Business Hours call City of Kelso Public Works at 360-577-3360 or contact the city's water treatment plant directly at 360-577-1085. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream or downstream of the Ranney Collector/Water Intake. After hours, contact Kelso Police at 360-423-1270 and ask that the on- duty public works person return your call.	Notify City of Kelso so they can take action to protect their water intakes	61	407
CWLZR-5.2-N	Cowlitz River - Longview Water Intakes 46.15038 -122.91448	Notification	Economic Resource, Water Intakes	During Normal Business Hours (Monday through Thursday 7am-6pm) call City of Longview Stormwater Division at 360-442-5299, 360-957-2720, or 360-442-5209. After hours call 360-578-0900.	Notify City or Longview so they can take action to protect their water intakes	61	409

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-22.3-N	Cowlitz River - Castle Rock Water Intakes 46.33403 -122.93194	Notification	Economic Resource, Water Intakes	During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility. If the business number is inoperative, or for afterhours assistance, call the city's answering service at 360-751-7478.	Notify City of Castle Rock so they can take action to protect their water intakes	58	411
CWLZR-27.3-N	Cowlitz River - Vader Water Intakes 46.40608 -122.93336	Notification	Water Intakes	During Normal Business Hours call Lewis County Public Works at 360-740-1123 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility. After hours call Lewis County Emergency Management at 360-740-1151 or the Sheriff's Office at 360-748-9286 for assistance.	Notify Lewis County so they can take action to protect the City of Vader's water intakes	57	413

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page#)	Strategy Details (Page#)
CWLZR-49.8-N	Cowlitz River - Salmon and Trout Hatcheries (WDFW) 46.51134 -122.62946	Notification	Fish Hatchery	Notify WDFW Cowlitz River Salmon Hatchery of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River or downstream waters. CALL 360-864-6135.	Notify WDFW Cowlitz River Hatcheries so they can take action to protect their fish resources	55	415
CWMR-13.3-N	Coweeman River - Rearing Pond 46.15566 -122.78136	Notification	Salmon, Steelhead	Notify Coweeman River Rearing Pond of any significant oil spill or potential spill that impacts or threatens to impact the river or downstream waters. CALL 360-577-0602.	Notify Coweeman Rearing Pond so they can take action to protect their fish resources	61	417
KLMAR-2.6-N	Kalama River - Kalama Ranney Collector (Water Intakes) 46.04361 -122.83902	Notification	Water Intakes	During Normal Business Hours call City of Kalama Public Works at 360-673-3706 or contact the city's water treatment plant directly at 360-673-4047. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Kalama River upstream of the Ranney Collector/Water Intake. After hours, contact Kalama Police/Dispatch at 360-577-3090 and ask that the on-duty public works person return your call.	Notify City of Kalama so they can take action to protect their water intakes	63	419

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page#)	Strategy Details (Page#)
KL MAR-10.8-N	Kalama River - Kalama Falls Hatchery (WDFW) 46.01659 -122.73408	Notification	Salmon	Notify WDFW Kalama Falls Hatchery of any significant spill or potential oil spill that impacts or threatens to impact the Kalama River, Toutle River, Cowlitz River, Lewis River, or downstream waters. CALL 360-673-4825 or 360-864-6135.	Notify WDFW Kalama Falls Hatchery so they can take action to protect their fish resources	63	421
LEWR-7.0-N	Lewis River - Woodland Ranney Collector (Water Intakes) 45.91014 -122.74015	Notification	Water Intakes	Call the City of Woodland Public Works at 360-606-1191, 360-608-1417, or 360-607-0968. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Lewis River upstream of the Ranney Collector/Water Intake.	Notify City of Woodland so they can take action to protect their water intakes	64	425
LEWR-19.0-N	Lewis River - Merwin Hatchery (WDFW) 45.95464 -122.56479	Notification	Salmon	Notify WDFW Merwin Hatchery of any significant oil spill or potential spill that impacts or threatens to impact the Lewis River or downstream waters. CALL 360-225-4390.	Notify WDFW Merwin Hatchery so they can take action to protect their fish resources	64	427

4.5.4 Staging Area Matrices

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
SA-CWLZR-1.6	Cowlitz River - Gerhart Gardens Park	46.11136 -122.89552	200 Freedom Way Longview, WA 98632	City of Vancouver Parks and Recreation 415 Sixth Street Vancouver, WA 98660 360-487-8337	LCR-65.9R	Gerhart Gardens Park belongs to the City of Longview. Coordinate staging with Parks Department; call 360-487-8337.	62	433
SA-CWLZR-6.35	Cowlitz River - Carnival Market	46.16564 -122.91561	829 Westside Hwy Kelso, WA 98626	No Information		Carnival Market	60	435
SA-CWLZR-16.1	Cowlitz River - Camelot Beach	46.26569 -122.90451	213 Camelot Spur Castle Rock, WA 98611	No Information		Gravel lot	59	437
SA-CWLZR-17.6	Cowlitz River - Castle Rock Sports Complex	46.27830 -122.91185	5018 Westside Hwy Castle Rock, WA 98611	City of Castle Rock - Public Works 360 "A" Street SW - P.O. Box 370 Castle Rock, WA 98611 360-703-0167	CWLZR-18.0	During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of the need to use the Sports Complex/Memorial Park boat launch parking area for staging. If the business number is inoperative, or for after-hours assistance, call the city's answering service 360-751-7478.	59	439

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
SA-CWLZR-24.7	Cowlitz River - WDFW Water Access Site "Olequa Creek"	46.36778 -122.93431	271 Miekler Rd Castle Rock, WA 98611	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	CWLZR-24.7 HILLC-0.9	WDFW Water Access Site "Olequa Creek" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	58	441
SA-CWLZR-29.8	Cowlitz River - WDFW "I-5" Water Access Site	46.41364 -122.89102	275 Mandy Rd Toledo, WA 98591	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	CWLZR-29.9	WDFW "I-5" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	57	443
SA-CWMR-1.0	Coweeman River - Cowlitz County SAR	46.13140 -122.89765	1809 Grade St Kelso, WA 98626	No Information		Search and Rescue station across street from boat launch	62	445
SA-KLMAR-2.8	Kalama River - WDFW Water Access "Modrow Bridge"	46.04735 -122.83712	150 Modrow Rd Kalama, WA 98625	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211		WDFW Water Access Site "Modrow Bridge" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	63	449

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
SA-LEWR-3.3	Lewis River - WDFW Water Access Site "Martin"	45.86799 -122.72479	1242 S Pekin Rd Woodland, WA 98674	Washington Department of Fish and Wildlife Region 5 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-3.4	WDFW Water Access Site "Martin" is open year round; For extended use, contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	67	457
SA-LEWR-11.7	Lewis River - WDFW "Island" Water Access Site	45.93933 -122.68185	3020 Lewis River Rd Woodland, WA 98674	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-11.7	WDFW "Island" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	65	459
SA-LEWR-12.4	Lewis River Golf Club Boat Launch	45.93622 -122.66598	3209 Old Lewis River Rd Woodland, WA 98674	Lewis River Golf Course 3209 Lewis River Road Woodland, WA 98674 360-225-8566	LEWR-11.5 LEWR-11.8 LEWR-12.2 LEWR-12.3a LEWR-12.3b LEWR-12.5	Lewis River Golf Club Boat Launch parking area can be used for staging. Coordinate use of parking area with golf course administration and operations office; call 360-225-8566 or 360-225-8254.	65	461

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
SA-LEWR-14.7	Lewis River - Haapa Boat Launch	45.93589 -122.63767	43309 NE Haapa Rd Woodland, WA 98674	Clark County Parks and Trails 360-397-2285 CRESA Clark Regional Emergency Services Agency 360-696-4461	LEWR-13.3 LEWR-13.8 LEWR-14.9	Haapa Park is open daily from 7AM to dusk. Contact Clark County Dispatch (CRESA) for after-hours access assistance; call 360-693-3111. Clark County Sheriff's Department and WDFW Enforcement Officers have a 24-hour access key to park.	65	463
SA-LEWR-15.5	Lewis River - WDFW "Cedar Creek" Water Access Site	45.93643 -122.62050	5100 NE Etna Rd Woodland, WA 98674	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-15.5a LEWR-15.5b LEWR-15.6a LEWR-15.6b	WDFW "Cedar Creek" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	65	465
SA-SALMC-5.6	Staging Area - Klineline Pond (Salmon Creek Region)	45.70654 -122.65817	1717 NE 117th St Vancouver, WA 98686	Clark County Parks and Trails 4700 NE 78th Street Vancouver, WA 98665 360-397-2285	SALMC-5.6	Contact Clark County Parks and Recreation for access support; call 360-737-6118 or 360-397-2285. Normal park hours are 7AM to dusk.	69	467

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
SA-SCHSC-0.6	Schoolhouse Creek - Old Pacific Highway near I-5	45.98127 -122.82349	200 Robb Rd Kalama, WA 98625	No Information	BYBEC-0.8 MILLC-0.3 MILLC-1.1	Location is gravel parking area off Old Pacific Highway South. Equipment trailer can be staged at this location so work trucks can be loaded and sent to deploy nearby strategies that have limited access or shoulder areas.	63	469

4.5.5 Boat Launch Matrices

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
BL-CWLZR-1.6	Cowlitz River - Gerhart Gardens Park	46.11136 -122.89552	200 Freedom Way Longview, WA 98632	City of Vancouver Parks and Recreation 415 Sixth Street Vancouver, WA 98660 360-487-8337	CWLZR-1.0 CWLZR-1.3 CWLZR-1.65 CWMR-0.02 CWMR-0.1 CWMR-0.15 CWMR-0.2 CWMR-0.35 CWMR-0.5 LCR-65.9R LCR-66.2R	Gerhart Gardens Park belongs to the City of Longview. Coordinate use of boat launch with Parks Department; call 360-487-8337.	62	473
BL-CWLZR-6.35	Cowlitz River - Carnival Market	46.16564 -122.91561	829 Westside Hwy Kelso, WA 98626	No Information	CWLZR-4.3 CWLZR-5.2 CWLZR-5.6 CWLZR-7.25 CWLZR-7.4	Carnival Market - Small boats only	60	475
BL-CWLZR-16.1	Cowlitz River - Camelot Beach	46.26569 -122.90451	213 Camelot Spur Castle Rock, WA 98611	No Information	CWLZR-14.1 CWLZR-15.8L CWLZR-15.8R CWLZR-15.9	Camelot Beach boat launch - small boats only	59	477
BL-CWLZR-17.6	Cowlitz River - Castle Rock Sports Complex	46.27830 -122.91185	5018 Westside Hwy Castle Rock, WA 98611	City of Castle Rock - Public Works 360 "A" Street SW - P.O. Box 370 Castle Rock, WA 98611 360-703-0167	CWLZR-17.2 CWLZR-17.4 CWLZR-17.75 CWLZR-18.0	During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of the need to use the Sports Complex/ Memorial Park boat launch. If the business number is inoperative, or for after-hours assistance, call the city's answering service at 360-751-7478.	59	479

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
BL-CWLZR-24.7	Cowlitz River - WDFW Water Access Site "Olequa Cre	46.36778 -122.93431	271 Miekler Rd Castle Rock, WA 98611	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	CWLZR-23.6 CWLZR-24.7 CWLZR-26.0 CWLZR-26.5	WDFW Water Access Site "Olequa Creek" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	58	481
BL-CWLZR-29.8	Cowlitz River - WDFW "I-5" Water Access Site	46.41364 -122.89102	275 Mandy Rd Toledo, WA 98591	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	CWLZR-27.4 CWLZR-29.9	WDFW "I-5" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	57	483
BL-CWMR-1.0	Coweeman River - Cowlitz County SAR	46.13140 -122.89765	1809 Grade St Kelso, WA 98626	No Information	CWMR-1.15 CWMR-1.3 CWMR-1.4 CWMR-1.6 CWMR-1.75 CWMR-2.0	Boat launch on private property	62	485
BL-KLMAR-2.8	Kalama River - WDFW Water Access "Modrow Bridge"	46.04735 -122.83712	150 Modrow Rd Kalama, WA 98625	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211		WDFW Water Access Site "Modrow Bridge" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	63	487

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
BL-LEWR-1.8	Lewis River - NW Lancaster Road Boat Launch	45.86340 -122.75020	33301 NW Lancaster Rd Ridgefield, WA 98642	No Information	LEWR-1.9	Lower portion of boat ramp is washed out but ramp should be usable during periods of higher water, or for hand-launching a workboat. Entry is gated and may be locked (or appear locked); notify BNSF at 800-832-5452 before entry. This site is located below RR Bridge on south side of Lewis River in Washington State at BNSF Rail Mile 119 on the Seattle Line (52).	67	491
BL-LEWR-3.3	Lewis River - WDFW Water Access Site "Martin"	45.86799 -122.72479	1242 S Pekin Rd Woodland, WA 98674	Washington Department of Fish and Wildlife Region 5 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-3.4	WDFW Water Access Site "Martin" is open year round; For extended use, contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	67	493
BL-LEWR-11.7	Lewis River - WDFW "Island" Water Access Site	45.93933 -122.68185	3020 Lewis River Rd Woodland, WA 98674	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-11.7	WDFW "Island" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	65	495

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Strategy Details (Page#)
BL-LEWR-12.4	Lewis River Golf Club Boat Launch	45.93622 -122.66598	3209 Old Lewis River Rd Woodland, WA 98674	Lewis River Golf Course 3209 Lewis River Road Woodland, WA 98674 360-225-8566	LEWR-11.5 LEWR-11.8 LEWR-12.2 LEWR-12.3a LEWR-12.3b LEWR-12.5	Coordinate use of Lewis River Golf Club Boat Launch with golf course administration and operations office; call 360-225-8566 or 360-225-8254. Shallow ramp - jet drive work boat recommended.	65	497
BL-LEWR-14.7	Lewis River - Haapa Boat Launch	45.93589 -122.63767	43309 NE Haapa Rd Woodland, WA 98674	Clark County Parks and Trails 360-397-2285 CRESA Clark Regional Emergency Services Agency 360-696-4461	LEWR-13.3 LEWR-13.8 LEWR-14.9	Haapa Park is open daily from 7AM to dusk. Contact Clark County Dispatch (CRESA) for after-hours access assistance; call 360-693-3111. Clark County Sheriff's Department and WDFW Enforcement Officers have a 24-hour access key to park.	65	499
BL-LEWR-15.5	Lewis River - WDFW "Cedar Creek" Water Access Site	45.93643 -122.62050	5100 NE Etna Rd Woodland, WA 98674	WDFW Region 5 Vancouver 2108 Grand Boulevard Vancouver, WA 98661 360-696-6211	LEWR-15.5a LEWR-15.5b LEWR-15.6a LEWR-15.6b LEWR-16.1b LEWR-16.1a	WDFW "Cedar Creek" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.	65	501

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Appendix 4A
Response Strategy 2-Pagers

RESPONSE STRATEGIES – LIST

ALNC-1.8	COLCS-13.1b	CWLZR-15.8R	CWMR-0.35	KLMAR-1.5	LEWR-13.8	OSTRC-0.15
BRBRC-6.2	COLCS-13.3	CWLZR-15.9	CWMR-0.5	LCMSC-0.3	LEWR-14.9	OSTRC-0.2
BRBRC-6.3	COLCS-13.4	CWLZR-17.2	CWMR-1.15	LCMSC-4.2	LEWR-15.5a	OSTRC-0.35
BRBRC-6.4	COLCS-13.8	CWLZR-17.4	CWMR-1.3	LCR-71.5M**	LEWR-15.5b	SALMC-2.2
BRBRC-6.5	COUGC-0.5	CWLZR-17.75	CWMR-1.4	LCR-71.6R**	LEWR-15.6a	SALMC-5.6
BRBRC-7.1	COUGC-1.6	CWLZR-18.0	CWMR-1.6	LCR-73.7L**	LEWR-15.6b	SAURC-0.75
BRBRC-7.3	COUGC-2.4	CWLZR-23.6	CWMR-1.75	LEWR-0.4**	LEWR-16.1a	SAURC-0.9
BRBRC-10.2	COUGC-2.5	CWLZR-24.7	CWMR-2.0	LEWR-1.9	LEWR-16.1b	SCHSC-0.3
BRBRC-10.4	CWLZR-1.0**	CWLZR-26.0	CWMRT-0.35	LEWR-2.3	LKRVR-10.8**	SCHSC-1.3
BRBRC-10.8	CWLZR-1.3	CWLZR-26.5	CWMRTB-0.6	LEWR-3.4	MCMRC-0.2	SLMNC-0.35
BRBRC-11.6	CWLZR-1.45	CWLZR-27.4	DAVSC-1.8	LEWR-4.1	MILLC-0.3	SLMNC-0.7
BRBRC-12.6a	CWLZR-1.65	CWLZR-28.4	ELEWR - 0.2	LEWR-5.0	MILLC-1.1	SLMNC-2.3
BRBRC-12.6b	CWLZR-4.3	CWLZR-29.9	FOSTC-1.8	LEWR-11.5	OLQAC-0.5	TTLR-1.0
BRBRC-13.0	CWLZR-5.2	CWLZRTE-0.3	GEEC-3.8	LEWR-11.7	OLQAC-2.6	TTLRTA-1.1
BRBRCT-0.2	CWLZR-5.6	CWLZRTE-0.15	GEEC-4.7	LEWR-11.8	OLQAC-3.7	USCCA-0.5
BURKC-0.7	CWLZR-6.3	CWLZRTE-0.2	GEEC-6.9	LEWR-12.2	OLQAC-4.8	USCCA-0.8
BYBEC-0.8	CWLZR-7.25	CWMR-0.02	GEECTG-1.1	LEWR-12.3a	OLQAC-7.9	USCCB-0.8
CANYC-0.2	CWLZR-7.4	CWMR-0.1	HILLC-0.9	LEWR-12.3b	OLQAC-10.9	USCCC-0.0
COLCS-12.1	CWLZR-14.1	CWMR-0.15	HILLC-2.1	LEWR-12.5	OLQAC-12.4	WPPLC-2.3
COLCS-13.1a	CWLZR-15.8L	CWMR-0.2	KLMAR-0.7**	LEWR-13.3		

***Response strategies from LCR-GRP that are included in this appendix*

Allen Creek - NW Allen Canyon Road ALNC-1.8

Position - Location: 45° 50.983', -122° 43.204' 45° 50' 59.0", -122° 43' 12.2" 45.84972, -122.72007 Ridgefield

Strategy Objective: Collection : Collect oil moving downstream on Allen Creek

Implementation: On downstream (west) side of roadway, deploy hard boom from creek left downstream to creek right. Deploy multiple lengths of sorbent boom within hard boom area to collect product moving downstream. Use line and anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. Limited shoulder area - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

Staging Area: Onsite: Stage work truck on shoulder of roadway; Space limited - **NO TRAILERS**

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Visibility, Ice); Heavy Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is very limited at this location and on the shoulder of the roadway - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

Watercourse: Creek - Allen Creek

Resources at Risk: Downstream Resources, Freshwater Wildlife, Salmon - Chinook, Salmon - Coho, Steelhead



Recommended Equipment

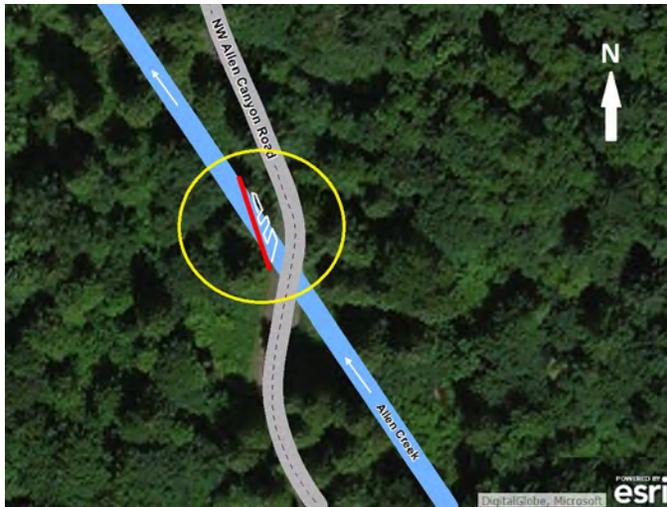
4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

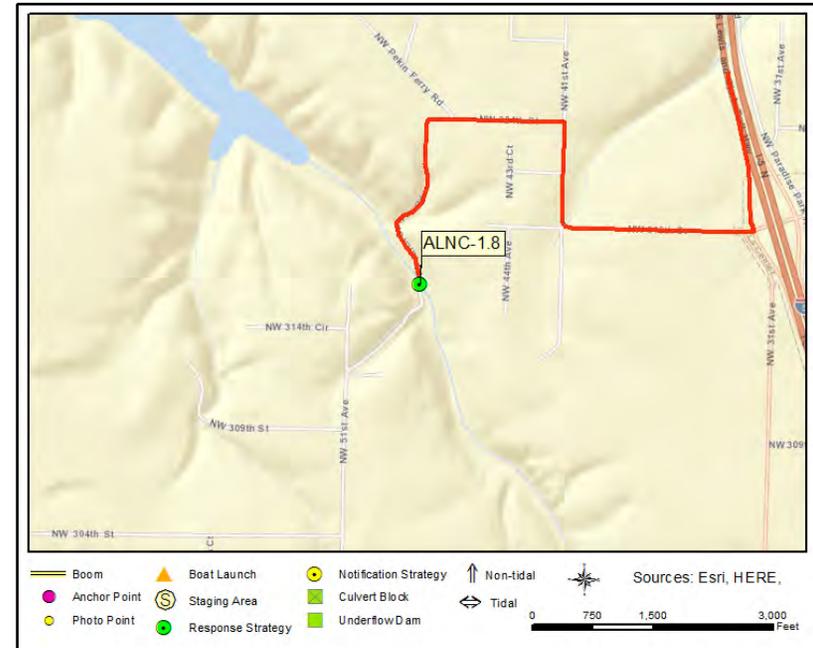
2	Laborer
1	Supervisor

Allen Creek - NW Allen Canyon Road

ALNC-1.8



ALNC-1.8 Photo: Aerial image of strategy location with creek, strategy, and roadway depicted. Hard boom in red; sorbent boom in white; site area in yellow circle.



Site Contact

No Information
Not Determined :

Nearest Address

32624 NW Pekin Ferry Rd
Ridgefield, WA 98642

Driving Directions

1. Head south on Interstate-5 and Take Exit 16 (NW La Center Road towards La Center)
2. Turn right at the end of exit ramp to travel west on NW319th St/NW Pekin Ferry Rd
3. After 0.4mi, turn right onto NW 41st Avenue
4. After 0.2mi, turn left onto NW 324th St/NW Pekin Ferry Rd
5. After 0.3mi, turn left onto NW Allen Canyon Road
6. After 0.6mi, strategy location will be on your right. Stage on roadway shoulder; **WORK TRUCKS ONLY– NO TRAILERS.**

Burnt Bridge Creek at Alki Road BRBRC-6.2

Position - Location: 45° 39.677', -122° 40.331' 45° 39' 40.6", -122° 40' 19.8" 45.66129, -122.67218 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy hard boom on upstream/east side of small bridge over creek at Alki Road. Deploy multiple lengths of sorbent boom on upstream side of hard boom and on downstream/west of roadway bridge. Use anchor posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from walking/bike trail on creek right or roadway near bridge.

Staging Area: Onsite: Stage on dirt road SW of bridge over creek off Alki Road - NO TRAILERS

Site Safety: Slips, Trips, Falls; Water Hazard; Narrow Roadway/Limited Shoulder Areas; Bike/Pedestrian Traffic; Vegetation

Field Notes: If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693-1474 or email jwigen@prestigecare.com.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

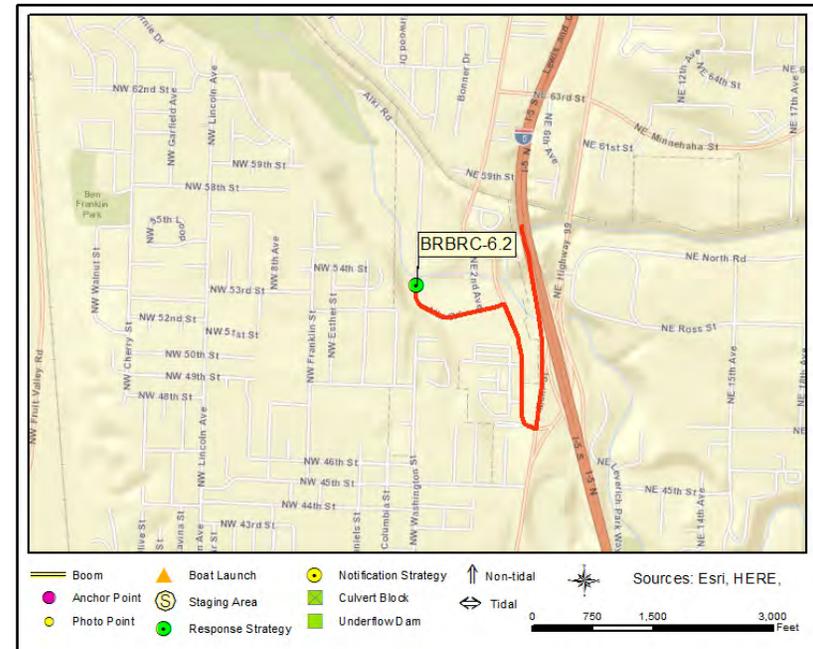
2	Laborer
1	Supervisor

Burnt Bridge Creek at Alki Road

BRBRC-6.2



BRBRC-6.2 Photo: At strategy location looking upstream (east) on Burnt Bridge Creek from Alki Road.



Site Contact

Clark County Public Works Parks Division
 Primary Contact :

 WA
 360-397-2446 ext. 1657

Nearest Address

5298 Alki Rd
 Vancouver, WA 98663

Driving Directions

1. Head south on Interstate-5 and Take Exit 3 to merge onto Main Street
2. At first intersection, turn right onto NE Hazel Dell Avenue
3. After 0.3mi, turn left onto Alki Road.
4. After 0.3mi, you have reached the strategy location. Stage on dirt road to the left/west just before the bridge - NO TRAILERS. If needed, temporarily stage trailer at Discovery Nursing and Rehab Center at 201 Alki Road.

Burnt Bridge Creek Greenway Bridge BRBRC-6.3

Position - Location: 45° 39.684', -122° 40.282' 45° 39' 41.0", -122° 40' 16.9" 45.66140, -122.67137 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy hard boom on upstream/east side of pedestrian bridge over creek, about 200ft east of Alki Road. Deploy multiple lengths of sorbent boom on upstream side of hard boom and on downstream/west side of pedestrian bridge. Use anchor posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use skimmer/portable storage for collection from walking/bike trail.

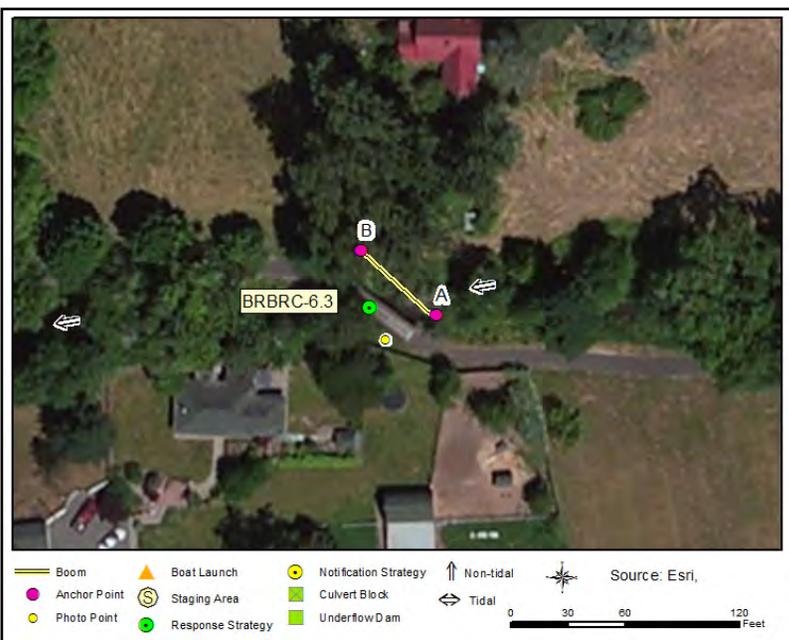
Staging Area: Onsite: Stage on dirt road SW of bridge over creek off Alki Road - NO TRAILERS

Site Safety: Slips, Trips, Falls; Water Hazard; Bike/Pedestrian Traffic; Vegetation

Field Notes: If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693-1474 or email jwigen@prestigecare.com.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

2	Laborer
1	Supervisor

Burnt Bridge Creek at NE 2nd Avenue BRBRC-6.4

Position - Location: 45° 39.690', -122° 40.167' 45° 39' 41.4", -122° 40' 10.0" 45.66150, -122.66945 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy hard boom on downstream/west side of small bridge over creek on NE 2nd Avenue. Deploy multiple lengths of sorbent boom on downstream side of hard boom and on upstream/east side of roadway bridge. Use anchor posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from walking/bike trail on creek right or roadway near bridge.

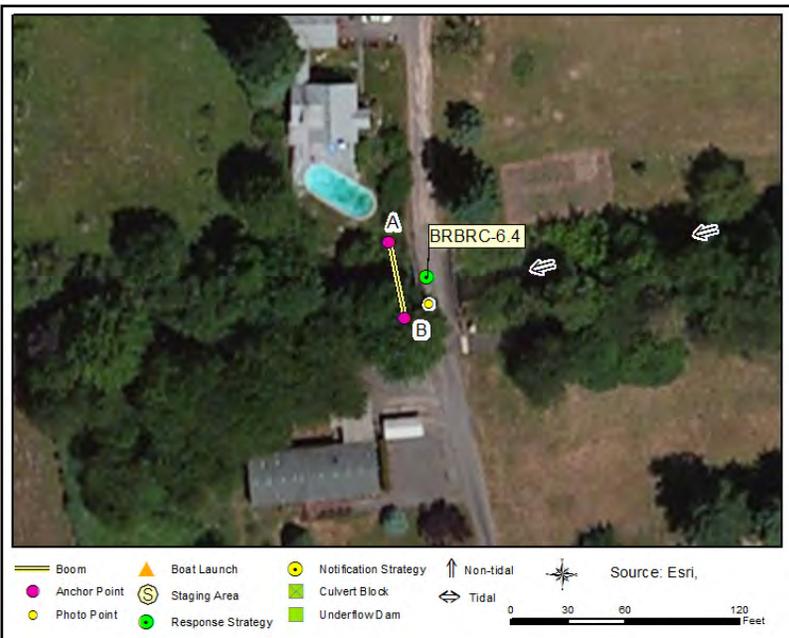
Staging Area: Onsite: Stage in grassy area to the right (east side of road) before the creek/trail - NO TRAILERS.

Site Safety: Slips, Trips, Falls; Water Hazard; Narrow Roadway/Limited Shoulder Areas; Bike/Pedestrian Traffic; Vegetation

Field Notes: If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693-1474 or email jwigen@prestigecare.com.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

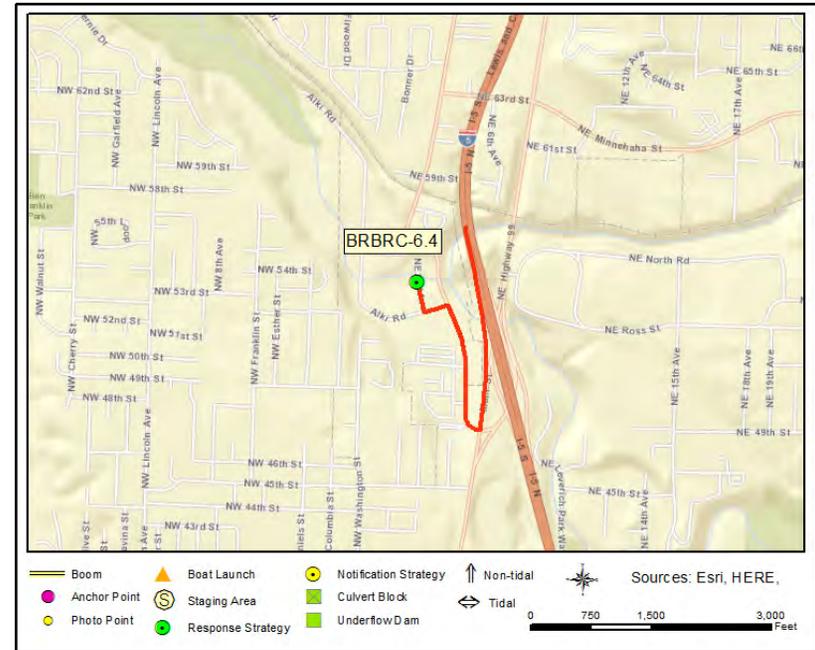
Recommended Personnel

2	Laborer
1	Supervisor

Burnt Bridge Creek at NE 2nd Avenue **BRBRC-6.4**



BRBRC-6.4 Photo: At strategy location at NE 2nd Avenue in Vancouver, looking downstream on Burnt Bridge Creek from roadway bridge.



Site Contact

Clark County Public Works Parks Division
 Municipality (County/City) :

 WA
 360-397-2446 ext. 1657

Nearest Address

5400 NE 2nd Ave
 Vancouver, WA 98663

Driving Directions

1. Head south on Interstate-5 and Take Exit 3 to merge onto Main Street
2. At first intersection, turn right onto NE Hazel Dell Avenue
3. After 0.3mi, turn left onto Alki Road.
4. After 300ft, turn right onto NE Second Avenue.
5. After 300ft, you have reached the strategy location. Stage truck/equipment on grassy area to the right (east side of road) just before the creek and trail - NO TRAILERS. If needed, temporarily stage trailer at Discovery Nursing and Rehab Center at 201 Alki Road.

Burnt Bridge Creek at NE Hazel Dell Avenue BRBRC-6.5

Position - Location: 45° 39.686', -122° 40.112' 45° 39' 41.2", -122° 40' 6.7" 45.66143, -122.66853 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy hard boom on downstream/west side of roadway over creek at NE Hazel Dell Avenue. Deploy multiple lengths of sorbent boom on upstream side of hard boom. Use posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use skimmer/portable storage for collection from walking/bike trail on creek left.

Staging Area: Onsite: Stage on NE 2nd Avenue in grassy area before the creek/trail - NO TRAILERS.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Traffic/Limited Shoulder Areas; Bike/Pedestrian Traffic; Vegetation

Field Notes: If needed, trailer can be temporarily staged at Discovery Nursing and Rehab Center at 201 Alki Road after receiving permission from facility's business manager; call 360-693-1474 or email jwigen@prestigecare.com.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

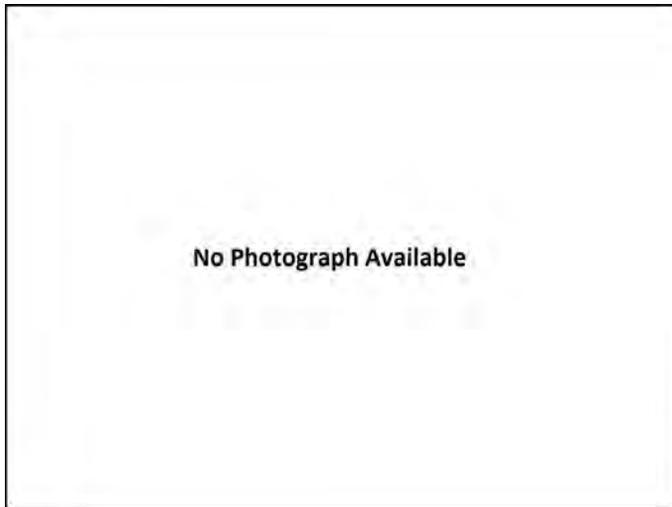
100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

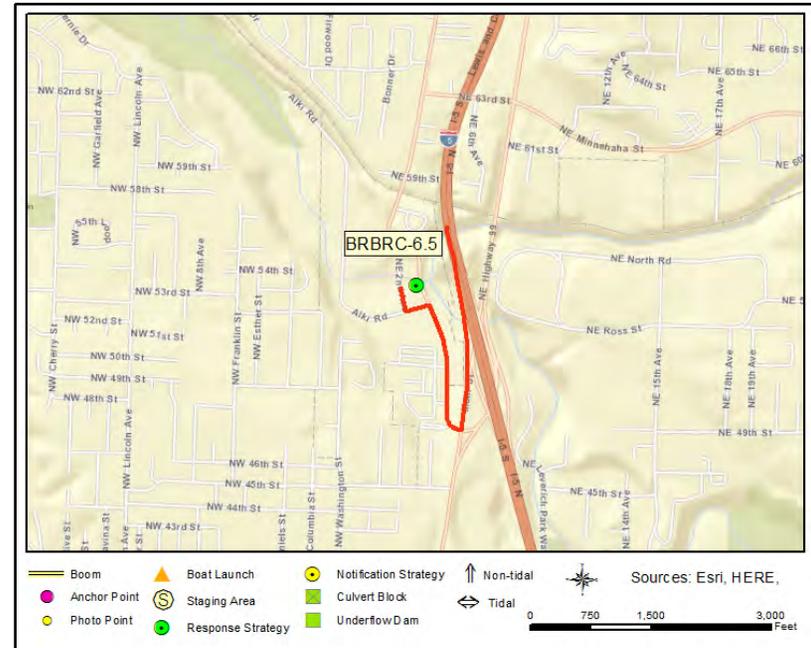
2	Laborer
1	Supervisor

Burnt Bridge Creek at NE Hazel Dell Avenue

BRBRC-6.5



BRBRC-6.5 Photo: No photograph currently available



Site Contact

Clark County Public Works Parks Division
 Municipality (County/City) :

 WA
 360-397-2446 ext. 1657

Nearest Address

5400 NE Hazel Dell Ave
 Vancouver, WA 98663

Driving Directions

1. Head south on Interstate-5 and Take Exit 3 to merge onto Main Street
2. At first intersection, turn right onto NE Hazel Dell Avenue
3. After 0.3mi, turn left onto Alki Road.
4. After 300ft, turn right onto NE Second Avenue.
5. After 300ft, pull off road and stage equipment in grassy area to the right (east side of road) just before the creek and trail - NO TRAILERS. Follow walking trail upstream/east about ~200ft and you'll have reached the strategy location (NE Hazel Dell Avenue). If needed, temporarily stage trailer at Discovery Nursing and Rehab Center at 201 Alki Road.

Burnt Bridge Creek at NE Leverich Park Way BRBRC-7.1

Position - Location: 45° 39.318', -122° 39.761' 45° 39' 19.1", -122° 39' 45.7" 45.65530, -122.66269 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A (45.655312, -122.662681; south side of roadway east of cul-de-sac). Using line, extend boom west about ~20ft to creek right and secure to bank near Point B (45.655288, -122.662739). From Point B, extend remaining boom downstream along creek left, securing it to NE corner of culverts at/near Point C (45.655346, -122.662719). Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

Staging Area: Onsite: Stage in cul-de-sac immediately west of strategy location

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation.

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

5	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

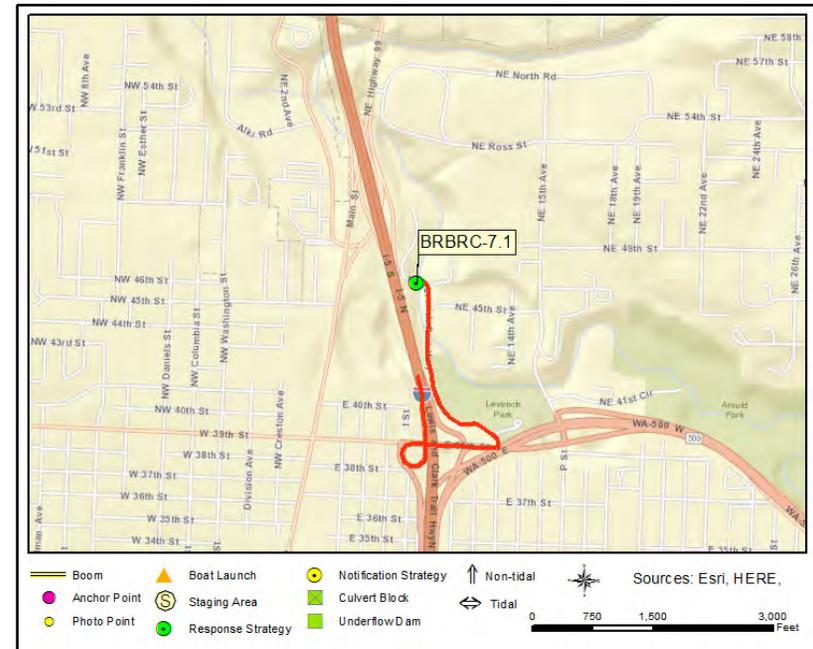
2	Laborer
1	Supervisor

Burnt Bridge Creek at NE Leverich Park Way

BRBRC-7.1



BRBRC-7.1 Photo: At strategy location on creek right at NE Leverich Park Way in Vancouver, looking slightly upstream and across to creek left. Cul-de-sac in background where truck is parked.



Site Contact

City of Vancouver Operations Center
 Primary Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

1006 NE Leverich Park Way
 Vancouver, WA 98663

Driving Directions

1. Head south on Interstate-5 and take Exit 2 (WA-500 East/39th Street)
2. At end of ramp, turn right onto E 39th Street
3. After 0.2mi, turn left onto NE Leverich Park Way
4. After 0.5mi strategy location will be on the right; stage in cul-de-sac immediately west of creek. Follow WSDOT work zone traffic control guidelines when working on or near the roadway.

Burnt Bridge Creek at Leverich Park BRBRC-7.3

Position - Location: 45° 39.177', -122° 39.684' 45° 39' 10.6", -122° 39' 41.1" 45.65295, -122.66141 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Install multiple lengths of hard and sorbent boom across the creek throughout the park so product moving downstream can be collected or snared in sorbent materials. Use vac-truck or skimmer & storage for collection, as needed. Responders are encouraged to seek out and find the best locations within the park to establish collection strategies based on stream-flow conditions and environmental factors. The exact placement of boom within the park has not been established for this strategy.

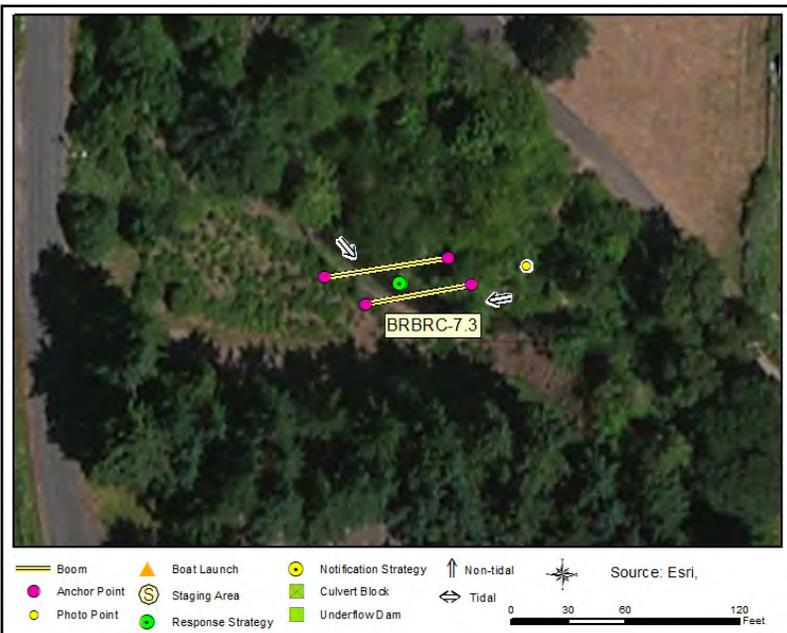
Staging Area: Onsite: Stage in Park's lower parking area off Leverich Park Way

Site Safety: Slips, Trips, Falls; Water Hazard; Vehicle Hazard in Parking Area; Vegetation.

Field Notes: Upper parking area is too high for vac-truck to effectively pull suction - use lower parking area off Leverich Park Way instead. Notify Parks at 360-487-8337 before staging; inform CRESA dispatch after-hours at 360-693-3111.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

10	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
400	Feet	Boom - Sorbent
2	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

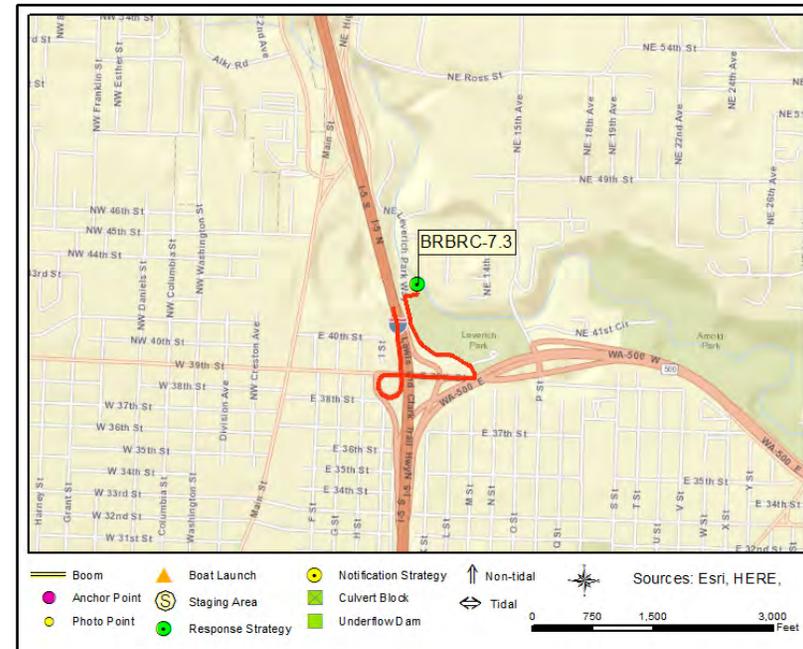
3	Laborer
1	Supervisor

Burnt Bridge Creek at Leverich Park

BRBRC-7.3



BRBRC-7.3 Photo: At strategy location in Leverich Park in Vancouver, looking downstream at creek left from creek right. Location is tree covered but has good access to creek.



Site Contact

City of Vancouver Operations Center
 Land/Property Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

4299 NE Leverich Park Way
 Vancouver, WA 98663

Driving Directions

1. Head south on Interstate-5 and take Exit 2 (WA-500 East/39th Street)
2. At end of ramp, turn right onto E 39th Street
3. After 0.2mi, turn left onto NE Leverich Park Way
4. After 0.3mi (before crossing the creek and going up the hill) turn right into the lower parking area for at Leverich Park; stage towards the NE corner of the parking area, close to the creek. Notify Vancouver Parks and Recreation at 360-487-8337 or CRESA dispatch after-hours at 360-693-3111.

Burnt Bridge Creek at E 18th Street BRBRC-10.2

Position - Location: 45° 38.079', -122° 37.445' 45° 38' 4.7", -122° 37' 26.7" 45.63464, -122.62408 Vancouver

Strategy Objective: Collection, Underflow Dam : Collect oil moving downstream on Burnt Bridge Cree

Implementation: Secure end of 100ft length of boom to bank on creek left near Point C (45.634676, -122.624132; west side of creek on south side of E 18th Street). Using roadway, extend boom across to creek right about ~25ft and secure to bank near Point B (45.634691, -122.624029). Using line, extend remaining boom upstream and back across to creek left securing it near Point A (45.634608, -122.624102). Use multiple layers of sorbent boom and/or sweep across creek upstream and downstream of boom. If time allows, consider installation of underflow dam. Use vac-truck or skimmer and storage for collection.

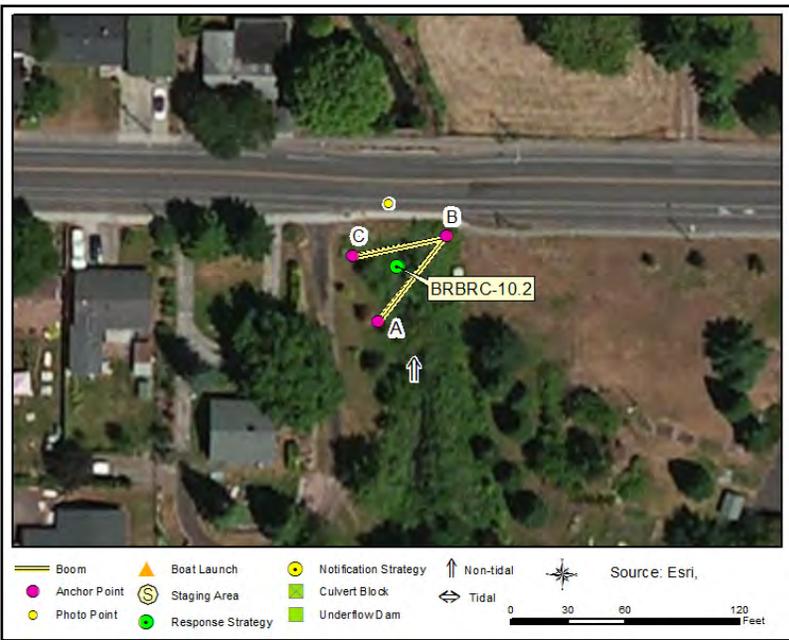
Staging Area: Onsite: Stage on shoulder of E 18th Street (south side of roadway east of creek) or in Unitarian Church Parking Lot

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Unstable Banks; Heavy Vegetation.

Field Notes: The aggressive use of sorbents may be an adequate enough for smaller spills. May be able to stage equipment at Unitarian Church immediately east of creek; call 360-695-1891.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

5	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1	Assort	Fill material (sand, earth, gravel, sandbags)
100	Feet	Line - 3/8" poly line
10	Each	Pipe(s), PVC (8 inch x 8ft)
1	Roll	Plastic Sheeting
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

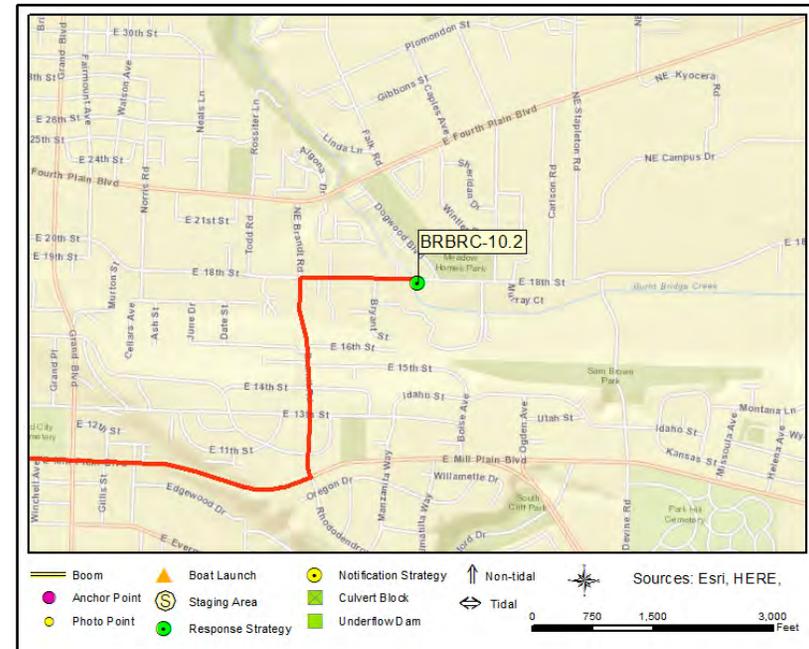
2	Laborer
1	Supervisor

Burnt Bridge Creek at E 18th Street

BRBRC-10.2



BRBRC-10.2 Photo: At strategy location on E 18th Street in Vancouver looking south towards downstream side of creek.



Site Contact

City of Vancouver Operations Center
 Primary Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

4215 E 18th Street
 Vancouver, WA 98661

Driving Directions

1. Head south on Interstate-5 and take Exit 1C (Washington 501/ Mill Plain Boulevard)
 2. At end of ramp, turn left onto E Mill Plain Blvd
 3. After 1.9mi, turn left onto Brandt Road
 4. After 0.5mi, turn right onto E 18th Street
 5. After 0.3mi, strategy location will be on your right. Stage on shoulder of roadway, immediately east of creek
- Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Burnt Bridge Creek at Thunderbird Village BRBRC-10.4

Position - Location: 45° 38.027', -122° 37.246' 45° 38' 1.6", -122° 37' 14.7" 45.63379, -122.62076 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Secure end of 100ft length of boom to bank on creek left near Point C (45.633735, -122.620803; south side of creek on east side of roadway). Using roadway, extend boom across to creek right about ~30ft and secure to bank near Point B). Using line, extend remaining boom upstream under walking bridge and back across to creek left securing it near Point A (45.633755, -122.620662). Use multiple layers of sorbent boom across creek within boomed area and upstream. if product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/storage for collection at path on creek right.

Staging Area: Onsite: Stage along east side of roadway before the bridge (near walking trail)

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: VAC-TRUCKS SHOULD NOT CROSS BRIDGE due to weight restrictions. Inform/coordinate response activities with nearby property owners as needed. The aggressive use of sorbents may be an adequate enough response for smaller spills to creek at this site.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

5	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

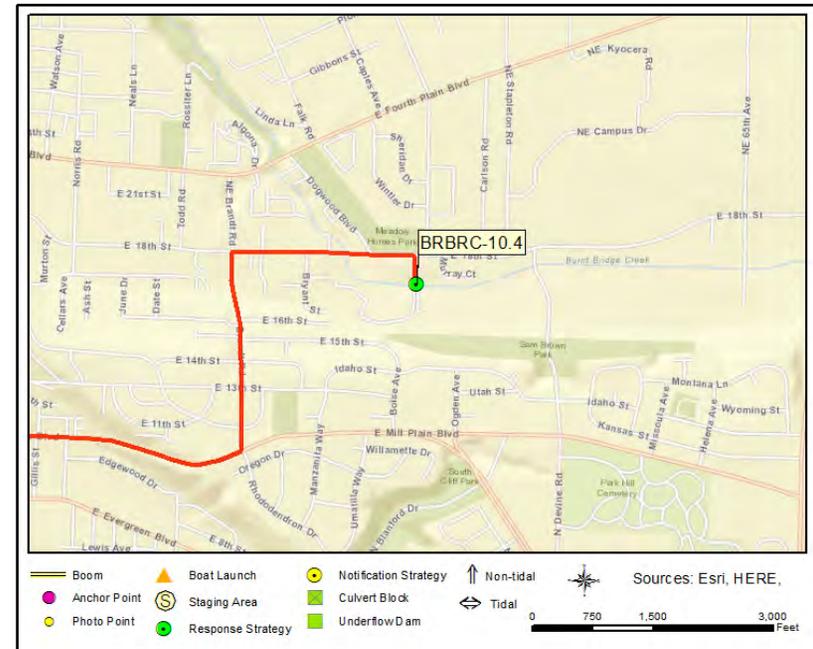
2	Laborer
1	Supervisor

Burnt Bridge Creek at Thunderbird Village

BRBC-10.4



BRBC-10.4 Photo: At strategy location on creek left, immediately south of bridge in Thunderbird Village off E 18th Street in Vancouver, looking north across to creek right.



Site Contact

City of Vancouver Operations Center
 Primary Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

4515 E 18th St
 Vancouver, WA 98661

Driving Directions

1. Head south on Interstate-5 and take Exit 1C (Washington 501/ Mill Plain Boulevard)
2. At end of ramp, turn left onto E Mill Plain Blvd
3. After 1.9mi, turn left onto Brandt Road
4. After 0.5mi, turn right onto E 18th Street
5. After 0.4mi, turn right onto roadway for Thunderbird Village
6. After 400ft strategy location will be at the bridge. Stage along east side of roadway before the bridge (near walking trail). Follow WSDOT work zone traffic control guidelines when working on or near roadway.

VAC-TRUCKS SHOULD NOT CROSS BRIDGE at strategy location due to weight restrictions.

Burnt Bridge Creek at N Devine Road BRBRC-10.8

Position - Location: 45° 38.066', -122° 36.908' 45° 38' 3.9", -122° 36' 54.5" 45.63443, -122.61513 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Burnt Bridge Creek

Implementation: From roadway, secure end of 100ft length of river boom to bank on creek right near Point A (45.634438, -122.615185). Extend boom across to creek left (about ~25ft from Point A) and secure to bank near Point B (45.634391, -122.615163). Use multiple layers of sorbent boom and/or sweep across creek within boomed area (between boom and culverts). River boom should be positioned in a manner that prevents sorbents from moving downstream if breakaway occurs. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer with storage for collection.

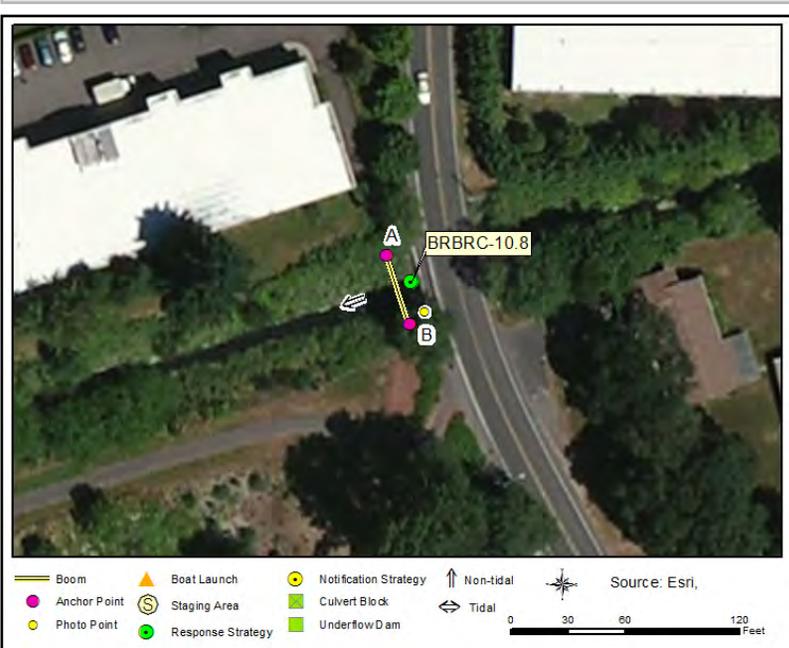
Staging Area: Onsite: Stage on shoulder or on pull-off near SW corner of the bridge structure.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation.

Field Notes: Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

2	Laborer
1	Supervisor

Burnt Bridge Creek at N Devine Road

BRBC-10.8



BRBC-10.8 Photo: At strategy location on N Devine Road in Vancouver on creek left, looking at culverts on west side of roadway and across to creek right



Site Contact

City of Vancouver Operations Center

Primary Contact :
360-487-8177

City of Vancouver - Afterhours

After Hours and Weekends Contact :
360-693-9302

Nearest Address

1707 N Devine Rd
Vancouver, WA 98661

Driving Directions

1. Head south on Interstate-5 and take Exit 1C (Washington 501/ Mill Plain Boulevard)
2. At end of ramp, turn left onto E Mill Plain Blvd
3. After 1.9mi, turn left onto Brandt Road
4. After 0.5mi, turn right onto E 18th Street
5. After 0.7mi, turn right onto N Devine Road
6. After 250ft strategy location will be on the right at the bridge structure. Stage on shoulder or pullout near SW corner of bridge. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Burnt Bridge Creek near NE Andresen Road BRBRC-11.6

Position - Location: 45° 38.072', -122° 35.916' 45° 38' 4.3", -122° 35' 55.0" 45.63454, -122.59860 Vancouver

Strategy Objective: Sorbent : Use sorbent boom to collect oil moving downstream on Burnt Bridge Creek

Implementation: Use walking bridge over creek to deploy multiple lengths of sorbent boom on creek, upstream and downstream of bridge. Area is likely to be overgrown with vegetation, so use of hard-boom is not recommended because of access limitations. Replace saturated sorbents as needed. Use line to secure ends of sorbent boom to bridge railings/structures.

Staging Area: Onsite: Stage in small parking area off NE Andresen Road, immediately south of bridge over creek on west side.

Site Safety: Slips, Trips, Falls; Water Hazard; Road/Trail Hazards; Heavy Vegetation near Creek.

Field Notes: Notify Vancouver Parks Department before implementation; call 360-487-8337 or CRESA dispatch after-hours at 360-693-3111.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

200 Feet	Boom - Sorbent
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line

Recommended Personnel

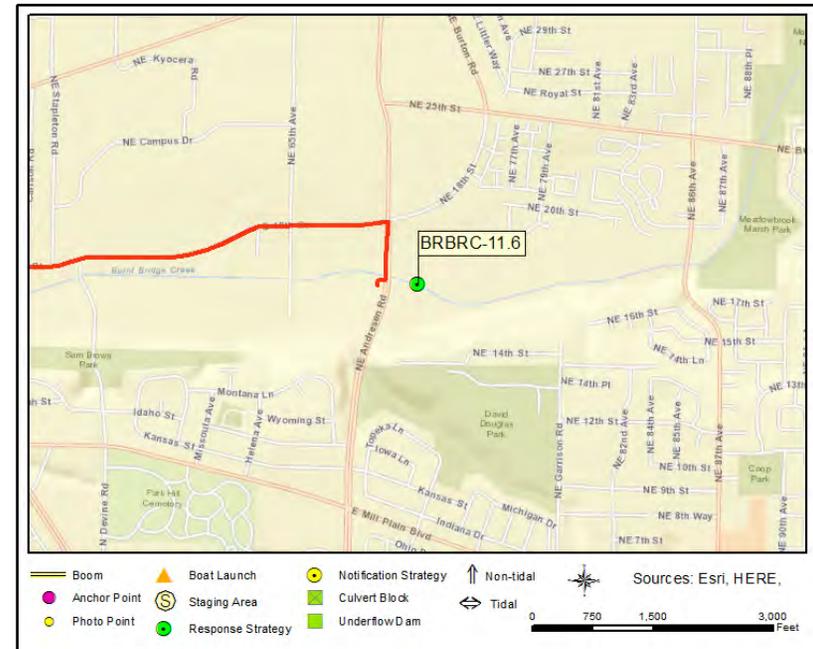
2	Laborer
1	Supervisor

Burnt Bridge Creek near NE Andresen Road

BRBC-11.6



BRBC-11.6 Photo: On creek left, south of walking bridge over creek, looking north towards bridge and trail beyond.



Site Contact

City of Vancouver Operations Center
 Primary Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

1720 NE Andresen Road
 Vancouver, WA 98661

Driving Directions

1. Head south on Interstate-5 and take Exit 1C (Washington 501/ Mill Plain Boulevard)
2. At end of ramp, turn left onto E Mill Plain Blvd
3. After 1.9mi, turn left onto Brandt Road
4. After 0.5mi, turn right onto E 18th Street
5. After 1.4mi, turn right onto NE Andresen Road
6. After 0.1mi (immediately after crossing over creek), turn right onto path for parking area. Stage in parking area. Follow path/trail to strategy location; E/SE 400ft then N/NE 200ft. 250ft strategy location will be on the right at the bridge structure. Notify City of Vancouver Parks Department; call 360-487-8337.

Burnt Bridge Creek at NE Burton Road BRBRC-12.6a

Position - Location: 45° 38.374', -122° 34.924' 45° 38' 22.5", -122° 34' 55.4" 45.63957, -122.58206 Vancouver

Strategy Objective: Collection, Sorbent : Use sorbent boom to collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy multiple lengths of sorbent boom on upstream and downstream sides of NE Burton Road Bridge. Use line to secure ends of sorbent boom to bridge railings/structures, anchoring posts, or existing structures. Replace saturated sorbents as needed. Area is likely to be overgrown with vegetation, so use of hard-boom downstream of sorbents depends on safe and timely access to creek.

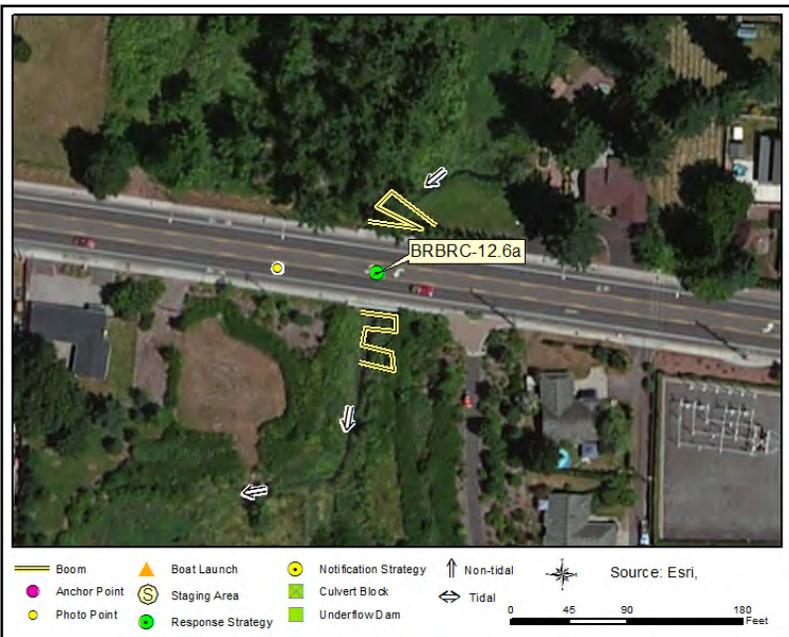
Staging Area: Onsite: Stage on gated property immediately SW of NE Burton Road Bridge over creek (City Property)

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation; Bank Condition Unknown

Field Notes: No Information

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
1	Each	Bolt Cutters
100	Feet	Boom - B3 (River Boom) or equivalent
500	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line

Recommended Personnel

2	Laborer
1	Supervisor

Burnt Bridge Creek at NE Burton Road

BRBRC-12.6a



BRBRC-12.6a Photo: At strategy location on NE Burton Road in Vancouver. Bridge over creek in background beyond truck. Ecology truck stationed on roadway facing east, downstream side of creek, creek right.



Site Contact

City of Vancouver Operations Center
 Primary Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

8717 NE Burton Rd
 Vancouver, WA 98662

Driving Directions

1. Head south on Interstate-5 and take Exit2 (Hwy 500 East/39th Street)
2. At end of ramp, turn right onto 39th Street
3. After 0.4mi, stay straight in the center lane for ramp onto Hwy500 East (towards Interstate-205)
4. After 2.3mi, take the NE Andresen Road Exit. Keep right within the exit ramp to continue towards NE Andresen Road
5. At end of ramp, turn right onto NE Andresen Road
6. After 0.5mi, turn left onto NE 25th Street (becoming NE Burton Road after 0.1mi).
7. After 0.8mi, the strategy location will be at the bridge over the Burnt Bridge Creek. Pull-off roadway immediately before bridge, into gated lot near SW corner of bridge (owned by the City of Vancouver). Gate may be locked or appear locked, but there should be room for one truck (without a trailer) before the gate.

Burnt Bridge Creek downstream of NE Burton Road BRBRC-12.6b

Position - Location: 45° 38.348', -122° 34.932' 45° 38' 20.9", -122° 34' 55.9" 45.63914, -122.58220 Vancouver

Strategy Objective: Collection, Sorbent : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy multiple lengths of sorbent boom on Burnt Bridge Creek at site, located about ~150ft downstream from NE Burton Road Bridge. Use anchor posts, trees, or existing structures to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed. Area is likely to be overgrown with vegetation, so use of hard-boom downstream of sorbents depends on safe and timely access to creek.

Staging Area: Onsite: Stage off road in front of PUD substation on SW Corner of NE Burton Road at NE 90th Avenue

Site Safety: Slips, Trips, Falls; Water Hazard; Trail Hazards; Heavy Vegetation near Creek, Mud/Muddy.

Field Notes: Alternative staging is at NE 19th Circle, ~0.3mi south of NE Burton Road on NE 92nd Avenue.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

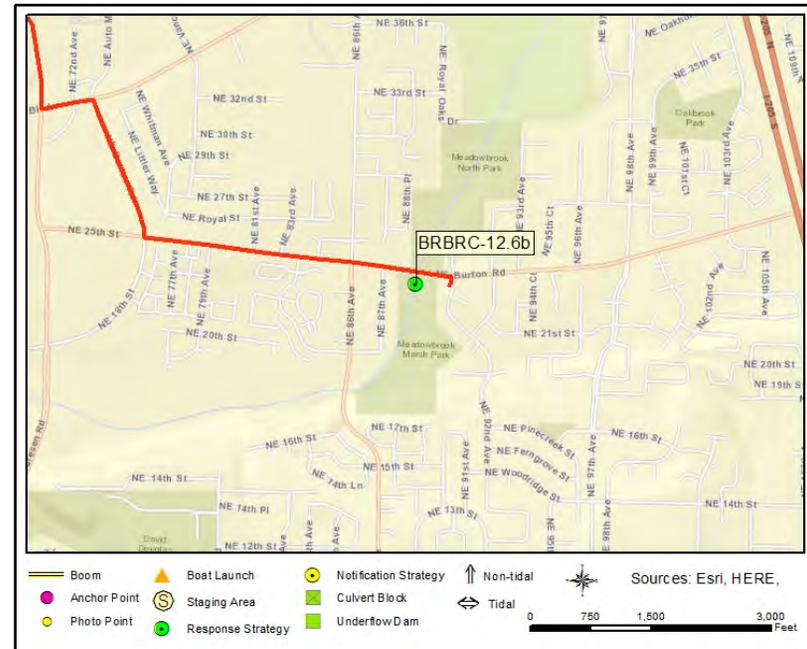
2	Laborer
1	Supervisor

Burnt Bridge Creek downstream of NE Burton Road

BRRC-12.6b



BRRC-12.6b Photo: Aerial image of strategy location with creek, staging, strategy, and path to site depicted.



Site Contact

City of Vancouver Operations Center

Primary Contact :
360-487-8177

City of Vancouver - Afterhours

After Hours and Weekends Contact:
360-693-9302

Nearest Address

8717 NE Burton Rd
Vancouver, WA 98662

Driving Directions

1. Head south on Interstate-5 and take Exit2 (Hwy 500 East/39th Street)
2. At end of ramp, turn right onto 39th Street
3. After 0.4mi, stay straight in the center lane for ramp onto Hwy500 East (towards Interstate-205)
4. After 2.3mi, take the NE Andresen Road Exit. Keep right within the exit ramp to continue towards NE Andresen Road
5. At end of ramp, turn right onto NE Andresen Road
6. After 0.5mi, turn left onto NE 25th Street (becoming NE Burton Road after 0.1mi).
7. After 0.9mi, turn right onto NE 90th Avenue; stage in front of PUD Sub-Station on your right immediately after the turn. Follow path on NE Burton Road to field on right (west side of path). Strategy location is just beyond the northwestern extent of the field, about 150ft downstream from NE Burton Road Bridge over creek.

Burnt Bridge Creek west of NE 93rd Avenue BRBRC-13.0

Position - Location: 45° 38.680', -122° 34.706' 45° 38' 40.8", -122° 34' 42.4" 45.64467, -122.57844 Vancouver

Strategy Objective: Collection, Sorbent : Collect oil moving downstream on Burnt Bridge Creek

Implementation: Deploy multiple lengths of sorbent boom on Burnt Bridge Creek near NW corner of Meadowbrook Park North, adjacent to NE 93rd Avenue in Vancouver. Use anchor posts, trees, or existing structures to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed. Area is likely to be overgrown with vegetation, so use of hard-boom downstream of sorbents depends on safe and timely access to creek.

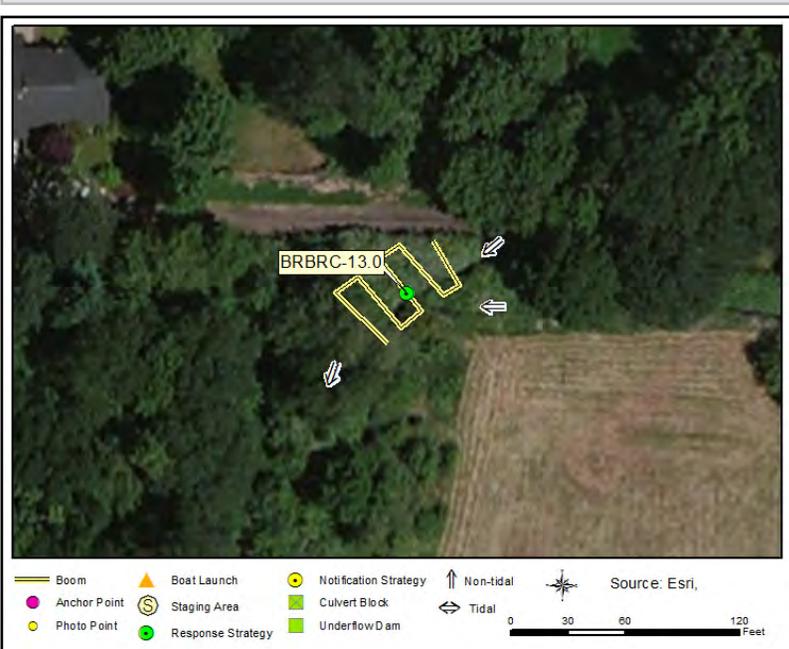
Staging Area: Onsite: Stage at turnaround at end of at end of NE 93rd Avenue in front of closed park gate.

Site Safety: Slips, Trips, Falls; Water Hazard; Trail Hazards; Heavy Vegetation near Creek, Mud/Muddy.

Field Notes: Strategy location is across field to the NW at confluence of unnamed tributary with Burnt Bridge Creek.

Watercourse: Creek - Burnt Bridge Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
1	Each	Bolt Cutters
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

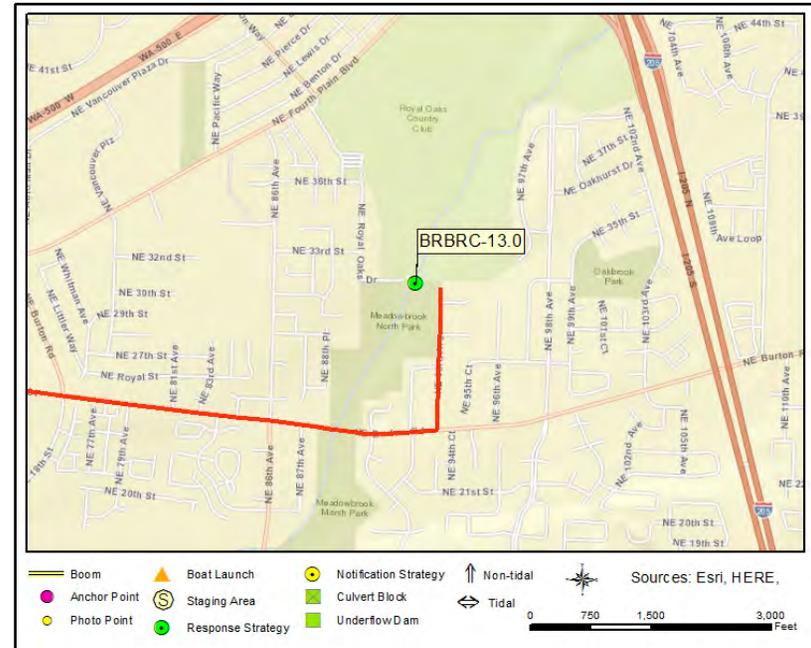
2	Laborer
1	Supervisor

Burnt Bridge Creek west of NE 93rd Avenue

BRBC-13.0



BRBC-13.0 Photo: Aerial image of strategy location with creek, staging, strategy, and path to site depicted.



Site Contact

City of Vancouver Operations Center
 Land/Property Contact :
 360-487-8177

City of Vancouver - Afterhours
 After Hours and Weekends Contact :
 360-693-9302

Nearest Address

3017 NE 93rd Ave
 Vancouver, WA 98662

Driving Directions

1. Head south on Interstate-5 and take Exit2 (Hwy 500 East/39th Street)
2. At end of ramp, turn right onto 39th Street
3. After 0.4mi, stay straight in the center lane for ramp onto Hwy500 East (towards Interstate-205)
4. After 2.3mi, take the NE Andresen Road Exit. Keep right within the exit ramp to continue towards NE Andresen Road
5. At end of ramp, turn right onto NE Andresen Road
6. After 0.5mi, turn left onto NE 25th Street (becoming NE Burton Road after 0.1mi).
7. After 1.1mi, turn left onto NE 93rd Avenue; stage at turnaround at end of road in front of closed park gate to the field. Strategy location is across field to the NW at confluence of unnamed tributary with Burnt Bridge Creek.

Burnt Bridge Creek Tributary at Hwy 99 BRBRCT-0.2

Position - Location: 45° 39.802', -122° 39.933' 45° 39' 48.1", -122° 39' 56.0" 45.66336, -122.66555 Vancouver

Strategy Objective: Sorbent : Collect oil moving downstream on tributary to Burnt Bridge Creek using sorbents

Implementation: Deploy multiple lengths of sorbent boom on unnamed tributary to Burnt Bridge Creek at site, located on west side of NE Highway 99 at bottom of path in wooded area. Use anchor posts or trees to secure ends of sorbent boom to banks of tributary. Replace saturated sorbents as needed. NOTE: Strategy location is on west side of Highway 99 but the only place to park vehicle is on shoulder along east side of the highway.

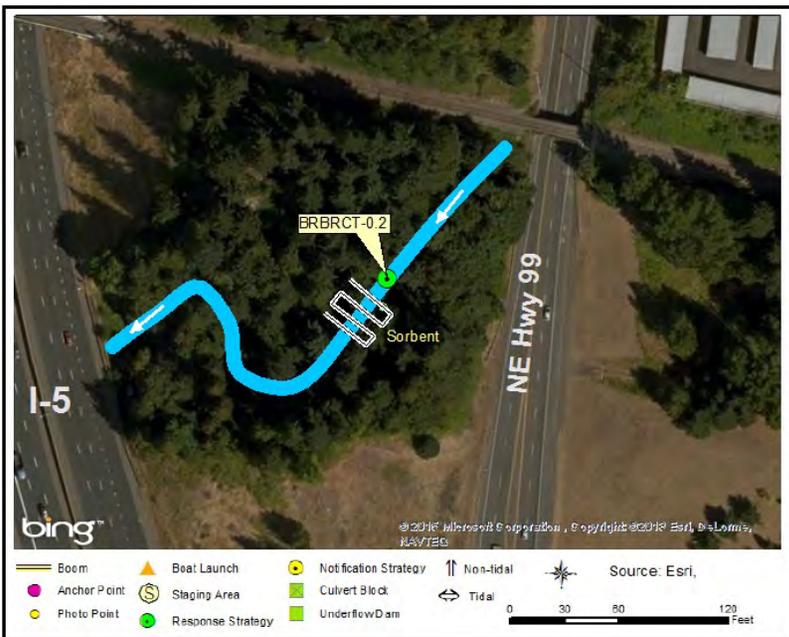
Staging Area: Onsite: Stage on east side shoulder/grassy area of NE Highway 99 about 150ft south of rail overpass.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Traffic and Crossing Hazard; Vegetation; Steep Grade on Trail; Mud/Muddy

Field Notes: Use caution crossing busy roadway. Be alert to occupied camp sites in woods near strategy location. Don't encroach on federal property along east side of Hwy 99. Waders or hip boots recommended.

Watercourse: Creek - Unnamed Tributary to Burnt Bridge Creek

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

2	Laborer
1	Supervisor

Burke Creek at South Cloverdale and Burke Roads BURKC-0.7

Position - Location: 45° 56.722', -122° 46.664' 45° 56' 43.3", -122° 46' 39.9" 45.94537, -122.77774 Woodland

Strategy Objective: Collection : Collect oil moving downstream on Burke Creek

Implementation: On downstream side of Burke Road, deploy hard boom across creek in front of roadway culvert. Deploy multiple lengths of sorbent boom upstream and downstream of hard boom. Also deploy multiple lengths of sorbent boom on upstream side of culvert ~70ft east of Burke Road, and across creek on upstream and downstream sides of S Cloverdale Road. Replace saturated sorbents as needed. Secure boom to banks using anchoring posts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection. Install underflow dam at Burke Road if time allows.

Staging Area: Onsite: Stage at pull out (circle) at intersection of South Cloverdale and Burke Roads

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Cowlitz County Public Works may be able to provide support if underflow dam needed; call 360-673-2175.

Watercourse: Creek - Burke Creek

Resources at Risk: Downstream Resources, Salmon - Coho



Recommended Equipment

10	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
400	Feet	Boom - Sorbent
1	Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1	Assort	Fill material (sand, earth, gravel, sandbags)
200	Feet	Line - 3/8" poly line
10	Each	Pipe(s), PVC (8 inch x 8ft)
1	Roll	Plastic Sheeting
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

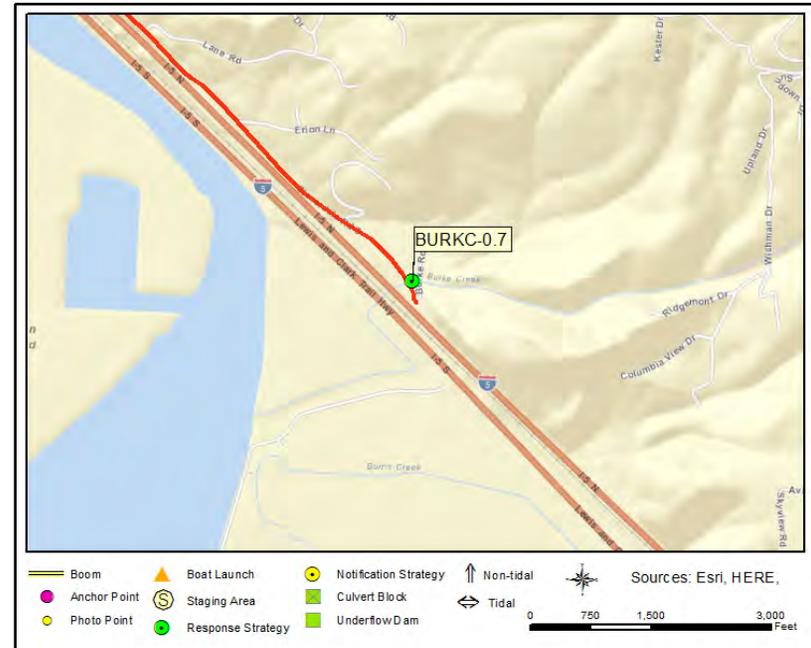
3	Laborer
1	Supervisor

Burke Creek at South Cloverdale and Burke Roads

BURKC-0.7



BURKC-0.7 Photo: At strategy location on Burke Creek looking downstream/SW towards South Cloverdale Road.



Site Contact

No Information
Not Determined :

Nearest Address

124 N Burke Rd
Woodland, WA 98674

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, turn right onto Todd Road
5. After 0.6mi, turn right onto S Cloverdale Road
6. After 1.5mi, stay to right to remain on S Cloverdale Road
7. After ~1.5mi you have reached the strategy location. Stage trucks/equipment in circle at intersection of South Cloverdale Road at Burke Road. Creek crosses under Burke Road about ~180ft north of the circle.

Bybee Creek at South Cloverdale Road BYBEC-0.8

Position - Location: 45° 58.368', -122° 48.671' 45° 58' 22.1", -122° 48' 40.2" 45.97281, -122.81118 Kalama

Strategy Objective: Collection : Collect oil moving downstream on Bybee Creek

Implementation: On upstream/east side of roadway, deploy hard boom across creek in front of roadway culvert. Deploy multiple lengths of sorbent boom upstream and downstream from hard boom. Also deploy multiple lengths of sorbent boom across creek on downstream/west side of road. Use line and anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection. If time allows, consider installation of underflow dam.

Staging Area: Onsite: Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Shoulder); Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6.

Watercourse: Creek - Bybee Creek

Resources at Risk: Salmon - Coho, Steelhead



Recommended Equipment

6 Each	Anchoring System(s)- Shoreside
100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1 Assort	Fill material (sand, earth, gravel, sandbags)
8 Each	Pipe(s), PVC (8 inch x 8ft)
1 Roll	Plastic Sheeting
1 Each	Vac Truck or Skimmer and Storage (if collection)

Recommended Personnel

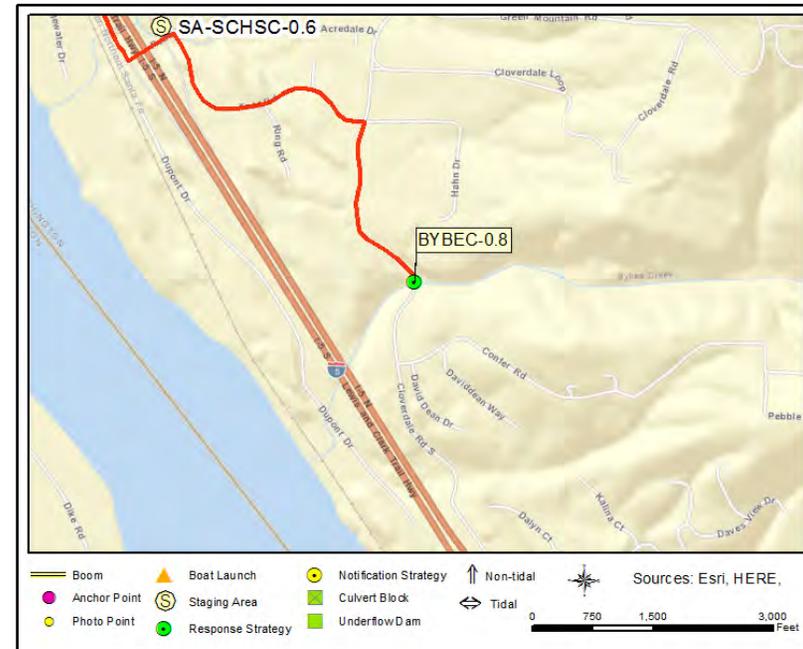
2	Laborer
1	Supervisor

Bybee Creek at South Cloverdale Road

BYBEC-0.8



BYBEC-0.8 Photo: From shoulder of South Cloverdale Road, looking east/upstream towards strategy location on Bybee Creek (upstream side of roadway culvert).



Site Contact

Nearest Address

1631 S Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, at the intersection of Robb Road with Todd Road and Old Pacific Highway, stage equipment trailer at the gravel lot on the left/north side of roadway (Staging Area SA-SCHSC-0.6). Only use work truck to deliver equipment/personnel to site because space along shoulder is very limited at strategy location.
4. From SA-SCHSC-0.6, head SE on Todd Road.
5. After 0.6mi, turn right onto S Cloverdale Road
6. After 0.4mi you have reach the strategy location. Stage work truck on shoulder of roadway on/near dirt road/driveway (cabled) on left/east side of roadway about ~100ft north of creek.

Canyon Creek at South Cloverdale Road CANYC-0.2

Position - Location: 45° 57.282', -122° 47.572' 45° 57' 16.9", -122° 47' 34.3" 45.95471, -122.79287 Kalama

Strategy Objective: Collection : Collect oil moving downstream on Canyon Creek

Implementation: On upstream/east side of roadway, deploy hard boom across creek in front of culvert. Deploy multiple lengths of sorbent boom on upstream side of hard boom. Use anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection.

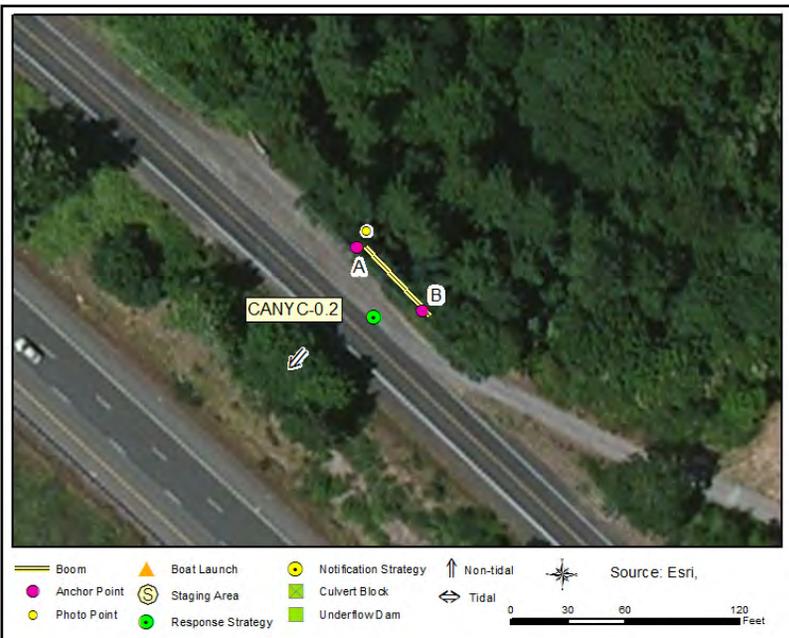
Staging Area: Onsite: Stage on shoulder of roadway near culvert.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation

Field Notes: Wide gravel shoulder at this location. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Canyon Creek

Resources at Risk: Downstream Resources, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
100	Feet	Line - 3/8" poly line
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

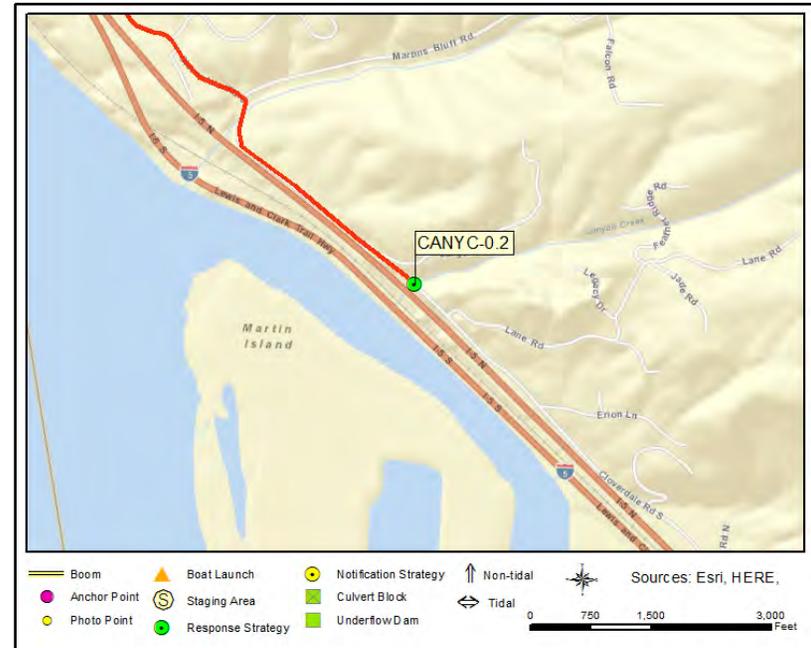
2	Laborer
1	Supervisor

Canyon Creek at South Cloverdale Road

CANYC-0.2



CANYC-0.2 Photo: At strategy location on Canyon Creek at culvert on upstream/NE side of S Cloverdale Road looking SE.



Site Contact

Nearest Address

2101 Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, turn right onto Todd Road
4. After 0.6mi, turn right onto S Cloverdale Road
5. After 1.5mi, stay to right to remain on S Cloverdale Road
6. After ~0.7mi the strategy location will be on the left (wooded area beyond shoulder). Stage trucks/equipment on shoulder near culvert. If needed, there is a wide turn-around at end of S Cloverdale Road (~1.0mi SE).

Coal Creek Slough at 34th Avenue COLCS-12.1

Position - Location: 46° 9.209', -122° 58.357' 46° 9' 12.5", -122° 58' 21.4" 46.15348, -122.97261 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough west of 34th Avenue

Implementation: On east side of 34th Avenue, deploy hard boom across waterway in front of culvert at an angle from Point A (46.153597, -122.972232, NE) to Point B (46.153476, -122.972392, SW). Deploy multiple lengths of sorbent boom on both sides of hard boom, and in front of culvert on west side of road. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from parking lot or grassy area next to waterway.

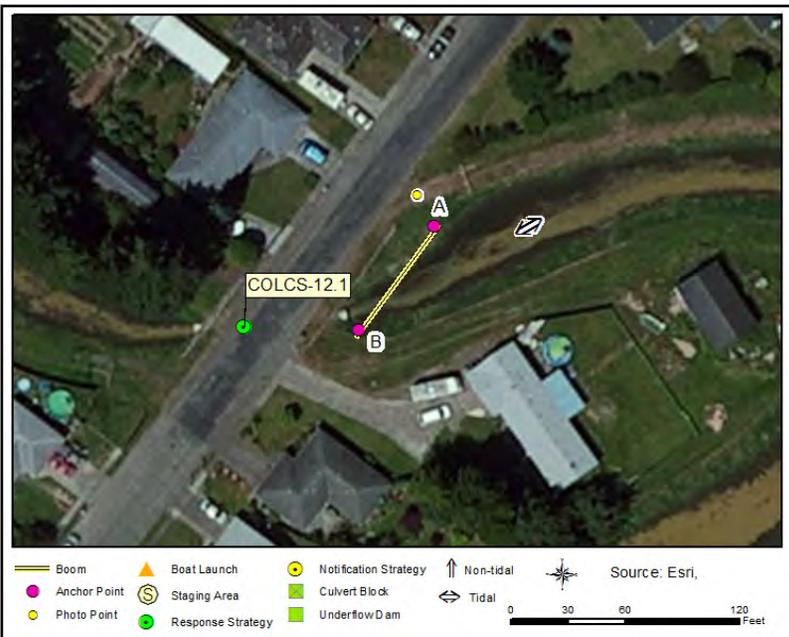
Staging Area: Onsite: Stage on grassy area near SW corner of roadway at slough or on roadway shoulder.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife, Waterfowl



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

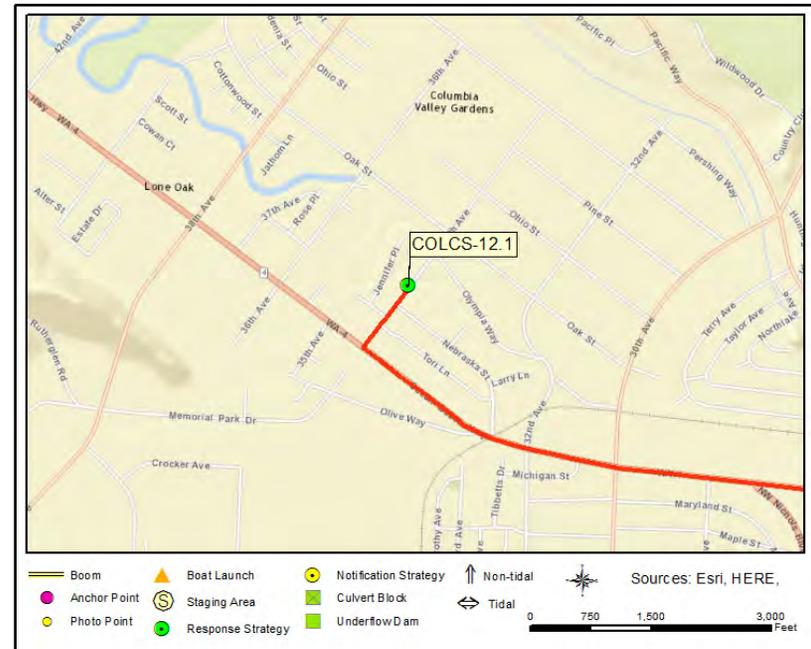
2	Laborer
1	Supervisor

Coal Creek Slough at 34th Avenue

COLCS-12.1



COLCS-12.1 Photo: At strategy location looking SW on Coal Creek Slough towards culvert and 34th Avenue in Longview.



Site Contact

Nearest Address

2280 34th Ave
 Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 – Kelso)
2. Turn right at the end of exit ramp to travel west on highway WA4/Allen Street
3. After 0.5mi, turn right onto 5th Avenue North
4. After 0.1mi, turn left onto Cowlitz Way
5. After 0.8mi, turn right onto Ocean Beach Highway (WA-4 W)
6. After 2.5mi, turn right onto 34th Avenue
7. After 0.2mi, strategy location will be on the right. Stage equipment on grassy area along the south side of waterway or on shoulder of roadway.

Coal Creek Slough near 32nd Avenue COLCS-13.1a

Position - Location: 46° 8.944', -122° 58.005' 46° 8' 56.6", -122° 58' .3" 46.14906, -122.96675 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough north of railroad tracks

Implementation: Deploy hard boom across waterway in front of culvert at an angle from Point A (46.14903, -122.966881, SW) to Point B (46.149296, -122.966825, NE). Deploy multiple lengths of sorbent boom on both sides of hard boom. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from parking lot or grassy area next to waterway.

Staging Area: Onsite: Stage on grassy area on north side of railroad tracks or along roadway shoulder. Parking lot also nearby.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation; Railroad Hazard; Mud/Muddy

Field Notes: Rail line is operated by Columbia and Cowlitz Railway; notify them at 360-501-2182 or 855-258-4514 before strategy implementation; reference Longview Washington at 32nd Avenue.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife, Waterfowl



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

2	Laborer
1	Supervisor

Coal Creek Slough near 32nd Avenue

COLCS-13.1a



COLCS-13.1a Photo: At strategy location looking NW on Coal Creek Slough towards culvert off 32nd Avenue, on north side of railroad tracks.



Site Contact

Columbia and Cowlitz Railway
 Land/Property Owner : Emergency: 855-258-4514
 3401 Industrial Way
 Longview, WA 98632
 360-501-2182

Nearest Address

2257 32nd Ave
 Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 – Kelso)
2. Turn right at the end of exit ramp to travel west on highway WA4/Allen Street
3. After 0.5mi, turn right onto 5th Avenue North
4. After 0.1mi, turn left onto Cowlitz Way
5. After 0.8mi, turn right onto Ocean Beach Highway (WA-4 W)
6. After 2.1mi, turn right onto 32nd Avenue
7. After 450ft (immediately after railroad tracks), strategy location will be on the left/west side of road, set back about ~180ft. Stage on grassy area on north side of railroad tracks or along roadway shoulder. Parking lot at NW corner of Ocean Beach Hwy and 32nd Avenue can also be used to stage equipment, if needed.

Coal Creek Slough near Ocean Beach Highway COLCS-13.1b

Position - Location: 46° 8.921', -122° 58.007' 46° 8' 55.3", -122° 58' .4" 46.14869, -122.96679 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough south of Ocean Beach Highway

Implementation: Deploy hard boom across waterway in front of culvert at an angle from Point A (46.148675, -122.966712, SE) to Point B (46.148827, -122.966803, NW). Deploy multiple lengths of sorbent boom on both sides of hard boom. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from parking lot or grassy area next to waterway.

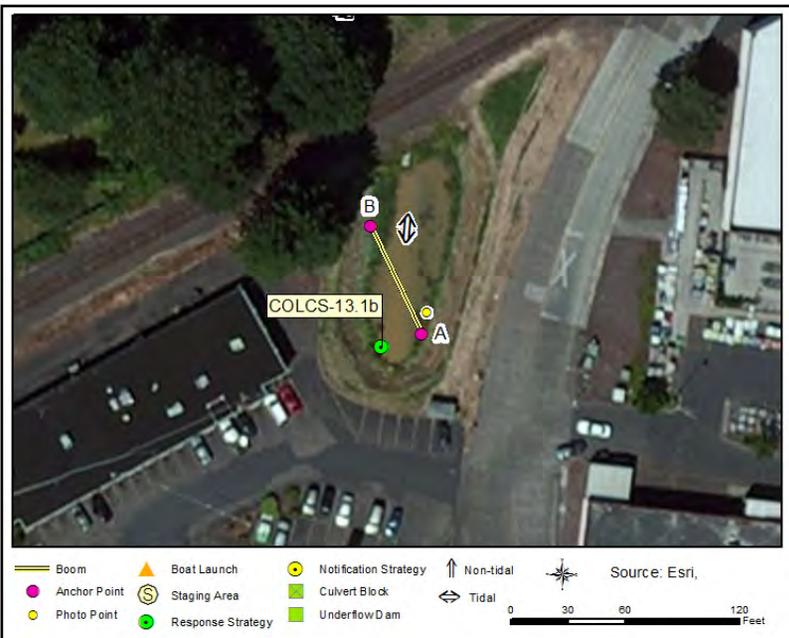
Staging Area: Onsite: Stage in parking lot at NW corner of Ocean Beach Hwy and 32nd Avenue or on grassy area next to waterway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway/Parking Lot Hazard; Vegetation; Railroad Tracks Nearby

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife, Waterfowl



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

2	Laborer
1	Supervisor

Coal Creek Slough near Ocean Beach Highway

COLCS-13.1b



COLCS-13.1b Photo: At strategy location looking SW on Coal Creek Slough towards culvert and parking lot at NW corner of Ocean Beach Hwy and 32nd Avenue.



Site Contact

Nearest Address

3202 Ocean Beach Hwy
Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 – Kelso)
2. Turn right at the end of exit ramp to travel west on highway WA4/Allen Street
3. After 0.5mi, turn right onto 5th Avenue North
4. After 0.1mi, turn left onto Cowlitz Way
5. After 0.8mi, turn right onto Ocean Beach Highway (WA-4 W)
6. After 2.1mi, turn right onto 32nd Avenue
7. After 180ft (1/2 block - before railroad tracks), strategy location will be on the left/west side of road. Stage in parking lot at NW corner of Ocean Beach Hwy and 32nd Avenue, or on grassy area next to waterway.

Coal Creek Slough at Michigan Street COLCS-13.3

Position - Location: 46° 8.822', -122° 58.010' 46° 8' 49.3", -122° 58' .6" 46.14704, -122.96683 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough south of Michigan Street

Implementation: Deploy hard boom across waterway in front of gated culvert on south side of road at an angle from Point A (46.146733, -122.966744, SE) to Point B (46.14697, -122.966909, NW). Deploy multiple lengths of sorbent boom on both sides of hard boom. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from shoulder or grassy area adjacent to waterway.

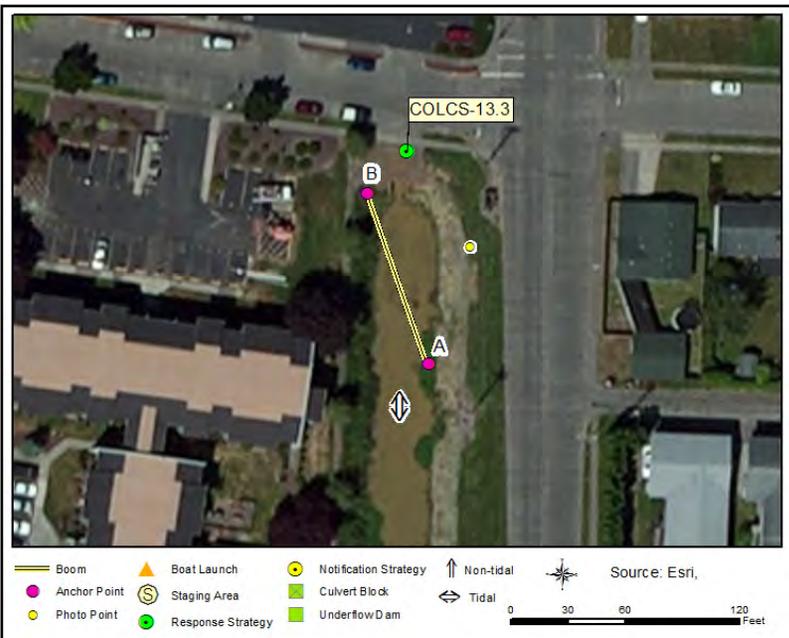
Staging Area: Onsite: Stage on shoulder of Michigan Street near waterway or on grassy area adjacent to waterway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife, Waterfowl



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line
4 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

2	Laborer
1	Supervisor

Coal Creek Slough at Maple Street COLCS-13.4

Position - Location: 46° 8.715', -122° 58.009' 46° 8' 42.9", -122° 58' .5" 46.14525, -122.96681 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough south of Maple Street

Implementation: Deploy hard boom across waterway in front of box culvert on north side of road at an angle from Point A (46.145364, -122.966709, SE) to Point B (46.145538, -122.966852, NW). Deploy multiple lengths of sorbent boom on both sides of hard boom, and in front of box culvert on south side of road. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from shoulder or grassy area adjacent to waterway.

Staging Area: Onsite: Stage on shoulder of Maple Street west of waterway or on grassy area adjacent to waterway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 3/8" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

2	Laborer
1	Supervisor

Coal Creek Slough at Maple Street

COLCS-13.4



COLCS-13.4 Photo: Looking north on Coal Creek Slough from strategy location on Maple Street in Longview.



Site Contact

Nearest Address

3216 Maple St
Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 – Kelso)
2. Turn right at the end of exit ramp to travel west on highway WA4/Allen Street
3. After 0.5mi, turn right onto 5th Avenue North
4. After 0.1mi, turn left onto Cowlitz Way
5. After 0.8mi, turn right onto Ocean Beach Highway (WA-4 W)
6. After 2.1mi, turn left onto 32nd Avenue
7. After 0.2mi, turn right onto Maple Street. Strategy location will be immediately on your right. Stage on shoulder of road or on grassy area adjacent to waterway

Coal Creek Slough at William Street COLCS-13.8

Position - Location: 46° 8.535', -122° 58.038' 46° 8' 32.1", -122° 58' 2.3" 46.14225, -122.96730 Longview

Strategy Objective: Collection, Exclusion : Collect oil on Coal Creek Slough and keep oil out of slough south of William Street

Implementation: Deploy hard boom across waterway in front of culvert on north side of road. Deploy multiple lengths of sorbent boom on both sides of hard boom, and in front of culvert on south side of road. Use anchoring posts or existing structures to secure hard boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection from roadway shoulder.

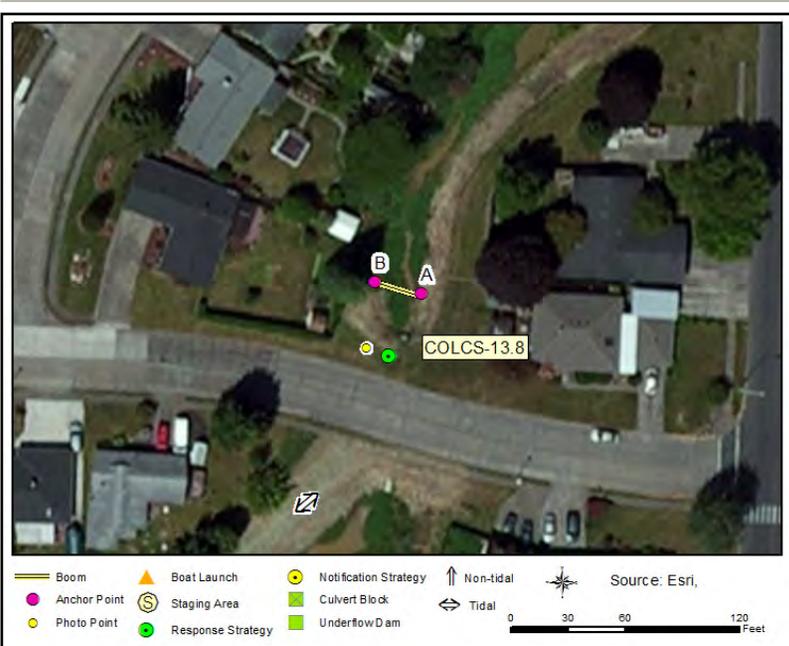
Staging Area: Onsite: Stage on shoulder of William Street near waterway

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Slough - Coal Creek Slough

Resources at Risk: Downstream Resources, Freshwater Wildlife



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

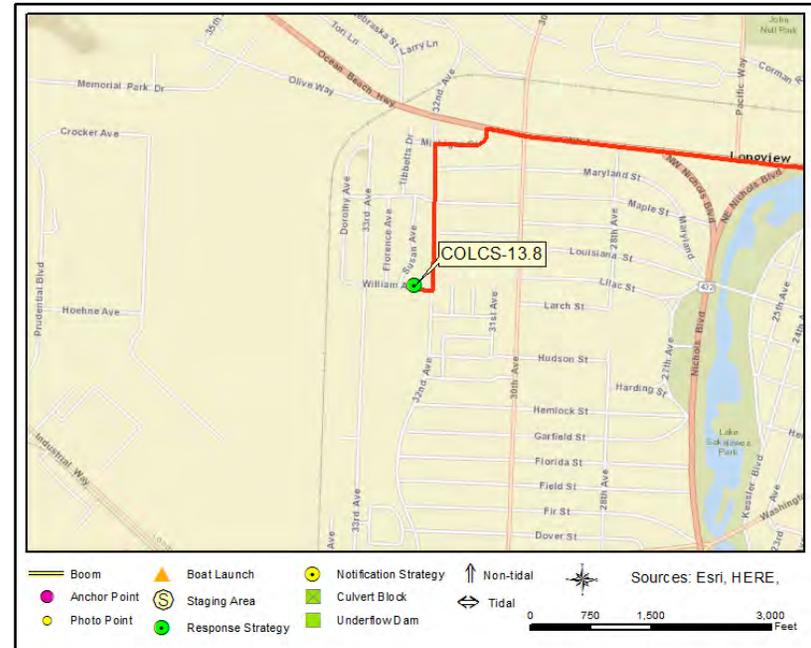
	Laborer
1	Supervisor

Coal Creek Slough at William Street

COLCS-13.8



COLCS-13.8 Photo: Looking north on Coal Creek Slough from strategy location on William Street in Longview.



Site Contact

Nearest Address

3215 William St
Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 – Kelso)
2. Turn right at the end of exit ramp to travel west on highway WA4/Allen Street
3. After 0.5mi, turn right onto 5th Avenue North
4. After 0.1mi, turn left onto Cowlitz Way
5. After 0.8mi, turn right onto Ocean Beach Highway (WA-4 W)
6. After 2.1mi, turn left onto 32nd Avenue
7. After 0.4mi, turn right onto William Street. Strategy location will be about 200ft down the road where it crosses over Coal Creek Slough. Stage equipment off north side of road near the waterway.

Cougar Canyon Creek at NW 119th Street COUGC-0.5

Position - Location: 45° 42.450', -122° 40.974' 45° 42' 27.0", -122° 40' 58.4" 45.70750, -122.68289 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Cougar Creek

Implementation: Deploy hard boom from creek right (east/trail side of creek) upstream to creek left allowing a suitable collection pocket to be formed on creek right. Deploy multiple lengths of sorbent boom on upstream and downstream sides of hardboom. Use posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use skimmer/portable storage for collection on creek right.

Staging Area: Onsite: Stage on shoulder of NW 119th Street near strategy location. Can also use Salmon Creek Regional Park (SA-SALMC-5.6)

Site Safety: Slips, Trips, Falls; Water Hazard; Heavy Traffic on Roadway; Steep Banks on Creek Left; Heavy Vegetation

Field Notes: Strategy location is adjacent to Salmon Creek Trail - Contact Clark County Parks and Recreation for access support; call call 360-737-6118 or 360-397-2285.

Watercourse: Creek - Cougar Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line
6 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

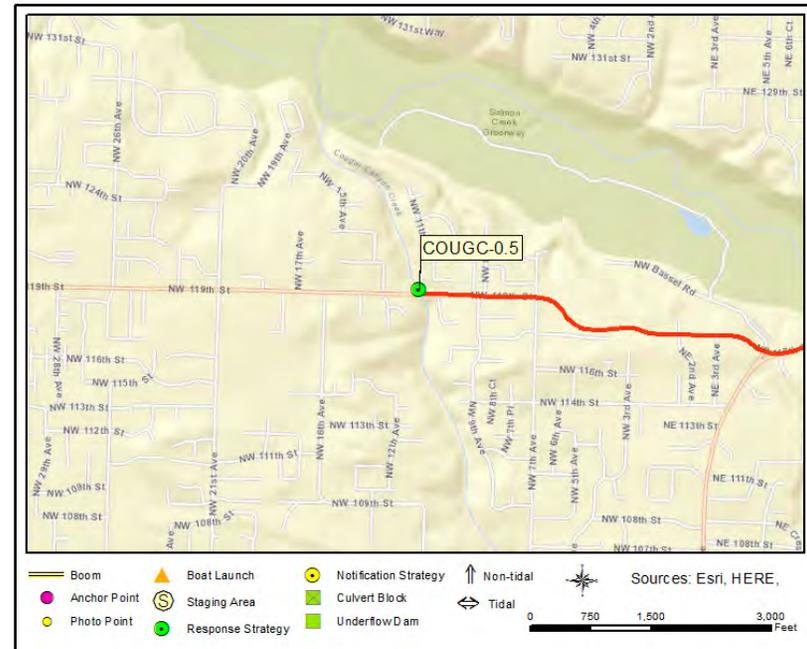
2	Laborer
1	Supervisor

Cougar Canyon Creek at NW 119th Street

COUGC-0.5



COUGC-0.5 Photo: View of strategy location from Salmon Creek Trail immediately NW of gate on north side of NW 119th Street. Salmon Creek in background beyond trees.



Site Contact

Clark County Parks
 Municipality (County/City) : Frenchman's Bar Park
 9612 NW Lower River Road
 Vancouver, WA 98660
 360-397-2285

Nearest Address

908 NW 119th St
 Vancouver, WA 98685

Driving Directions

1. Head south on Interstate-5 and at Exit 7 keep right to stay on Interstate-205 (Salem)
2. On Interstate-205 take Exit 36 (NE 134th Street)
3. At end of ramp, turn left onto NE 134th Street
4. After 0.1mi, turn right onto NE Hwy 99/Pacific Hwy
5. After 0.9mi, turn right onto NE 117th Street (becoming NW 119th St after 1.3mi)
6. After 1.6mi, the strategy location will be on your right; Park on shoulder and stage equipment on Salmon Creek Trail adjacent to the strategy location. Can also stage equipment trailer at Salmon Creek Regional Park (SA-SALMC-5.6) and just drive a work truck to site.

Cougar Canyon Creek at Columbia River High School COUGC-1.6

Position - Location: 45° 41.591', -122° 40.576' 45° 41' 35.5", -122° 40' 34.6" 45.69319, -122.67627 Vancouver

Strategy Objective: Sorbent : Collect oil moving downstream on Cougar Creek using sorbents

Implementation: Deploy multiple lengths of sorbent boom across each tier of the fish ladder on Cougar Creek, immediately adjacent to Columbia River High School. Use anchor posts, trees, or existing structures to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed. Area is likely to be overgrown with vegetation and has steep banks so the use of hard-boom and vac-truck or skimmer/storage is not recommended.

Staging Area: Onsite: Stage at Columbia River High School; SE corner of parking lot near creek.

Site Safety: Slips, Trips, Falls; Water Hazard; Heavy Traffic on Roadway; Parking Lot Traffic; Steep Banks; Heavy Vegetation

Field Notes: Creek property and fish ladders maintained by Clark County; call public works at 360-397-6118 x4944. Inform Columbia River High School if parking lot used for staging during school hours; call 360-313-3900.

Watercourse: Creek - Cougar Creek

Resources at Risk: Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

2	Each	Anchoring Post(s) - (shoreside)
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line

Recommended Personnel

2	Laborer
1	Supervisor

Cougar Canyon Creek at Columbia River High School

COUGC-1.6



COUGC-1.6 Photo: At Strategy location on Cougar Creek, from outfall looking downstream towards fish ladder.



Site Contact

Clark County Public Works
 Municipality (County/City) :
 1300 Franklin St
 Vancouver, WA 98660
 360-397-6118 ext. 4944

Nearest Address

800 NW 99th St
 Vancouver, WA 98685

Driving Directions

1. Head south on Interstate-5 and take Exit 5 (NE 99th Street)
2. At end of ramp, turn right onto NE 99th Street
3. After 0.8mi, turn right into the parking lot for Columbia River High School. Stage in SE corner of parking lot after informing school office (if on-site during school hours); call 360-313-3900.

Cougar Canyon Creek at NE Hazel Dell Avenue COUGC-2.4

Position - Location: 45° 41.042', -122° 40.388' 45° 41' 2.5", -122° 40' 23.3" 45.68404, -122.67314 Vancouver

Strategy Objective: Sorbent : Collect oil moving downstream on Cougar Creek using sorbents

Implementation: Deploy multiple lengths of sorbent boom on Cougar Canyon Creek at site, located about ~600ft down the road from Fire District 6 Station 1 Fire House. Use anchor posts, trees, or existing structures to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed. Area is likely to be overgrown with vegetation and has steep banks so the use of hard-boom is not recommended.

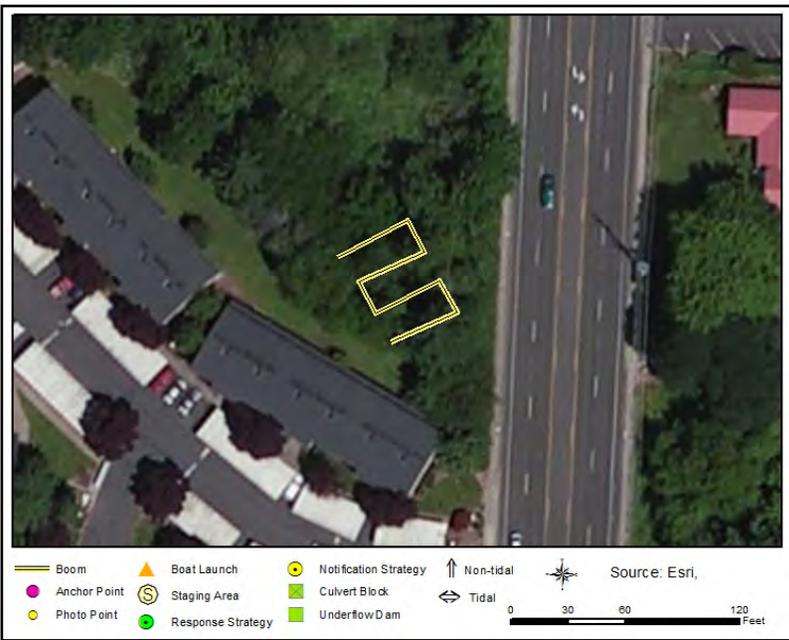
Staging Area: Onsite: Stage at Fire Station located ~600ft north of strategy location (call 360-576-1195) or at Target across street.

Site Safety: Slips, Trips, Falls; Water Hazard; Heavy Roadway Traffic; Limited Parking; Steep Banks; Heavy Vegetation

Field Notes: There is no on-street parking at or near this strategy location. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Cougar Canyon Creek

Resources at Risk: Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

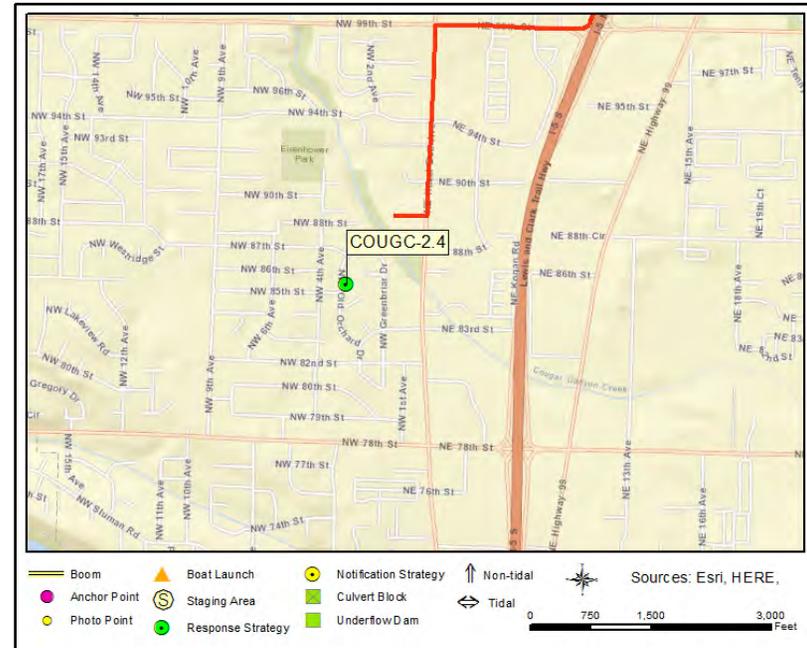
2	Laborer
1	Supervisor

Cougar Canyon Creek at NE Hazel Dell Avenue

COUGC-2.4



COUGC-2.4 Photo: Aerial image of strategy location with creek, strategy site, and staging depicted. Sorbent boom in white with strategy location circled in yellow.



Site Contact

No Information
Not Determined :

Nearest Address

8800 NE Hazel Dell Ave
Vancouver, WA 98665

Driving Directions

To Fire District 6 - Station 1 (located ~600ft north of strategy location)
8800 NE Hazel Dell Ave, Vancouver, WA98665

1. Head south on Interstate-5 and take Exit 5 (NE 99th Street)
2. At end of ramp, turn right onto NE 99th Street
3. After 0.4mi, turn left onto NE Hazel Dell Avenue
4. After ~0.5mi, the fire station will be on your right. Park equipment well away from emergency vehicle exits and check-in with on-duty personnel. If station unable to accommodate equipment, temporarily park across the street near Target Store.

Cougar Canyon Creek at NE 83rd Street COUGC-2.5

Position - Location: 45° 40.965', -122° 40.081' 45° 40' 57.9", -122° 40' 4.8" 45.68275, -122.66801 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Cougar Creek

Implementation: Deploy hard boom from creek right to creek left on upstream side of small walking bridge on private property, downstream/north of NE 83rd Street. Extend boom upstream on creek right, as needed to create a suitable collection pocket on creek left at/near bridge. Deploy multiple lengths of sorbent boom downstream of bridge and on downstream side of culvert at NE 83rd Street. Use posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. Use vac-truck or skimmer/storage for collection on creek left at/near walking bridge.

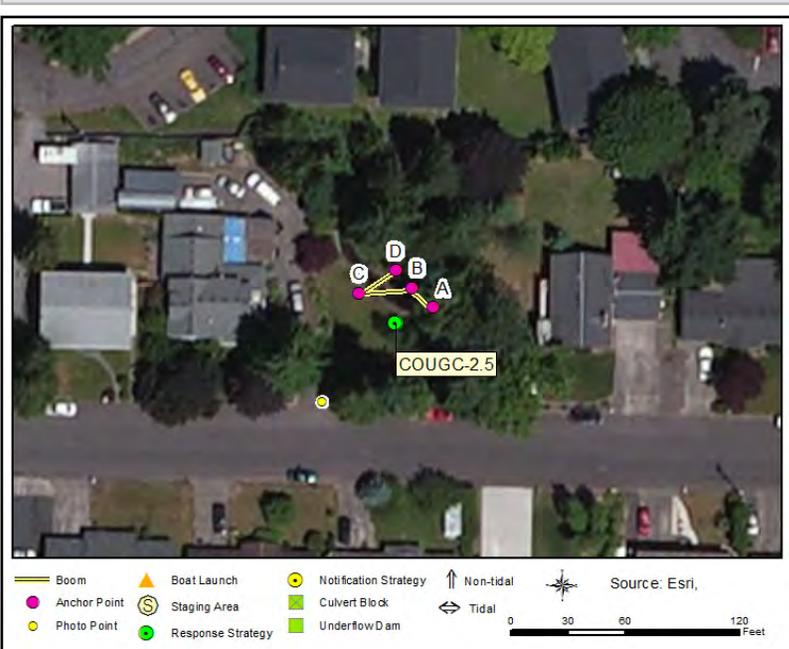
Staging Area: Onsite: Stage on side of NE 83rd Street near creek or in private driveway adjacent creek's west side.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Traffic; Limited Parking; Vegetation

Field Notes: Strategy is on private property - coordinate with local property owner before strategy implementation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Cougar Creek

Resources at Risk: Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Bridle(s) - Hand (appropriately sized for boom)
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line
4 Each	Shore Connect System (posts, driver, anchor, chain, line)

Recommended Personnel

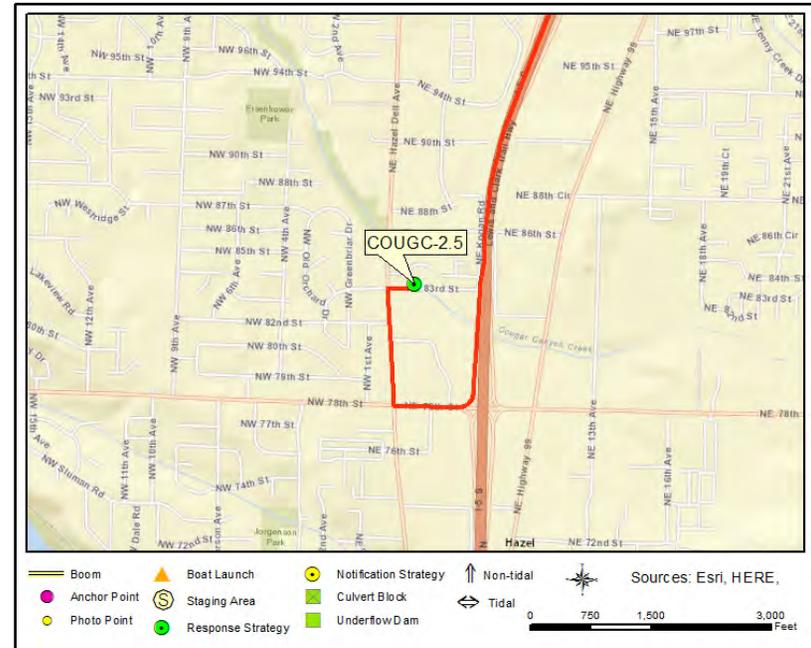
2	Laborer
1	Supervisor

Cougar Canyon Creek at NE 83rd Street

COUGC-2.5



COUGC-2.5 Photo: Aerial image of strategy location with creek, strategy site, and staging depicted. Hard boom in red, sorbent boom in white, strategy location circled in yellow.



Site Contact

No Information
Not Determined :

Nearest Address

304 NE 83rd St
Vancouver, WA 98665

Driving Directions

1. Head south on Interstate-5 and take Exit 5 (NE 99th Street)
2. At end of ramp, turn right onto NE 99th Street
3. After 0.4mi, turn left onto NE Hazel Dell Avenue
4. After 0.7mi, turn left onto NE 83rd Street
5. After ~300ft, the strategy location will be on your left. Park on side of street near creek or coordinate with private property owner for temporary use of driveway on creek's west side off roadway.

BNSF Rail Yard (WA) CWLZR-1.0

Position - Location: 46° 6.266', -122° 53.475' 46° 6' 15.9", -122° 53' 28.5" 46.10443, -122.89124 Kelso

Strategy Objective: Collection : Collect oil coming downstream on the Cowlitz River to prevent it from entering the Columbia River

Implementation: From BL-CWLZR-1.6, Crew 2 launch workboat to BNSF rail yard. Crew 1 stage 1000ft. boom in BNSF yard and attach line to end of boom. Crew 1 pass line to Crew 2, and Crew 2 use line to pull boom across to center highway bridge piling. Anchor boom to piling to create steeply angled collection pocket. Anchor every 100-150ft. along boom length to maintain angle. Upstream strategy CWLZR-1.45 will divert oil into collection pocket. Crew 1 anchor boom to shore using shoreside anchor posts at AP-1, approx. (46.104506,-122.891205). Collect oil with vac truck staged at BNSF rail yard.

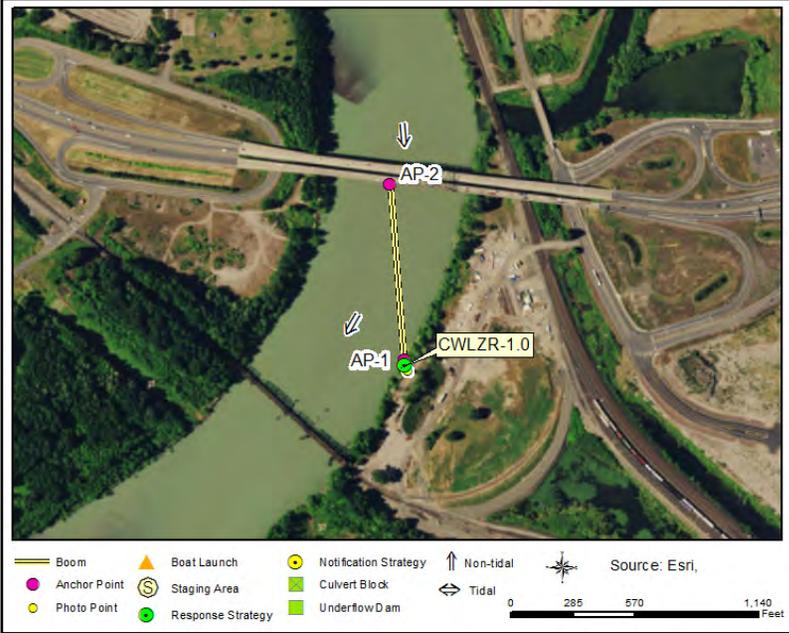
Staging Area: Onsite: Stage at BNSF Rail Yard. Contact Longview Yard Master for access.

Site Safety: Active railroad track. Slips, trips, and falls. Rail yard with heavy equipment traffic and overhead cranes.

Field Notes: Expect trains on the track at any time/from either direction. Do not allow people/equipment within 25' of tracks. Site is BNSF rail yard at the confluence of the Cowlitz, Columbia, and Coweeman Rivers.

Watercourse: River - With Tidal Influence - Cowlitz River

Resources at Risk: Downstream Resources



Recommended Equipment

8	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Bridge Pier (appropriately sized for boom)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Winch - Power Winch
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

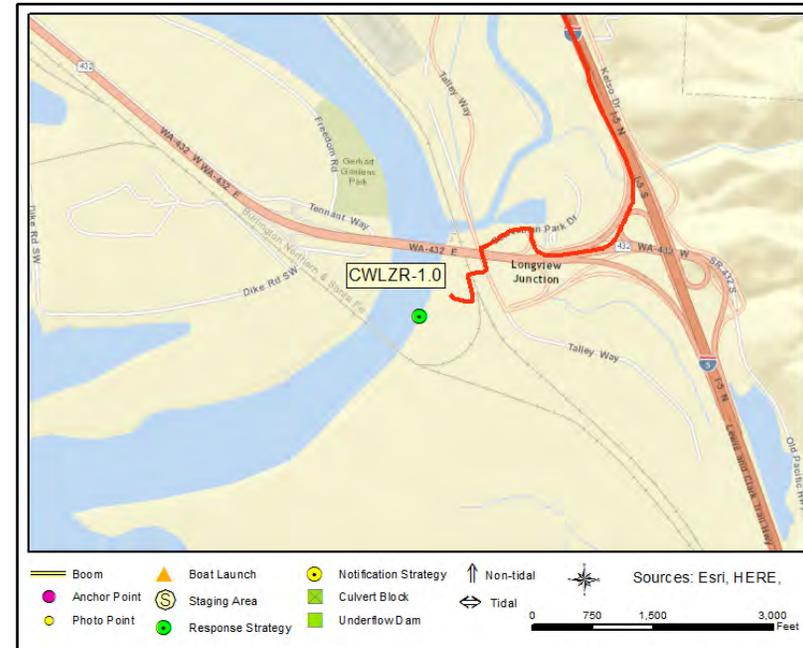
1	Boat Operator
4	Laborer
1	Supervisor

BNSF Rail Yard (WA)

CWLZR-1.0



CWLZR-1.0 Photo: River left on Cowlitz River looking NW toward highway bridge



Site Contact

Burlington Northern Santa Fe Railroad
 Emergency Contact : Longview Yard Master
 3001 Talley Way
 Kelso, WA 98626
 360-578-2373

Nearest Address

3001 Talley Way
 Kelso, WA 98626

Driving Directions

- From I-5 S, Kelso, WA
- 3. At exit 36 bear right onto ramp to WA-432 W toward US-30/Longview/Kelso (0.46 miles)
- 4. Continue on WA-432 (0.11 miles)
- 5. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
- 6. Turn left on Coweeman Park Dr (0.14 miles)
- 7. Turn left on Talley Way (0.1 miles)
- 8. Turn right and cross railroad bridge to enter BNSF rail yard. Check in at BNSF offices or call BNSF Longview Yard Master to obtain access to site.

Cowlitz River at the mouth of the Coweeman River CWLZR-1.3

Position - Location: 46° 6.472', -122° 53.408' 46° 6' 28.3", -122° 53' 24.5" 46.10786, -122.89014 Kelso

Strategy Objective: Exclusion : Exclude oil from the mouth of the Coweeman River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom downstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment in gravel lot

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Launch boat upstream and tow boom to site

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

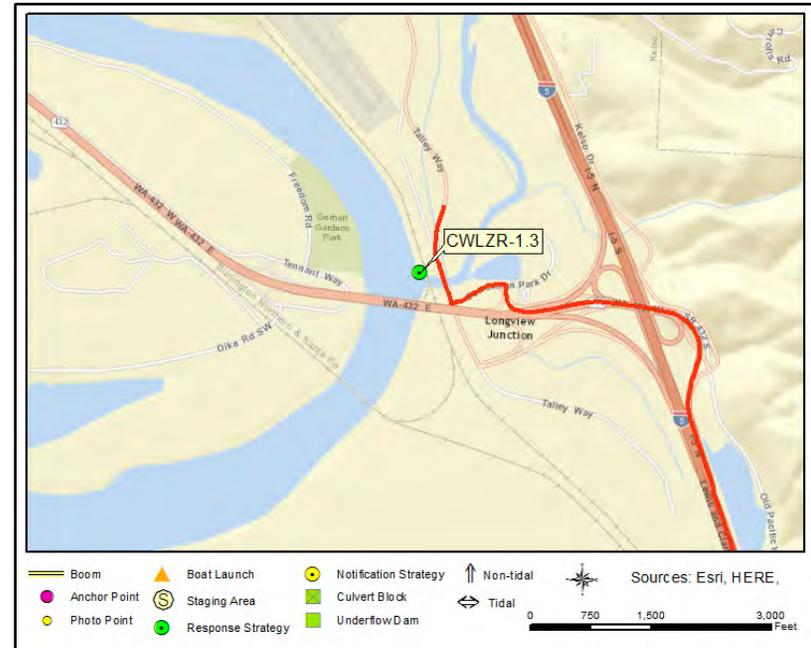
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River at the mouth of the Coweeman River

CWLZR-1.3



CWLZR-1.3 Photo: Photo taken from river right looking East



Site Contact

Burlington Northern Santa Fe Railroad
 Emergency Contact :

 WA
 800-832-5452

Nearest Address

Kelso, WA 98626

Driving Directions

1. From Kalama, take I-5 N
3. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
4. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
5. Continue on WA-432 (0.32 miles)
6. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
7. Turn left on Coweeman Park Dr (0.14 miles)
8. Turn right on Talley Way (0.23 miles)
9. Finish at 2514 Talley Way,98626, on the right

Gerhardt Gardens CWLZR-1.45

Position - Location: 46° 6.548', -122° 53.596' 46° 6' 32.9", -122° 53' 35.8" 46.10914, -122.89327 Longview

Strategy Objective: Deflection : Deflect oil coming from upstream into downstream collection pocket

Implementation: Launch workboat onsite at Gerhardt Gardens boat launch, BL-CWLZR-2.0. Angle boom downstream from decommissioned boat ramp to divert oil into collection pocket downstream. Anchor at AP-1 using shoreside anchor posts, and anchor at AP-2 using Danforth or other anchor. Anchor every 100-150ft. along boom length or as necessary for conditions.

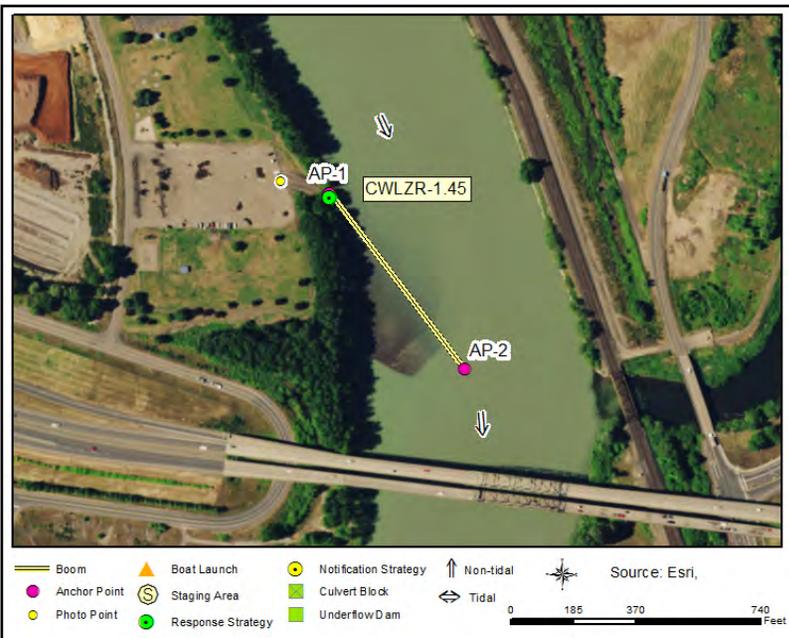
Staging Area: Onsite: Stage in old parking area at Gerhardt Gardens Park.

Site Safety: Slips, trips, and falls. Water hazards.

Field Notes: Site is an old boat ramp at Gerhardt Gardens Dog Park.

Watercourse: River - With Tidal Influence - Cowlitz River

Resources at Risk: Downstream Resources



Recommended Equipment

6	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Line throwing gun(s) or device(s)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

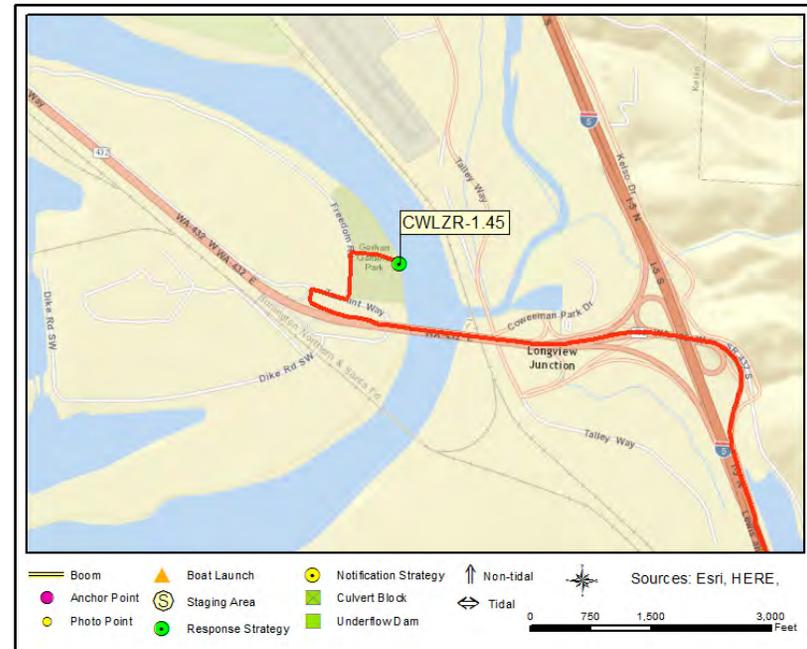
1	Boat Operator
3	Laborer
1	Supervisor

Gerhardt Gardens

CWLZR-1.45



CWLZR-1.45 Photo: River right on Cowlitz River at Gerhardt Gardens Park old boat ramp



Site Contact

City of Longview
 Land/Property Contact : Parks and Recreation
 2920 Douglas Street
 Longview, WA 98632
 360-442-5400

Nearest Address

200 Freedom Way
 Longview, WA 98632

Driving Directions

1. From Kalama, take I-5 N
2. At exit 36 take ramp on the right to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.78 miles)
5. Take ramp toward Dike Road 0.2 miles)
6. Turn right on Tennant Way (Tennant Way Frontage Rd) 0.09 miles)
7. Turn left on Freedom Rd (0.1 miles)
8. Turn right into parking lot.

Cowlitz River at north end of Gerhart Gardens Park CWLZR-1.65

Position - Location: 46° 6.698', -122° 53.758' 46° 6' 41.9", -122° 53' 45.5" 46.11163, -122.89597 Longview

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

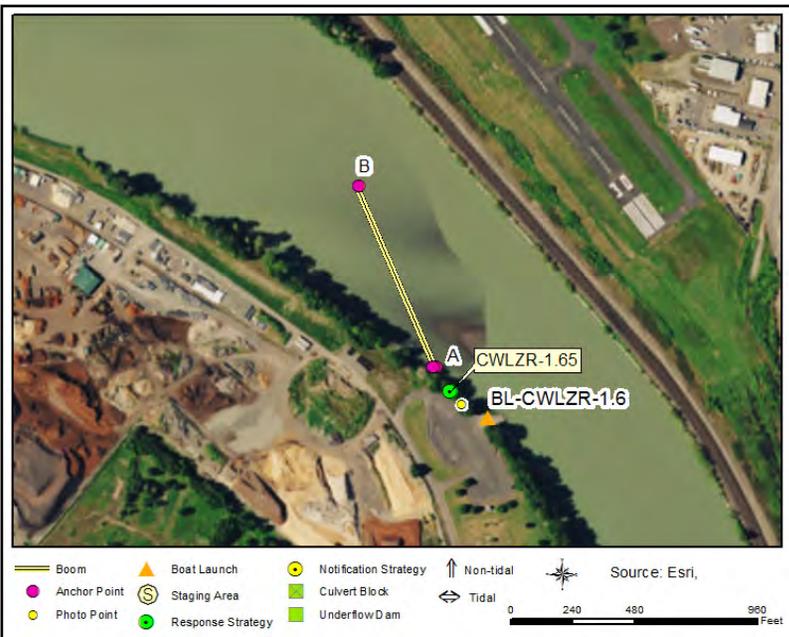
Staging Area: Onsite: Stage equipment at Gerhart Gardens Park

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Collection strategy just north of the boat ramp.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

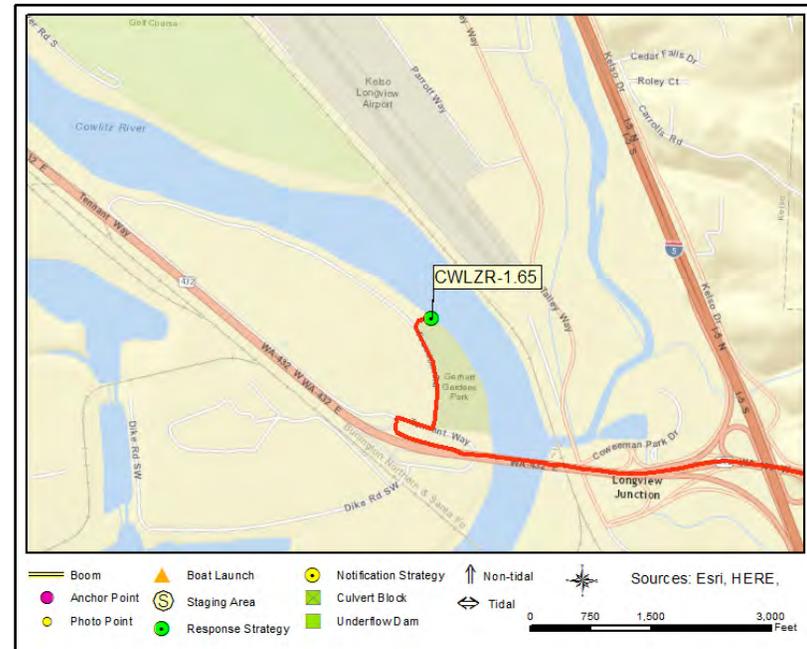
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River at north end of Gerhart Gardens Park

CWLZR-1.65



CWLZR-1.65 Photo: Photo taken from river right looking East



Site Contact

City of Longview
 Municipality (County/City) : Parks and Recreation
 2920 Douglas Street
 Longview, WA 98632
 360-442-5400

Nearest Address

200 Freedom Way
 Longview, WA 98632

Driving Directions

1. From Kalama, take I-5 N
2. At exit 36 take ramp on the right to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.78 miles)
5. Take ramp toward Dike Road 0.2 miles)
6. Turn right on Tennant Way (Tennant Way Frontage Rd) 0.09 miles)
7. Turn left on Freedom Rd (0.5 miles)
8. Turn right into parking lot.

Cowlitz River near Mill St CWLZR-4.3

Position - Location: 46° 8.254', -122° 54.962' 46° 8' 15.2", -122° 54' 57.7" 46.13756, -122.91603 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment outside of the ecology blocks

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Boat and boom can be launched at a nearby boat launch. A portable skimmer could be

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

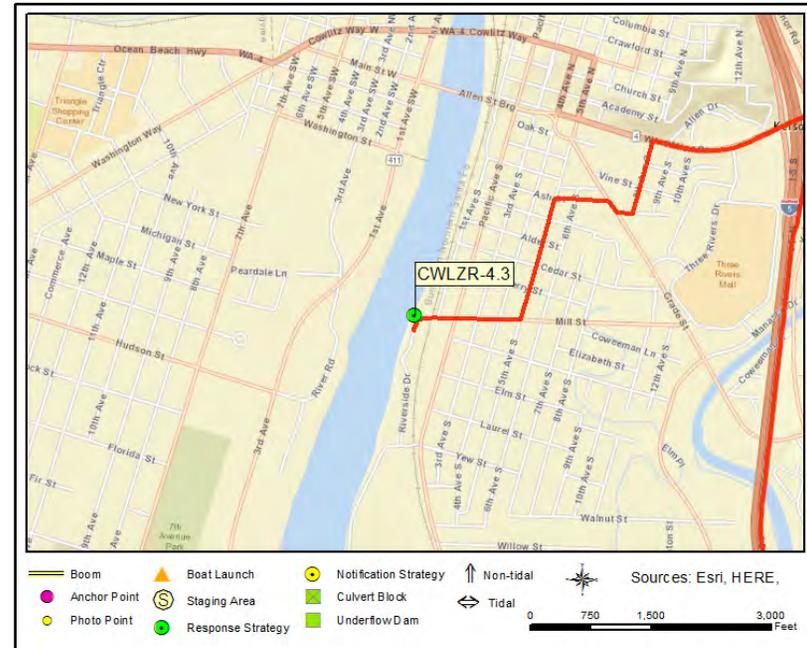
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River near Mill St

CWLZR-4.3



CWLZR-4.3 Photo: Photo taken on river left looking NW



Site Contact

City of Kelso - Public Works
 Municipality (County/City) :
 203 S Pacific Ave
 Kelso, WA 98626
 360-577-3360

Nearest Address

1007 Riverside Dr
 Kelso, WA 98626

Driving Directions

1. From Kalama, take I-5 N
2. Take exit 39 to WA-4 W toward Kelso (0.3 miles)
3. Turn left on WA-4 (Allen St) (0.4 miles)
4. Turn left on 8th Ave S (0.18 miles)
5. Turn right on Ash St (0.04 miles)
6. Bear right on Grade St (0.03 miles)
7. Bear left on Ash St (0.13 miles)
8. Turn left on 5th Ave S (0.3 miles)
9. Turn right on Mill St (0.25 miles)
10. Bear left on Riverside Dr (0.03 miles)
11. Finish at 1007 Riverside Dr, 98626, on the right

Cowlitz River - Longview Pump Station CWLZR-5.2

Position - Location: 46° 9.013', -122° 54.867' 46° 9' .8", -122° 54' 52.0" 46.15021, -122.91446 Kelso

Strategy Objective: Exclusion : Keep oil away from pump station water intakes

Implementation: Secure end of 200ft length of boom to bank on river right about ~20ft north of pump house at/near Point A (46.150487, -122.914439). Using workboat, set anchor system in river at/near Point B (46.150327, -122.914271 ; about ~35ft out from the downstream side of the pump house). Then extend boom from Point A and secure to Point B before extending remaining boom towards Point C (46.150175, -122.914479 ~50ft south/downstream from pump house). Remove slack from boom and secure to bank at/near Point C. Anticipated total length of boom needed is ~150ft.

Staging Area: Onsite: Stage in grassy area on north side of pump house or across street at Longview Regional Water Plant

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Steep Bank with Vegetation

Field Notes: Nearest suitable boat launch is 3.6mi downstream at Gerhart Gardens Park (BL-CWLZR-1.6). Once implemented, notify City of Longview Stormwater Division at 360-442-5299, 360-957-2720, or 360-442-5209. After hours call 360-578-0900.

Watercourse: River - With Tidal Influence - Cowlitz River

Resources at Risk: Economic Resource, Water Intakes



Recommended Equipment

1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
1	Each	Bolt Cutters
200	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

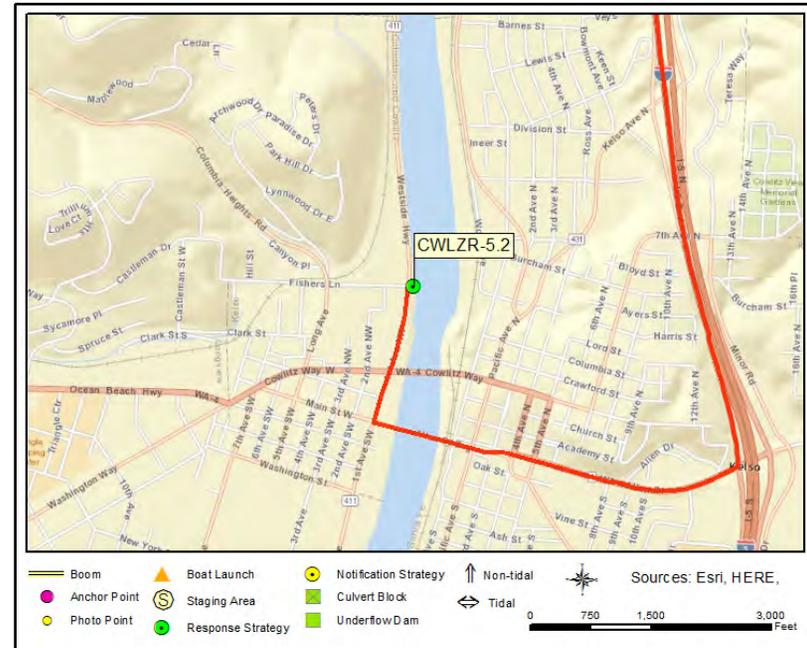
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River - Longview Pump Station

CWLZR-5.2



CWLZR-5.2 Photo: At strategy location on north/upstream side of pump house on river right, looking east across Cowlitz River to river left.



Site Contact

City of Longview - Stormwater
 Primary Contact :
 1525 Broadway
 Longview, WA 98632
 360-442-5299

Nearest Address

101 Fishers Lane
 Kelso, WA 98626

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (towards Kelso)
2. Turn right at the end of exit ramp, heading west on Hwy 4/Allen Street
3. After 0.9mi, just after the bridge over the Cowlitz River, turn right onto 1st Avenue NW
4. After 0.3 miles, the pump house will be on your right, adjacent to the river. Stage in small grassy area on north side of pumphouse, may need to remove or cut small cable blocking access. Additional parking available across street at Longview Regional Water Treatment Plant (101 Fishers Lane).

Cowlitz River at Division St CWLZR-5.6

Position - Location: 46° 9.336', -122° 54.777' 46° 9' 20.2", -122° 54' 46.6" 46.15560, -122.91296 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, secure one end of 800ft length of boom to shore on the Cowlitz River near Point A. Then extend boom ~800ft NW and secure remaining boom end to shore near Point C. Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water.

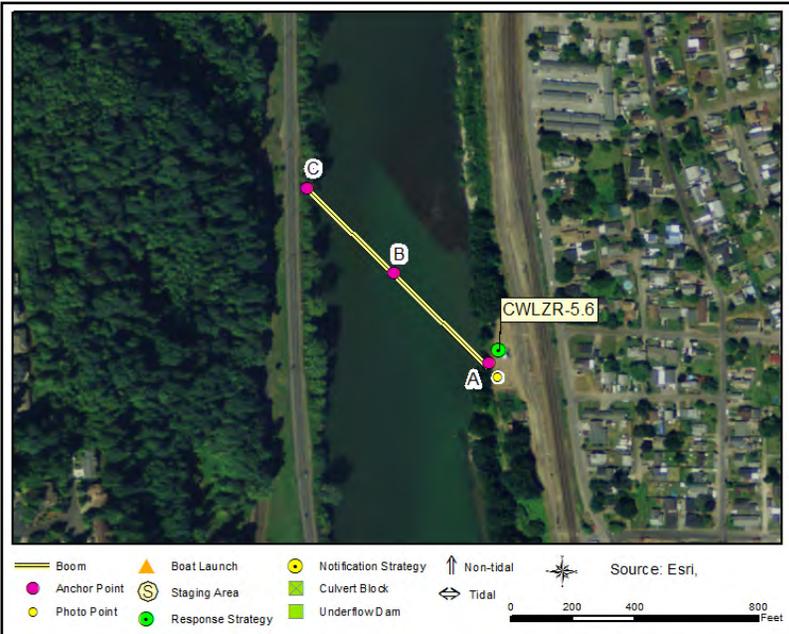
Staging Area: Onsite: Stage equipment in gravel field

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Access from the north at Cowlitz Garden Road through a gate, which was not locked but had a pin for a padlock, and onto a narrow gravel road. Follow this for a mile until you see a small two story building surrounded by a fence. GRP site is on a sand beach on the

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

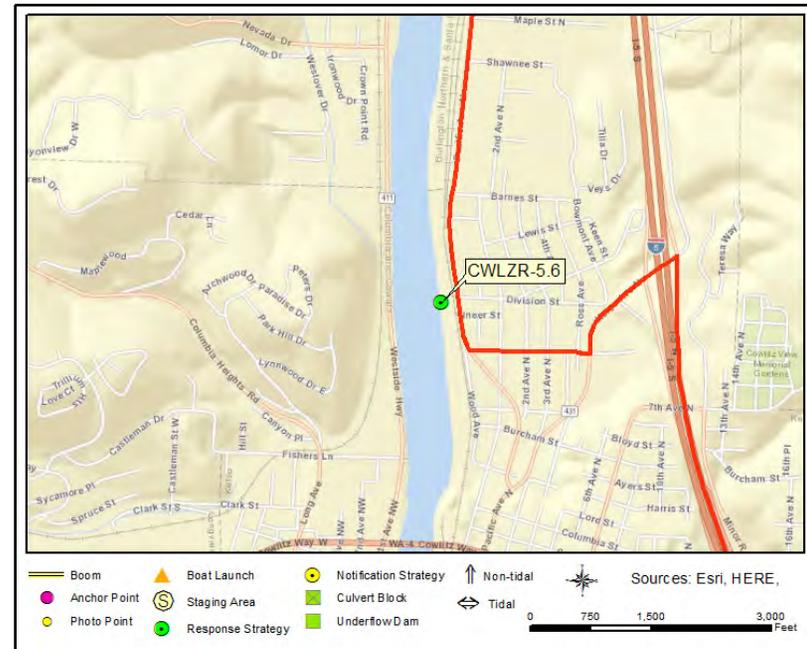
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz River at Division St

CWLZR-5.6



CWLZR-5.6 Photo: Photo taken looking West



Site Contact

No Information

Not Determined :

Nearest Address

95 Cowlitz Gardens Lane
Kelso, WA 98626

Driving Directions

1. Start at I 5 Kelso
2. Go north on I-5 (7.44 miles)
3. At exit 40 bear right onto ramp to N Kelso Ave (0.28 miles)
4. Turn left on WA-431 (Kelso Ave N) (0.33 miles)
5. Turn right on Redpath St (0.28 miles)
6. Turn right on Pacific Ave N (0.94 miles)
7. Turn left on Cowlitz Gdns (Cowlitz Gardens Rd) (0.05 miles)
8. Turn left on Cowlitz Gardens Ln (Cowlitz Gdns Ln) (0.1 miles)
9. Continue south through a gate onto a gravel road and drive approximately 1 mile until you see a small building with a fence around it and another abandoned concrete building.

Cowlitz River at SR 411 CWLZR-6.3

Position - Location: 46° 9.957', -122° 54.935' 46° 9' 57.4", -122° 54' 56.1" 46.16595, -122.91558 Kelso

Strategy Objective: Collection : Collect oil moving downstream along the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

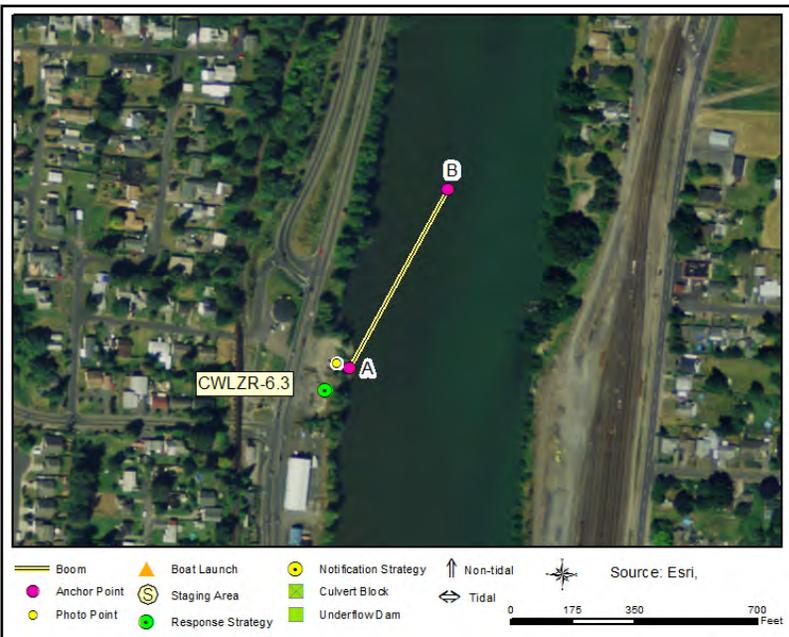
Staging Area: Onsite: Stage equipment in gravel lot. Approximately 190'x60'

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard

Field Notes: Access is from a gravel parking lot off a main paved road.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

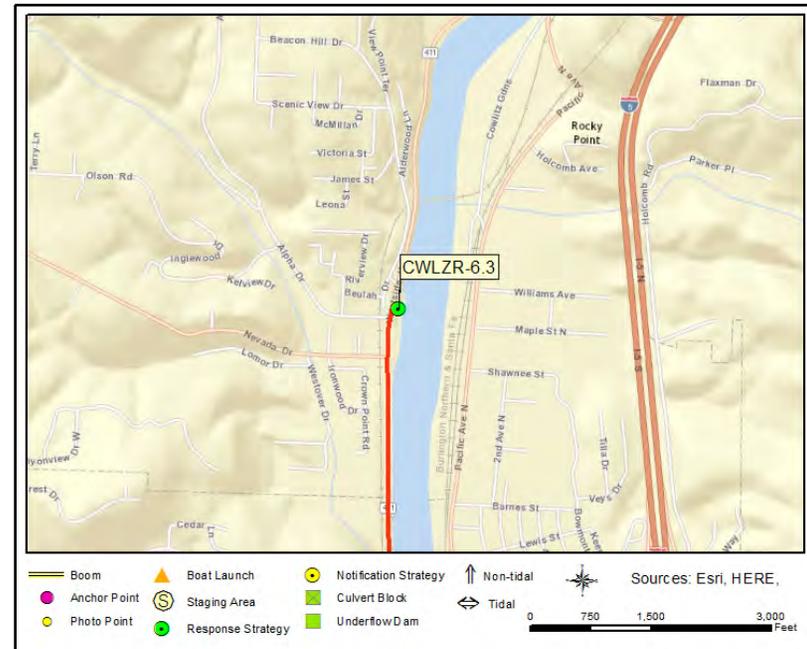
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz River at SR 411

CWLZR-6.3



CWLZR-6.3 Photo: Photo taken from staging area looking East



Site Contact

No Information
Not Determined :

Nearest Address

810 Westside Hwy
Kelso, WA 98626

Driving Directions

1. From Kalama, head N on I-5
2. Take exit 39 to WA-4 W toward Kelso (0.3 miles)
3. Turn left on WA-4 (Allen St) (0.73 miles)
4. Continue on Allen St Bridge (0.24 miles)
5. Turn right on WA-411 (1st Ave NW) (1.47 miles)
6. Finish at 810 Westside Hwy. Gravel lot is on the right.

Cowlitz river along Westside Hwy CWLZR-7.25

Position - Location: 46° 10.668', -122° 54.506' 46° 10' 40.1", -122° 54' 30.3" 46.17780, -122.90843 Kelso

Strategy Objective: Collection : collect oil moving downstream on Cowlitz River

Implementation: Using workboat, secure one end of 300ft length of boom to shore on the Cowlitz River near Point A. Then extend boom ~300ft and secure remaining boom end near Point B. Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water.

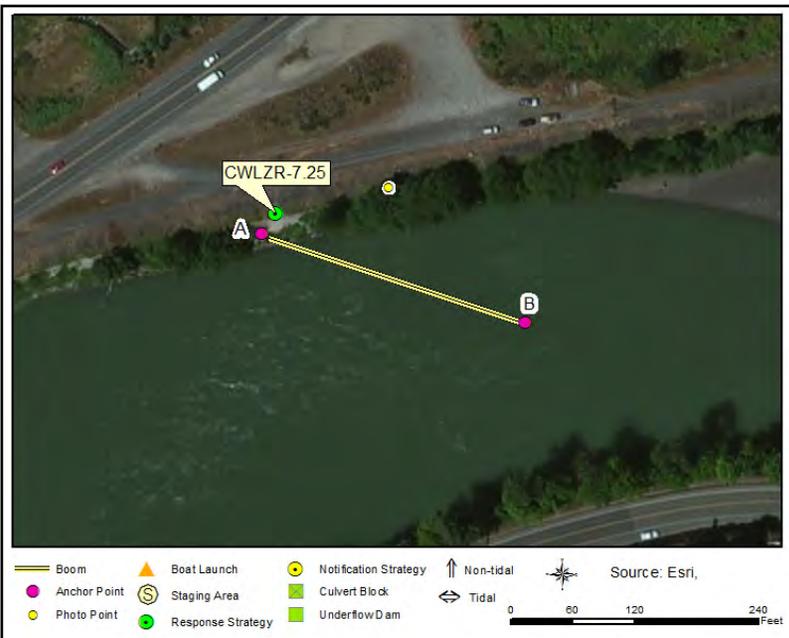
Staging Area: Onsite: Stage equipment on gravel lot; approximately 12,000 sqft.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Gravel lot of to the side of a busy road. Easy access and lots of room for parking. Down to the river was a steep bank with gravel and vegetation.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Anchoring System(s) - (anchor, lines, floats)
1 Each	Anchoring System(s)- Shoreside
300 Feet	Boom - B3 (River Boom) or equivalent
1 Each	Vac Truck or Skimmer and Storage
1 Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

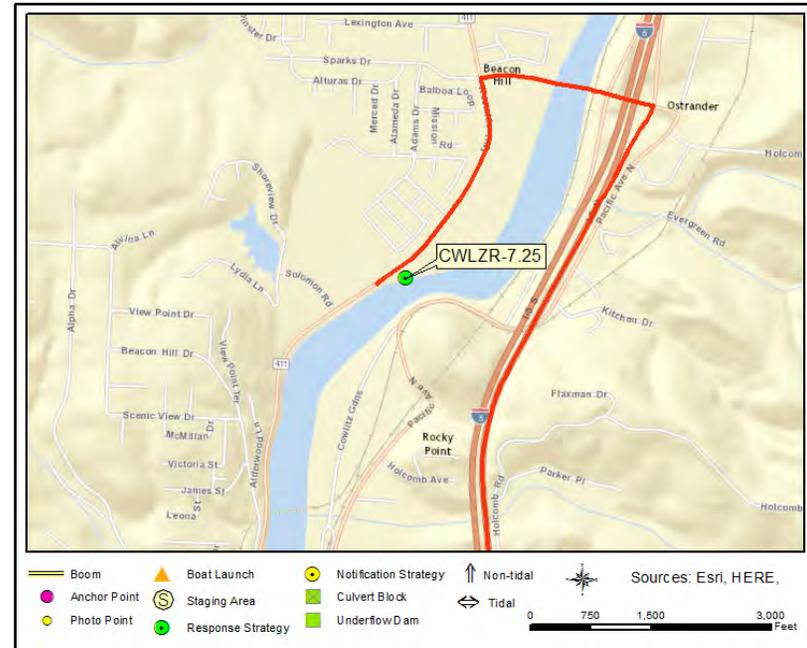
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz river along Westside Hwy

CWLZR-7.25



CWLZR-7.25 Photo: Photo taken from dike trail looking East



Site Contact

No Information
Not Determined :

Nearest Address

1229 Westside Hwy
Kelso, WA 98626

Driving Directions

1. From Kalama, take I-5 North
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn left on Sparks Dr (0.42 miles)
4. Turn left on WA-411 (Westside Hwy) (0.59 miles)
5. Entrance to gravel lot is 0.5 miles on the left

Cowlitz River near Pacific Ave N

CWLZR-7.4

Position - Location: 46° 10.630', -122° 54.258' 46° 10' 37.8", -122° 54' 15.5" 46.17717, -122.90430 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

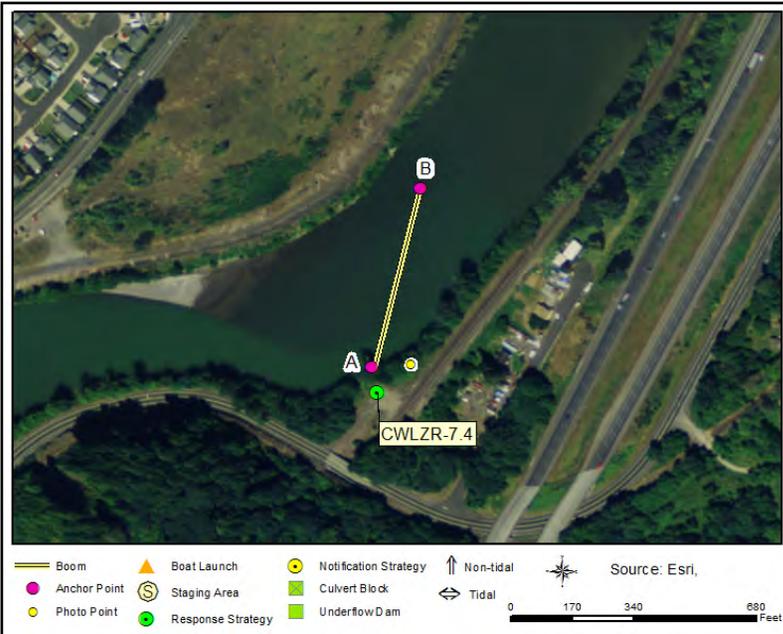
Staging Area: Onsite: Stage equipment in grass field adjacent to railroad track.

Site Safety: Slips, Trips, Falls; Water Hazard; Active Railroad, expect trains on the tracks at any time/from either direction

Field Notes: Chained off entrance to road leading down to a field near a railroad track.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

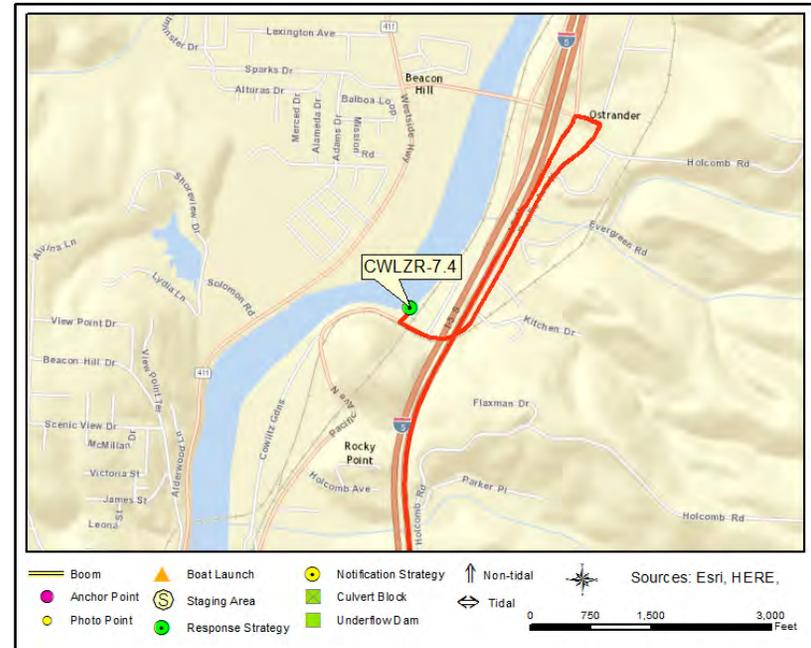
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River near Pacific Ave N

CWLZR-7.4



CWLZR-7.4 Photo: Photo taken looking North



Site Contact

Cowlitz County
 Emergency Contact : Emergency Management

 WA
 360-577-3130

Nearest Address

101 Pacific Avenue Spur
 Kelso, WA 98626

Driving Directions

1. From Kalama, head north on I-5
3. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
4. Turn right on Sparks Dr (0.06 miles)
5. Turn right on Pacific Ave N (0.72 miles)
6. Chained entrance is on the right just past Pacific Ave Spur (Pacific Avenue Spur)

Cowlitz River at Pleasant Hill Rd CWLZR-14.1

Position - Location: 46° 14.415', -122° 53.335' 46° 14' 24.9", -122° 53' 20.1" 46.24025, -122.88892 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment on gravel road leading to river

Site Safety: Slips, Trips, Falls; Water Hazard; Active Railroad, expect trains on the track at any time/from either direction.

Field Notes: There is a small sand beach that could be reached by boat. It is possible to get down to the river, but would be a safety hazard trying to carry equipment down.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

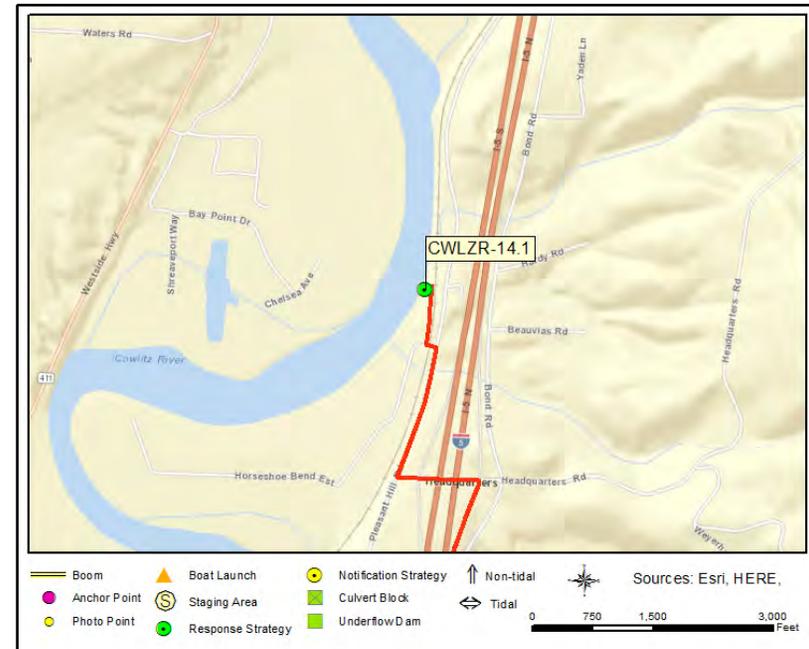
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River at Pleasant Hill Rd

CWLZR-14.1



CWLZR-14.1 Photo: Photo taken looking North



Site Contact

Burlington Northern Santa Fe Railroad
 Not Determined :

 WA
 800-832-5452

Nearest Address

118 Horseshoe Bend Ests
 Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 46 to Headquarters Road toward Pleasant Hill Rd (0.34 miles)
3. Turn left on Headquarters Rd (0.2 miles)
4. Make sharp right on Pleasant Hill Rd (0.32 miles)
5. Turn left on Horseshoe Bend Est (0.06 miles)
6. Make a right onto gravel road just past the Railroad tracks.

Cowlitz River at Lions Pride Park S CWLZR-15.8L

Position - Location: 46° 15.819', -122° 53.960' 46° 15' 49.2", -122° 53' 57.6" 46.26365, -122.89933 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment in gravel lot

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes:

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

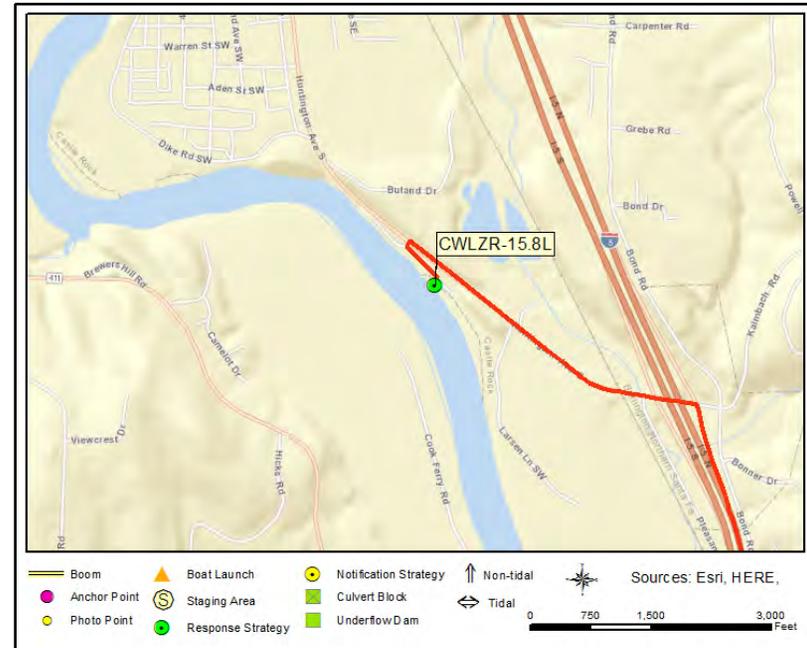
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River at Lions Pride Park S

CWLZR-15.8L



CWLZR-15.8L Photo: Photo looking West



Site Contact

City of Castle Rock - Lion's Pride Park
 Municipality (County/City) :
 360 "A" Street SW
 Castle Rock, WA 98611
 360-274-7478

Nearest Address

1779 Huntington Ave S
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to I-5 Business Loop/ Castle Rock (0.26 miles)
3. Turn left on I-5 Business/Huntington Ave S (0.48 miles)
4. Entrance to Lion's Pride Park will be on the left
5. Follow to end of parking lot

Cowlitz River near Cook Ferry Rd CWLZR-15.8R

Position - Location: 46° 15.756', -122° 54.044' 46° 15' 45.4", -122° 54' 2.6" 46.26261, -122.90073 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Staging available onsite

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes:

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River near Cook Ferry Rd

CWLZR-15.8R



CWLZR-15.8R Photo: Photo taken looking SE



Site Contact

Nearest Address

597 Cook Ferry Rd
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N (1.67 miles)
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn left on Sparks Dr (0.42 miles)
4. Turn right on WA-411 (Westside Hwy) (4.43 miles)
5. Turn right on Cook Ferry Rd (1.23 miles)
6. Continue to the end of the dirt road. Site is along river.

Cowlitz River near Huntington Ave S CWLZR-15.9

Position - Location: 46° 15.879', -122° 54.058' 46° 15' 52.8", -122° 54' 3.5" 46.26466, -122.90097 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment in parking lot

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes: Large gravel lot (apx. 40,000 sqft) with bathroom, rv dump, and lots of parking.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

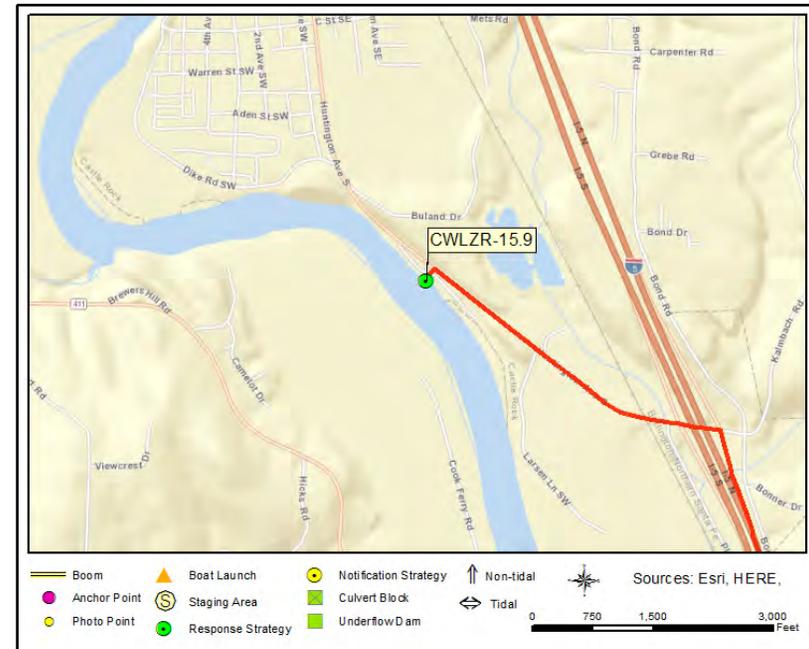
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz River near Huntington Ave S

CWLZR-15.9



CWLZR-15.9 Photo: Photo taken from river left looking NW



Site Contact

City of Castle Rock - Lion's Pride Park
 Municipality (County/City) :
 360 "A" Street SW
 Castle Rock, WA 98611
 360-274-7478

Nearest Address

1779 Huntington Ave S
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to I-5 Business Loop/ Castle Rock (0.26 miles)
3. Turn left on I-5 Business/Huntington Ave S (0.48 miles)
4. Lion's Pride Park will be on the left

Cowlitz River along Castle Rock bike path CWLZR-17.2

Position - Location: 46° 16.340', -122° 54.933' 46° 16' 20.4", -122° 54' 56.0" 46.27234, -122.91555 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream along the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

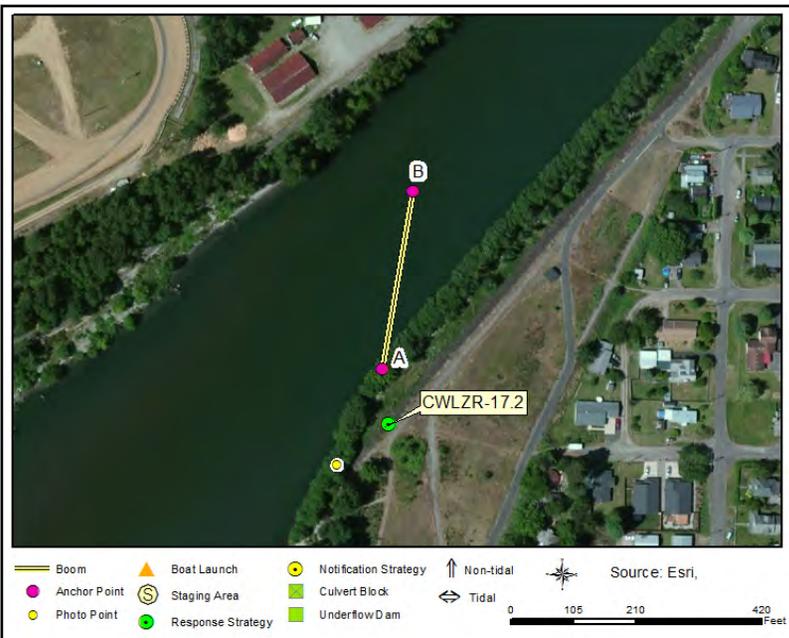
Staging Area: Onsite: Stage equipment along bike path

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes: Bike path runs along levee. Steep bank to the river. Inform/coordinate response activities with nearby property owners as needed.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

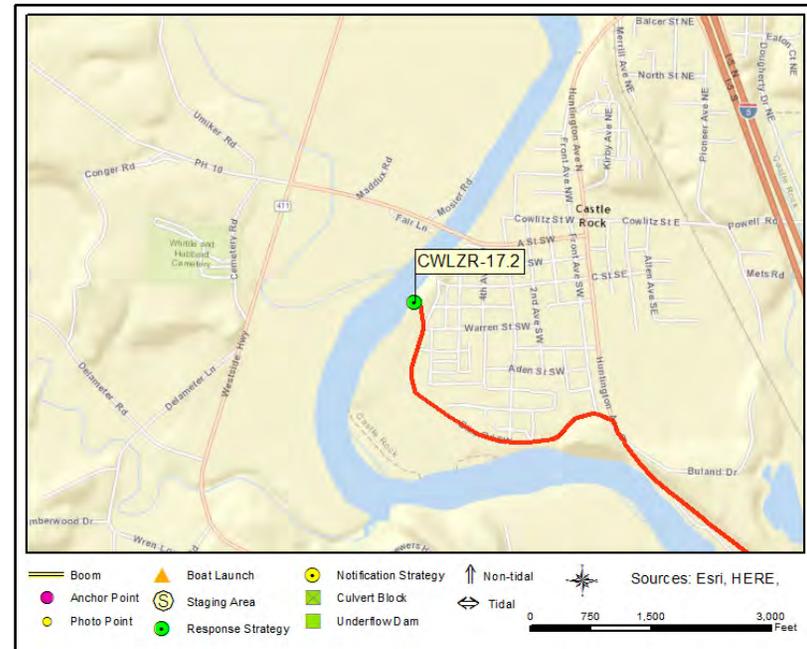
1	Boat Operator
1	Laborer
1	Supervisor

Cowlitz River along Castle Rock bike path

CWLZR-17.2



CWLZR-17.2 Photo: Photo taken from river left looking West



Site Contact

City of Castle Rock - Public Works
 Municipality (County/City) :
 360 "A" Street SW - P.O. Box370
 Castle Rock, WA 98611
 360-703-0167

Nearest Address

Dike Road
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to I-5 Business Loop/ Castle Rock (0.26 miles)
3. Turn left on I-5-Business/Huntington Ave S) (1.15 miles)
4. Turn left on Front Ave SW (0.04 miles)
5. Bear left on Dike Rd SW (0.33 miles)
6. Access the bike path at the Castle Rock BMX Track, on the left.

Cowlitz River near A St Bridge CWLZR-17.4

Position - Location: 46° 16.507', -122° 54.759' 46° 16' 30.4", -122° 54' 45.5" 46.27512, -122.91265 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment onsite

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes: Must navigate a steep turn up a gravel road and up onto the jogging path. It would be very difficult for larger trucks to make this turn. Transport boom by water

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

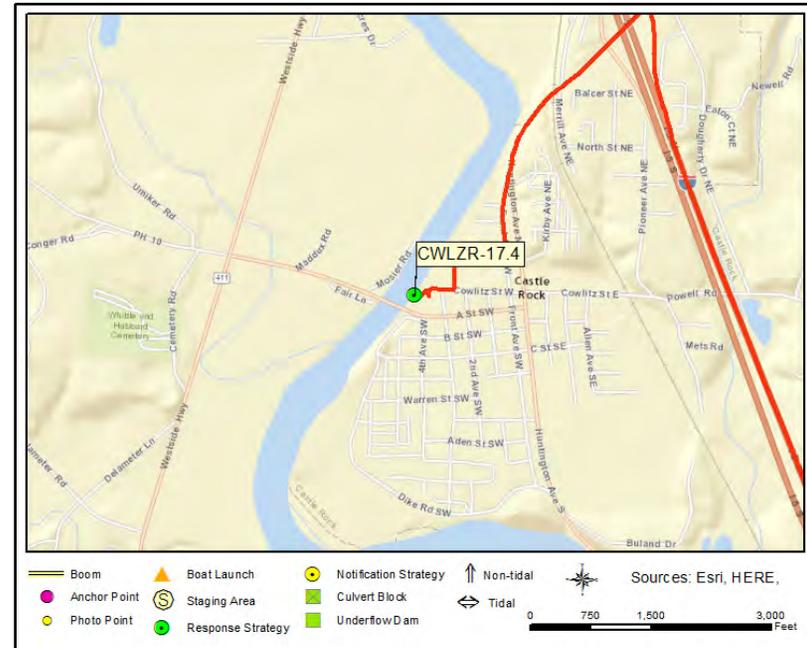
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River near A St Bridge

CWLZR-17.4



CWLZR-17.4 Photo: Photo taken from river left looking NW



Site Contact

City of Castle Rock - Public Works
 Municipality (County/City) :
 360 "A" Street SW - P.O. Box370
 Castle Rock, WA 98611
 360-703-0167

Nearest Address

101 3rd Ave SW
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 49 to WA-411 S/WA-504 E toward Castle Rock/Toutle (0.33 miles)
3. Turn left on I-5-BL (Mt St Helens Way NE) (0.53 miles)
4. Bear right on Front Ave NW (0.19 miles)
5. Turn right on Shintaffer St NW (0.12 miles)
6. Bear left on Leaming Ave NW (0.11 miles)
7. Turn right on Cowlitz St W (0.03 miles)
8. Continue past 3rd Ave SW and onto gravel road behind house. (0.01 miles)
9. Make sharp left turn onto gravel path, site is on the right.

Cowlitz River near Front Ave NW **CWLZR-17.75**

Position - Location: 46° 16.763', -122° 54.530' 46° 16' 45.8", -122° 54' 31.8" 46.27938, -122.90883 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

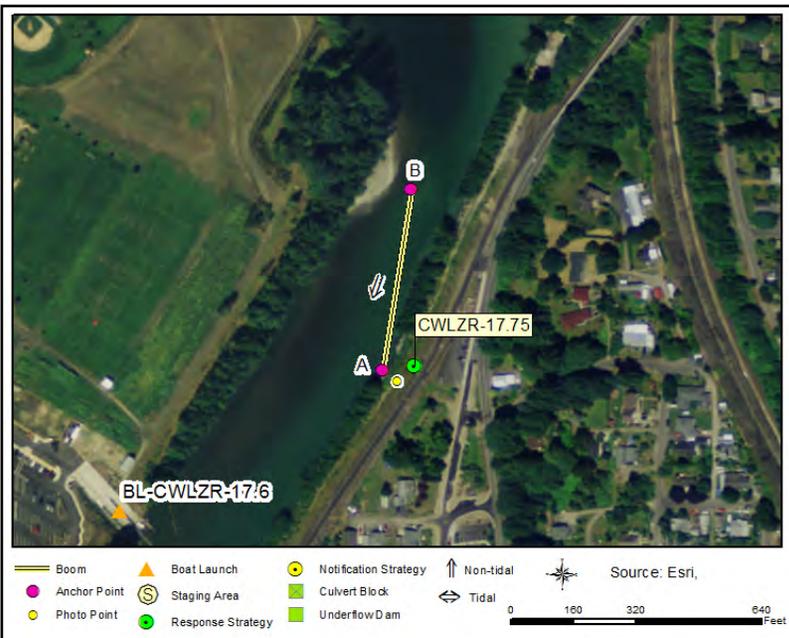
Staging Area: Onsite: Stage equipment in parking lot

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes: Rip-rap bank poses difficulties in launching equipment. Transport boom by water and use a vacuum truck at the top of the dike to collect product. Due to the length and height of the dike, an inline pump may be needed.

Watercourse: River - Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

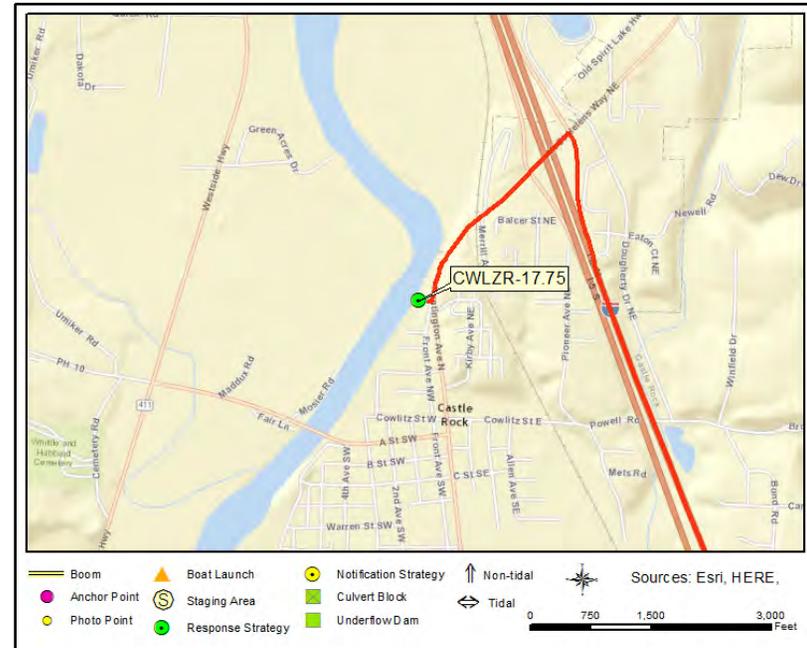
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River near Front Ave NW

CWLZR-17.75



CWLZR-17.75 Photo: Photo taken from river left looking NW



Site Contact

No Information
Not Determined :

Nearest Address

401 Front Ave NW
Castle Rock, WA 98611

Driving Directions

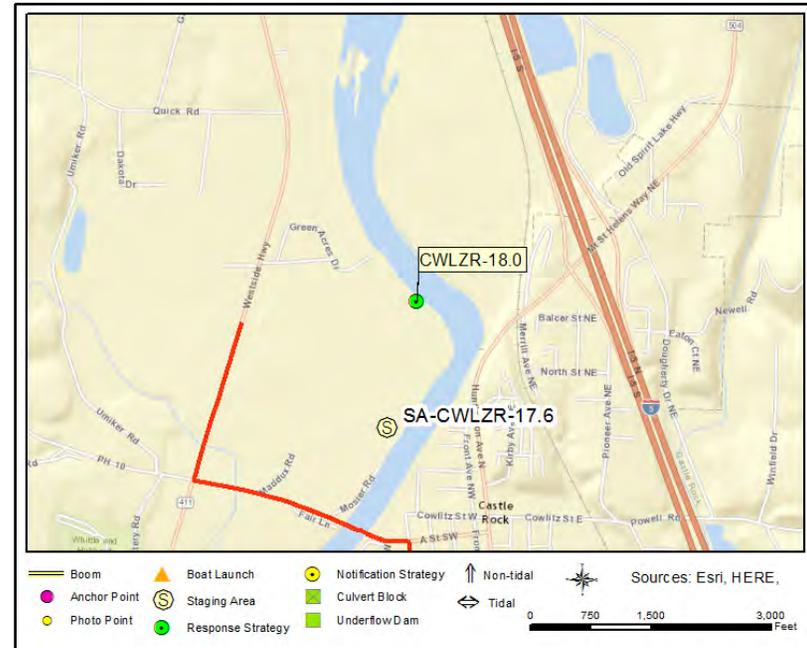
1. From Kelso, take I-5 N
2. Take exit 49 to WA-411 S/WA-504 E toward Castle Rock/Toutle (0.33 miles)
3. Turn left on I-5-BL (Mt St Helens Way NE) (0.53 miles)
4. Bear right on Front Ave NW (0.09 miles)
5. Parking lot is immediately on the left.

Cowlitz River near North County Sports Complex

CWLZR-18.0



CWLZR-18.0 Photo: Photo taken from river right looking NE



Site Contact

North County Sports and Recreation Complex

Primary Contact : Grounds Keeper

Castle Rock, WA 98611
360-270-3409

Nearest Address

5140 Westside Hwy
Castle Rock, WA 98611

Driving Directions

1. Start at I 5 Kelso
2. Go north on I-5 (2.92 miles)
3. Take ramp on the right to I-5-BL (0.26 miles)
4. Turn left on I-5-BL (Huntington Ave S) (1.15 miles)
5. Turn left on Front Ave SW (0.04 miles)
6. Turn right at Dike Rd SW to stay on Front Ave SW (0.16 miles)
7. Turn left on Hibbard St SW (0.11 miles)
8. Turn right on 2nd Ave SW (0.05 miles)
9. Turn left on Warren St SW (0.05 miles)
10. Turn right on 3rd Ave SW (0.2 miles)
11. Turn left on WA-411 (A St SW) (0.53 miles)
12. Turn right to stay on WA-411 (Westside Hwy) (0.39 miles)
13. Finish at 5140 Westside Hwy, 98611, on the right

Cowlitz River - Westside Highway Downstream of RR CWLZR-23.6

Position - Location: 46° 21.170', -122° 56.193' 46° 21' 10.2", -122° 56' 11.6" 46.35284, -122.93655 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Secure end of 600ft length of boom to bank on river right near Point C (46.352814, -122.937217). Then extend boom SE ~90ft, securing it to end of small peninsula near Point B (46.352578, -122.93712); use plywood sheets if ground excessively muddy. Use workboat to set anchor systems every 100ft (or as needed based on flow) in relatively straight line between Point B and Point A (46.353418, -122.935801; 450ft upstream and across to river left). Then extend boom to Point A, securing it to each anchor system as the boom is deployed. Use vac-truck or skimmer with storage for collection at Point B.

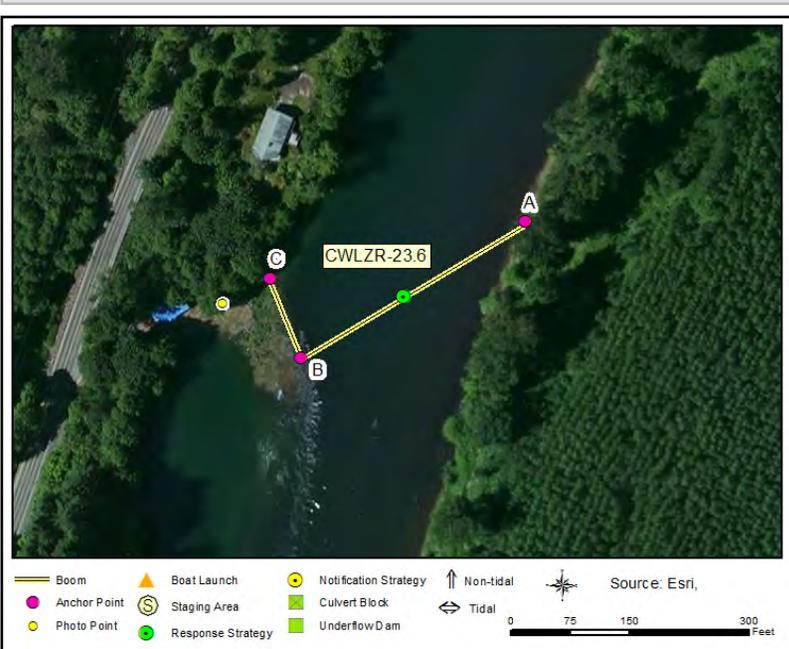
Staging Area: Onsite: Stage off roadway near top of vacant lot south of bridge over Rock Creek

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Near Shore; Roadway Hazard; Vegetation; Mud/Muddy

Field Notes: Launch jet-boat from BL-CWLZR-24.7 (located ~1.1mi upstream) to support strategy implementation. Nearest downstream launch is BL-CWLZR-17.6 (~6.0mi away). Boat operator must know the river well in order to avoid sandbars and other obstructions.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Freshwater Wetlands, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
4	Each	Plywood sheets (4ft x 8ft)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

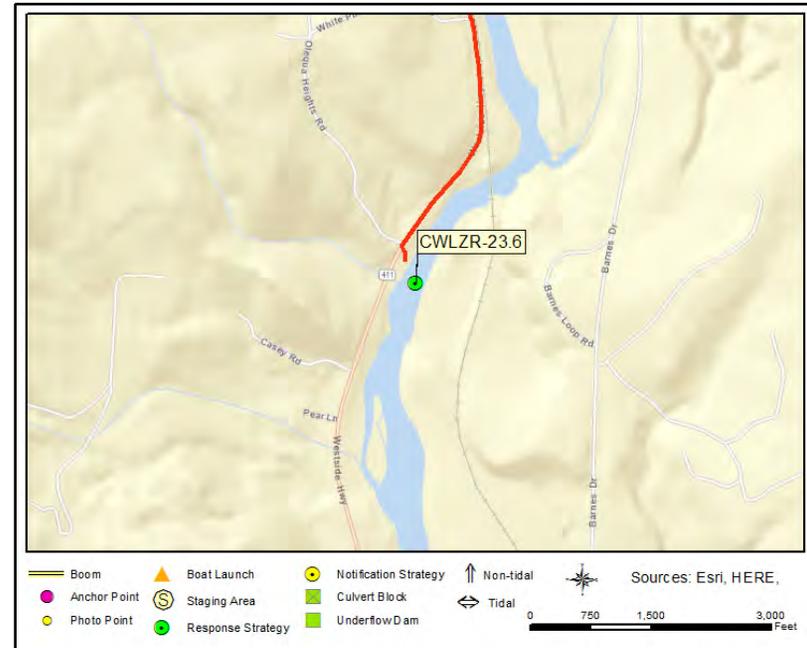
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz River - Westside Highway Downstream of RR

CWLZR-23.6



CWLZR-23.6 Photo: On Cowlitz River (river right) looking ESE towards end of small peninsula and across to river right.



Site Contact

No Information

Not Determined :

Nearest Address

7578 Westside Hwy
Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.0mi, turn left onto Westside Highway
4. After 3.8mi, the strategy location will be on your left after the bridge (small bridge) over Rock Creek. Turn left onto private/dirt roadway that leads down to river. Notify property owner by calling 360-560-2973 or email larry.hgc at gmail.com

Cowlitz River - WDFW Water Access Site CWLZR-24.7

Position - Location: 46° 22.100', -122° 56.080' 46° 22' 6.0", -122° 56' 4.8" 46.36833, -122.93466 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (46.368897, -122.934742; river right near old railroad trestle support) and Point B (46.367708, -122.934552; downstream end of parking area on river left). After anchors are set, tow boom upstream and secure to anchor at Point A, then all remaining anchor points between Points A & B. At Point B secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point B.

Staging Area: Onsite: Location is at WDFW Water Access Site "Olequa Creek" and is open year round; for more information contact WDFW Regi

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Near Shore; Vehicle Hazard (Parking Area); Vegetation

Field Notes: Location is at WDFW Water Access Site "Olequa Creek" and is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

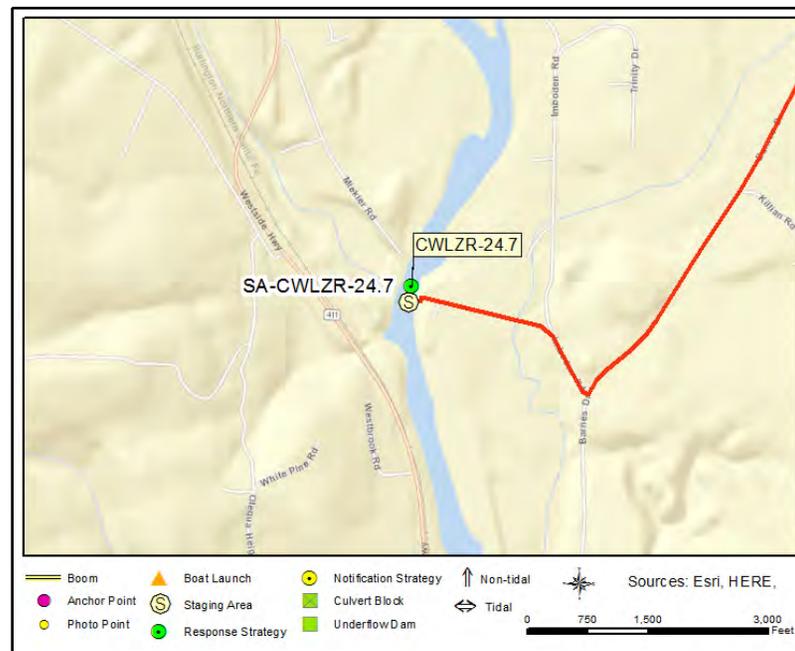
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River - WDFW Water Access Site

CWLZR-24.7



CWLZR-24.7 Photo: At strategy location on the Cowlitz River (river left) looking upstream and across to river right.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

271 Miekler Rd
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road
3. After ~0.1mi, turn left onto Barnes Drive
4. After 2.1mi, turn right onto Imboden Road
5. After 0.2mi, stay left to travel on Miekler Road
6. After ~0.3mi at end of road, you have reached the strategy location; WDFW Olequa Creek Water Access Site Strategy is co-located with SA-CWLZR-24.7 and BL-CWLZR-24.7. Stage equipment in parking area to the south, adjacent to river.

Cowlitz River near Imboden Road CWLZR-26.0

Position - Location: 46° 23.188', -122° 55.930' 46° 23' 11.3", -122° 55' 55.8" 46.38647, -122.93217 Toledo

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (46.387076, -122.932229; mid-river upstream) and Point B (46.386062, -122.932014, 370ft downstream from Point A and 60ft out from river left). After anchors are set, tow boom upstream and secure to anchor at Point A, then all remaining anchor points between Points A & B as boom is deployed. From Point B, bring boom to shore securing it on river left near Point C (46.385806, -122.931813, about 110ft SW of Point B). Skimmer/portable storage collection at Point C.

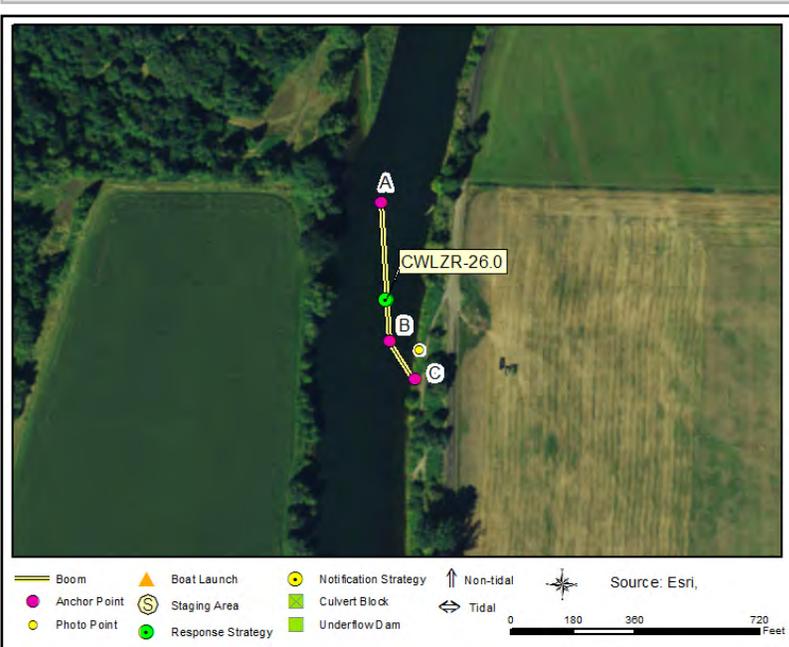
Staging Area: Onsite: Stage on dirt roadway/pullout off Imboden Road (~250ft from strategy) or on shoulder of road closer to site.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation; Mud/Muddy Banks

Field Notes: Stage equipment on-site but launch work boat (jet drive) from BL-CWLZR-24.7 (~1.3mi downstream). Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

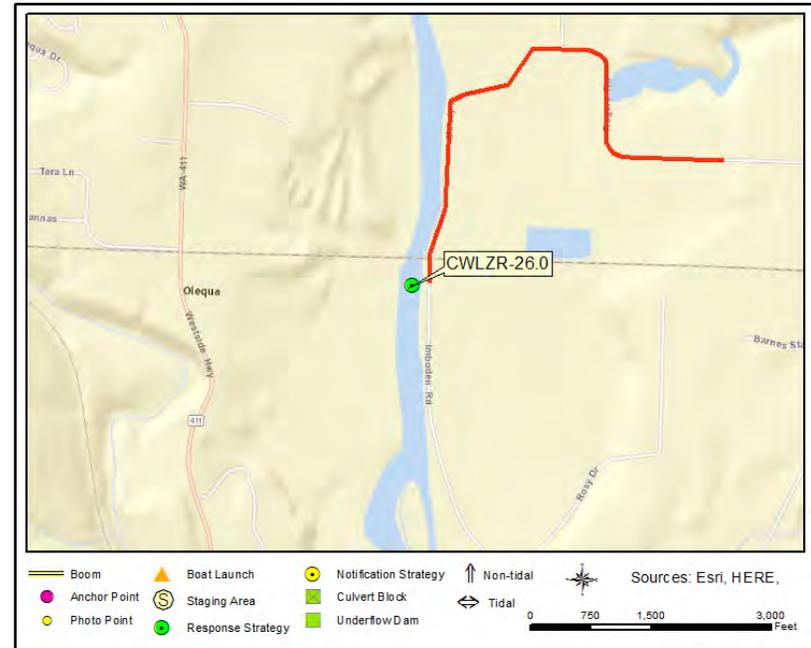
1	Boat Operator
	Laborer
1	Supervisor

Cowlitz River near Imboden Road

CWLZR-26.0



CWLZR-26.0 Photo: At strategy location on the Cowlitz River (river left - Point C, looking upstream towards the NNW and across to river right.



Site Contact

No Information
Not Determined :

Nearest Address

684 Imboden Rd
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, stay straight to remain on Mandy Road (westbound)
4. After ~0.7mi, pull off roadway onto shoulder/pullout area with concrete barriers blocking dirt road (about 250ft away from strategy location) Stage here or travel 250ft down roadway (near first group of large trees on your right) and stage on roadway/shoulder directly adjacent to strategy location on other side of small dirt hill.

Cowlitz River near Mandy Road **CWLZR-26.5**

Position - Location: 46° 23.561', -122° 55.891' 46° 23' 33.7", -122° 55' 53.4" 46.39269, -122.93151 Toledo

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (46.393232, -122.931626; upstream towards river right) and Point B (46.392362, -122.93124, ~330ft downstream from Point A and 75ft out from river left). After anchors are set, tow boom upstream and secure to Point A, then all remaining anchor points between Points A & B as boom is deployed. From Point B, bring boom to shore, securing it on river left near Point C (46.392027, -122.930932, ~145ft SW of Point B). Vac-truck or skimmer/portable storage collection at Point C.

Staging Area: Onsite: Stage on dirt roadway/pullout adjacent to the river off Mandy Road

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation; Mud/Muddy Banks

Field Notes: Stage equipment on-site but launch work boat (jet drive) from BL-CWLZR-24.7 (~1.8mi downstream). Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

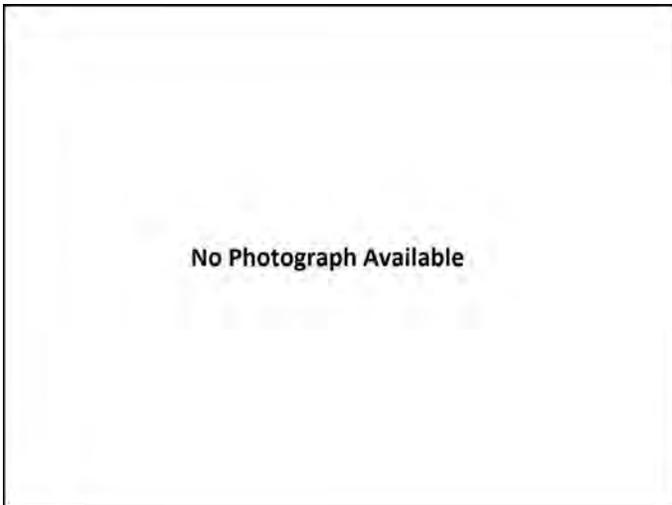
5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

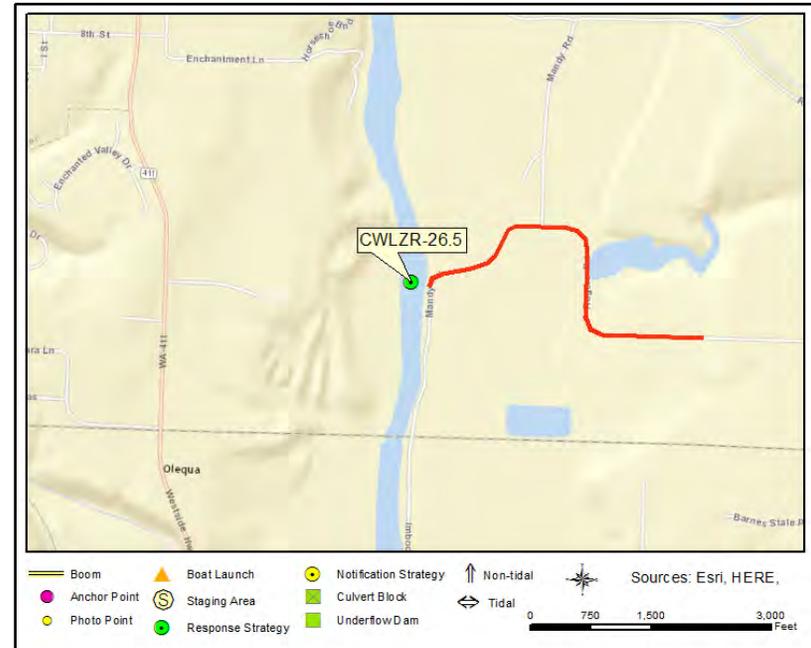
1	Boat Operator
3	Laborer
	Supervisor

Cowlitz River near Mandy Road

CWLZR-26.5



CWLZR-26.5 Photo: No photograph currently available



Site Contact

No Information
Not Determined :

Nearest Address

684 Imboden Rd
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, stay straight to remain on Mandy Road (westbound)
4. After ~0.4mi, strategy location will be on your right, riverside of the dirt roadway/pullout area. Stage equipment on the dirt roadway/pullout.

Cowlitz River - Upstream of Vader Water Intakes CWLZR-27.4

Position - Location: 46° 24.426', -122° 55.956' 46° 24' 25.6", -122° 55' 57.4" 46.40710, -122.93261 Vader

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River immediately upstream of Vader Water Intakes

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (46.407506, -122.93158; river left upstream) and Point B (46.406594, -122.933561, downstream river right). Then tow 700ft hard boom upstream and secure to bank on river left near Point A, before extending boom downstream and across to bank on river right near Point B. Secure boom to all anchor points between Points A and B as it is deployed. Secure boom to river banks using anchoring posts or existing structures. Vac-truck or skimmer collection at Point B.

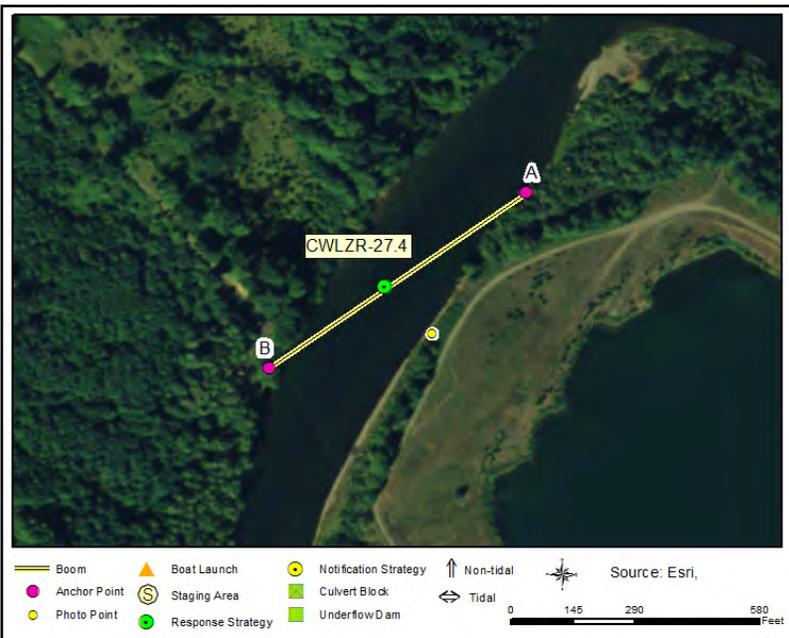
Staging Area: Onsite: Stage on site at bottom of hill, >1100ft beyond gated entry off Hwy WA-506.

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Near Shore; Heavy Vegetation

Field Notes: For access assistance or permission to cut lock and enter, call Lewis County Public Works at 360-740-1123, Emergency Management at 360-740-1151, or the Sheriff's Office at 360-748-9286.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead, Water Intakes



Recommended Equipment

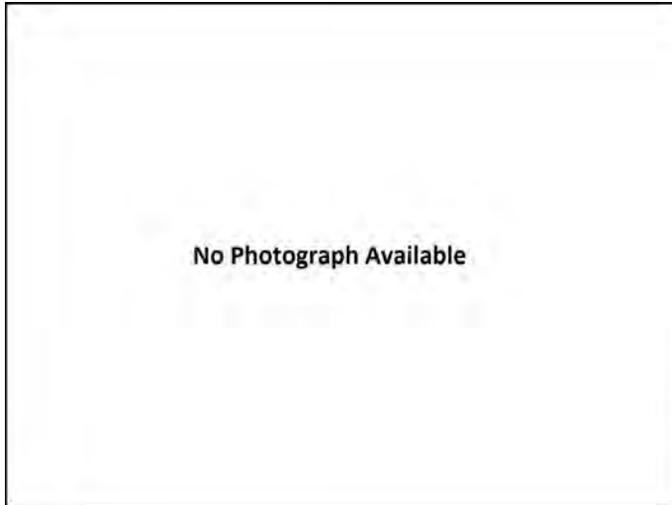
5	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
1	Each	Bolt Cutters
700	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

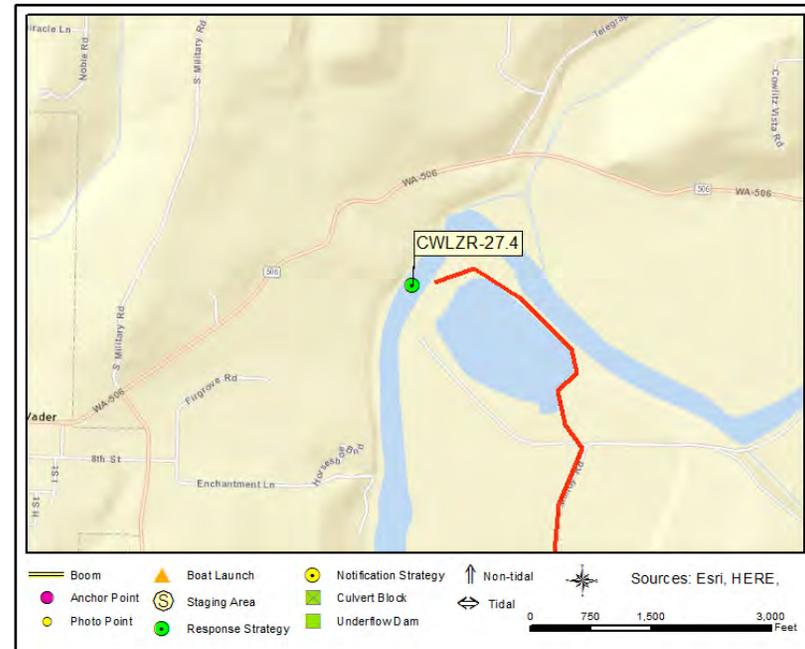
1	Boat Operator
3	Laborer
1	Supervisor

Cowlitz River - Upstream of Vader Water Intakes

CWLZR-27.4



CWLZR-27.4 Photo: No photograph currently available



Site Contact

Lewis County - Emergency Management

Municipality (County/City) :
360-740-1151

Lewis County - Public Works

Municipality (County/City) :
360-740-1123

Nearest Address

108 Willmar Ct
Vader, WA 98593

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (WA-506, Vader/Ryderwood)
2. At end of exit, turn left to head west on highway WA-506
3. After ~2.4mi, turn left onto dirt/gravel pullout with gate.
4. The strategy location is at the bottom of the hill about ~1100ft beyond gate. City of Vader's Water Intakes are immediately downstream of this strategy location. Call 360-740-1123, 360-740-1151, or 360-748-9286 for access assistance.

Cowlitz River at Mouth of Foster Creek CWLZR-28.4

Position - Location: 46° 24.109', -122° 54.952' 46° 24' 6.6", -122° 54' 57.1" 46.40182, -122.91587 Toledo

Strategy Objective: Exclusion, Sorbent : Exclude oil from Foster Creek. Collect oil moving downstream on Foster Creek with sorbents.

Implementation: On downstream (north) side of roadway, deploy 100ft hard boom across the mouth of the creek. Place multiple lengths of sorbent boom on north and south sides of bridge, upstream of hard boom. May be able to quickly deploy boom from bridge but WSDOT work zone traffic control guidelines must be followed. Use line and anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks or bridge. Replace saturated sorbents as needed. Limited shoulder area - **DO NOT BRING AN EQUIPMENT TRAILER** to this site (use SA-CWLZR-29.8).

Staging Area: Onsite: Stage work truck on shoulder of roadway; space limited - **NO TRAILERS**.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Visibility, Limited Shoulder); Heavy Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on/near roadway. Shoulder very limited - **NO TRAILERS**. If needed, trailers can be staged at SA-CWLZR-29.8 (WDFW I-5 Water Access).

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line

Recommended Personnel

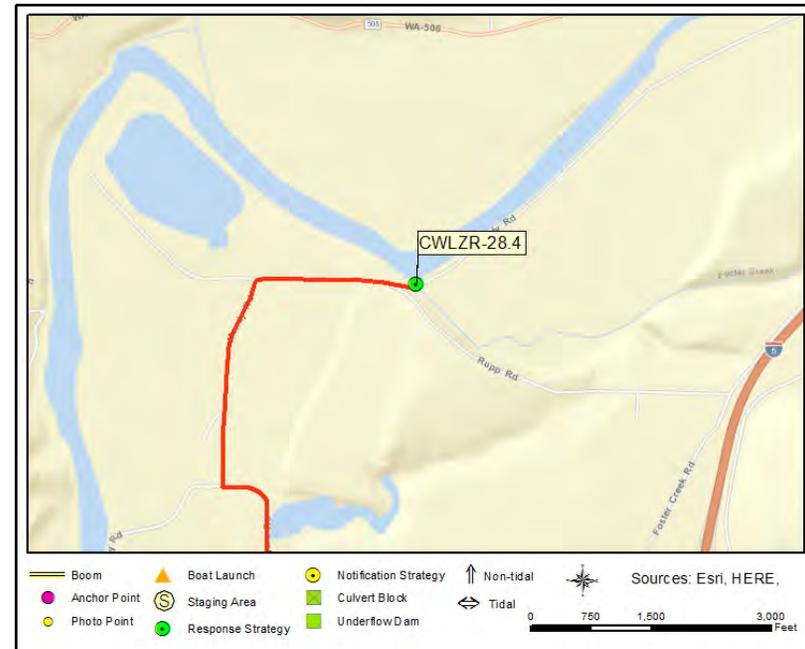
2	Laborer
1	Supervisor

Cowlitz River at Mouth of Foster Creek

CWLZR-28.4



CWLZR-28.4 Photo: On Cowlitz River (river left) at mouth of Foster Creek (creek left) looking NE across to creek right with bridge over creek and Mandy Road in background.



Site Contact

Nearest Address

516 Mandy Rd
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, turn right onto Mandy Road
4. After 0.9mi, the strategy location will be at the bridge over Foster Creek near the bottom of the hill. Small shoulder available on both sides of the roadway immediately after the bridge. NO TRAILERS. If needed, trailers can be staged at WDFW I-5 Water Access Site (SA--CWLZR-29.8) about ~1.4mi down Mandy Road.

Cowlitz River at Interstate-5 CWLZR-29.9

Position - Location: 46° 24.853', -122° 53.436' 46° 24' 51.2", -122° 53' 26.2" 46.41422, -122.89060 Toledo

Strategy Objective: Collection : Collect oil moving downstream on the Cowlitz River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (46.414719, -122.89; river right upstream of I-5 northbound bridge) and Point B (46.413725, -122.89126, upstream side of WDFW boat ramp on river left). Then tow 500ft hard boom upstream and secure to river right near Point A, before extending boom downstream and across to river left, securing it to all anchor points between Points A and B as boom is deployed. Secure boom to river banks using anchoring posts or existing structures. Vac-truck or skimmer collection at Point B.

Staging Area: Onsite: Staging Area SA-CWLZR-29.8 is on-site. Stage in parking area near boat ramp.

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Near Shore; Vehicle Hazard (Parking Area); Vegetation

Field Notes: Location is at WDFW Water Access Site "I-5" and is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.

Watercourse: River - Cowlitz River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1		Workboat(s) - (jet drive)

Recommended Personnel

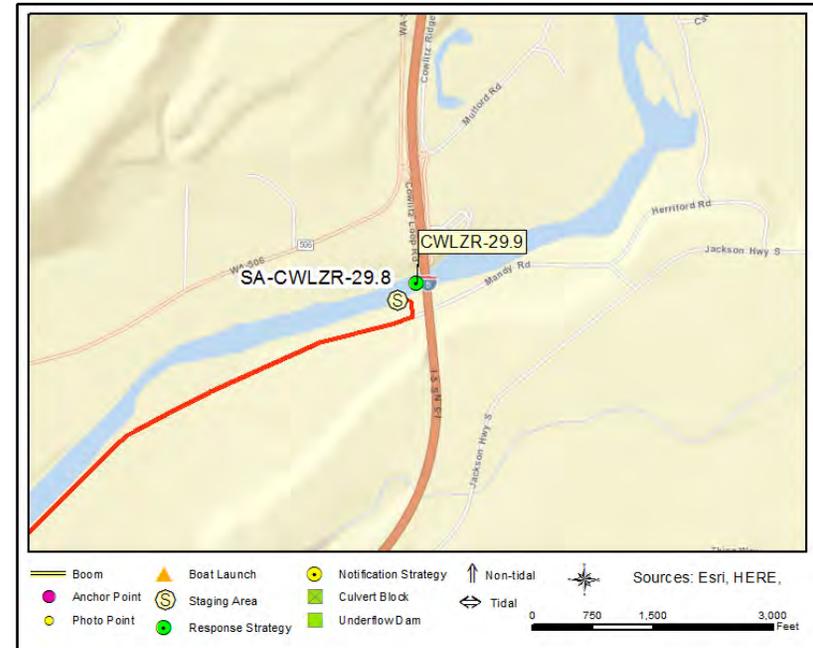
1	Boat Operator
2	Laborer
1	Supervisor

Cowlitz River at Interstate-5

CWLZR-29.9



CWLZR-29.9 Photo: At strategy location on the Cowlitz River at WDFW boat ramp (river left - Point B) looking upstream towards Interstate-5 bridge and river right.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

275 Mandy Rd
 Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, turn right onto Mandy Road
4. After 2.3mi, WDFW "I-5" Water Access Site will be on your left before passing under Interstate-5.

Unnamed tributary to Cowlitz River at Evergreen Rd **CWLZRTC-0.3**

Position - Location: 46° 10.797', -122° 53.777' 46° 10' 47.8", -122° 53' 46.6" 46.17996, -122.89628 Kelso

Strategy Objective: Underflow Dam : Collect oil moving downstream

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A. Using line, extend boom west about ~20ft to creek right and secure to bank near Point B. Form Point B, extend remaining boom downstream along creek left, securing it to NE corner of culverts at/near Point C. Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

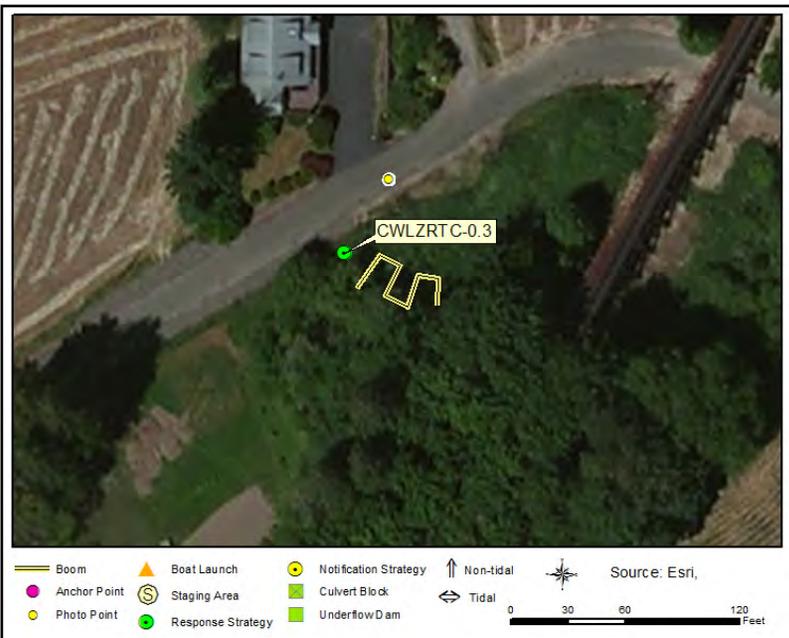
Staging Area: Onsite: Stage equipment on shoulder of Evergreen Rd

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard

Field Notes: Culvert off of the side of the road leads north under the road and along the side of a private driveway.

Watercourse: Creek - Unnamed tributary to Cowlitz River

Resources at Risk: Freshwater Wildlife



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)

Recommended Personnel

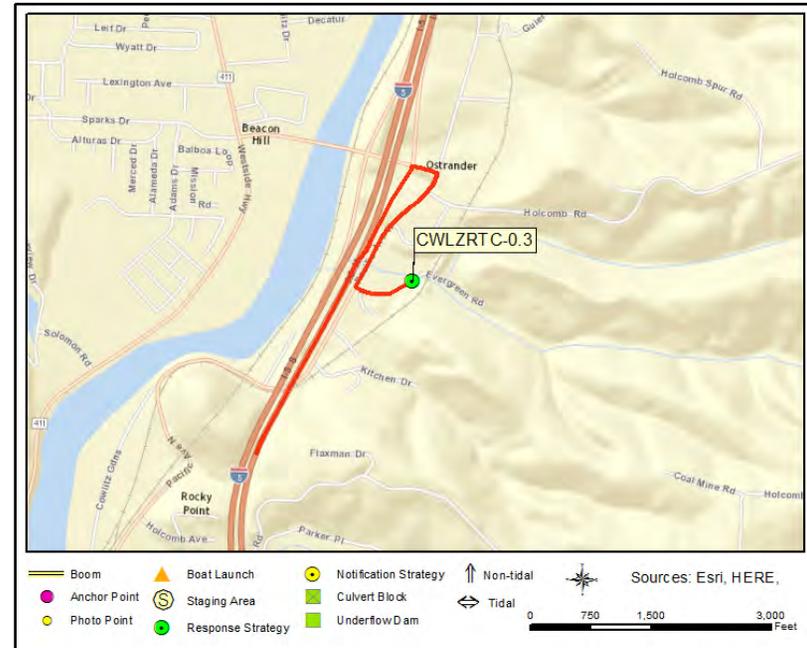
2	Laborer
1	Supervisor

Unnamed tributary to Cowlitz River at Evergreen Rd

CWLZRTC-0.3



CWLZRTC-0.3 Photo: Photo taken upstream of culvert looking SE



Site Contact

No Information

Not Determined :

Nearest Address

140 Evergreen Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn right on Sparks Dr (0.06 miles)
4. Turn right on Pacific Ave N (0.35 miles)
5. Turn left on Evergreen Rd (0.33 miles)
6. Site is on the right 0.20 miles, before the railroad trestle.

Unnamed Creek along Pleasant Hill Rd CWLZRTE-0.15

Position - Location: 46° 14.265', -122° 53.297' 46° 14' 15.9", -122° 53' 17.8" 46.23776, -122.88829 Kelso

Strategy Objective: Underflow Dam : Collect oil moving downstream

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

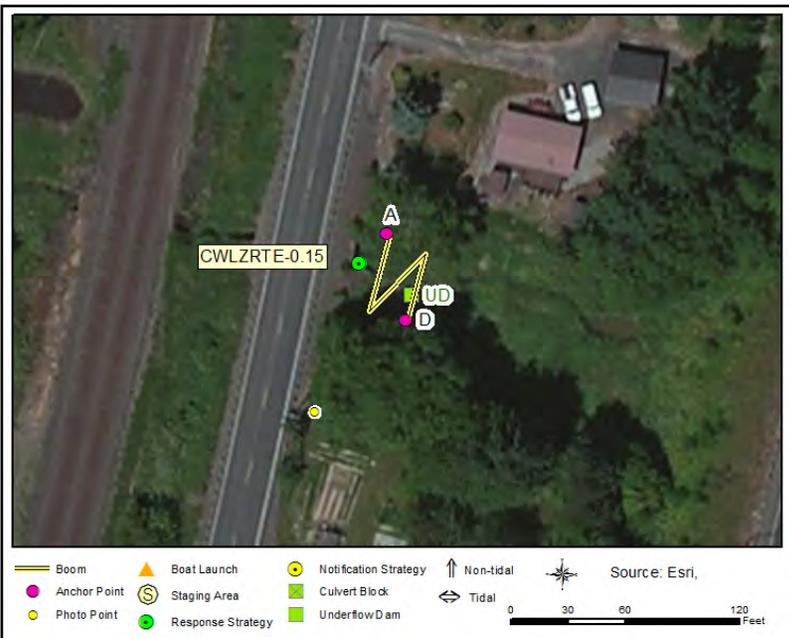
Staging Area: Remote: No room to stage equipment.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation.

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Unnamed tributary to Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon - Coho



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1 Assort	Fill material (sand, earth, gravel, sandbags)
2 Each	Pipe(s), PVC (8 inch x 8ft)
1 Each	Vac Truck or Skimmer and Storage

Recommended Personnel

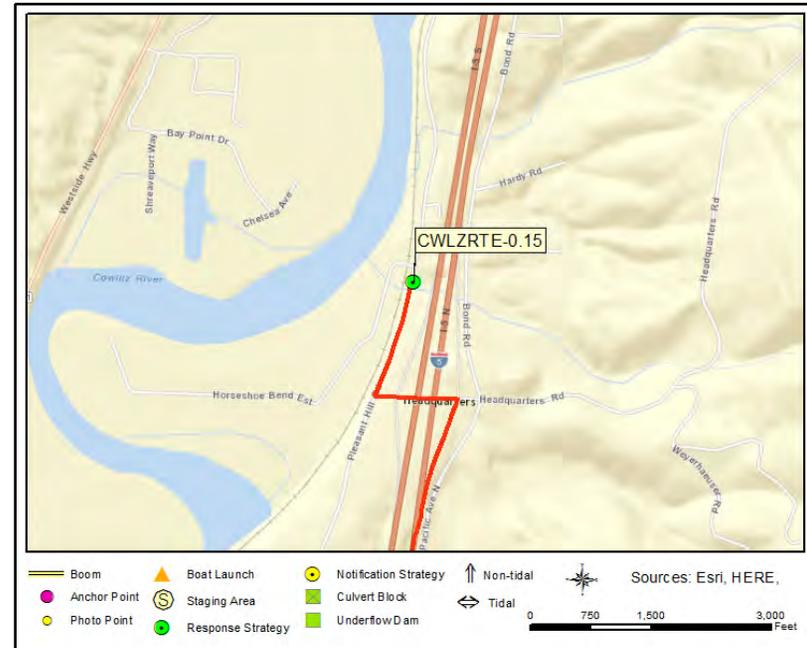
	Laborer
1	Supervisor

Unnamed Creek along Pleasant Hill Rd

CWLZRTE-0.15



CWLZRTE-0.15 Photo: Photo taken downstream of culvert looking SW



Site Contact

No Information
Not Determined :

Nearest Address

5210 Pleasant Hill Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 46 to Headquarters Road toward Pleasant Hill Rd (0.34 miles)
4. Turn left on Headquarters Rd (0.2 miles)
5. Make sharp right on Pleasant Hill Rd (0.3 miles)
6. Finish at 5210 Pleasant Hill Rd, 98626, on the right

Unnamed trib to Cowlitz River at Pleasant Hill Rd CWLZRTF-0.2

Position - Location: 46° 14.590', -122° 53.237' 46° 14' 35.4", -122° 53' 14.2" 46.24316, -122.88729 Kelso

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A. Using line, extend boom south about ~20ft to creek right and secure to bank near Point B. From Point B, extend remaining boom across to creek right, securing it to NE corner of culverts at/near Point C. Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

Staging Area: Onsite: Stage equipment in gravel lots on both sides of road. Contact property owner before staging.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Steep hill with vegetation leading down to creek and culvert

Watercourse: Creek - Unnamed tributary to Cowlitz River

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

4 Each	Anchoring System(s)- Shoreside
100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent

Recommended Personnel

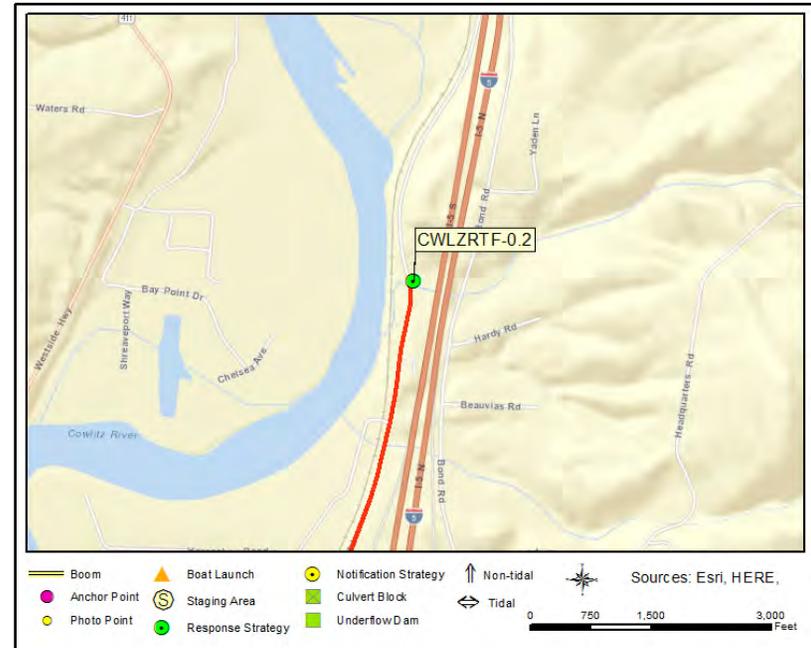
2	Laborer
1	Supervisor

Unnamed trib to Cowlitz River at Pleasant Hill Rd

CWLZRTF-0.2



CWLZRTF-0.2 Photo: Photo taken from road looking East



Site Contact

Private Owner : Homeowner

WA
360-270-7164

Nearest Address

5410 Pleasant Hill Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 46 to Headquarters Road toward Pleasant Hill Rd (0.34 miles)
3. Turn left on Headquarters Rd (0.2 miles)
4. Make sharp right on Pleasant Hill Rd (0.66 miles)
5. Finish at 5410 Pleasant Hill Rd, 98626, on the right

Coweeman River at mouth CWMR-0.02

Position - Location: 46° 6.472', -122° 53.380' 46° 6' 28.3", -122° 53' 22.8" 46.10787, -122.88967 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water.

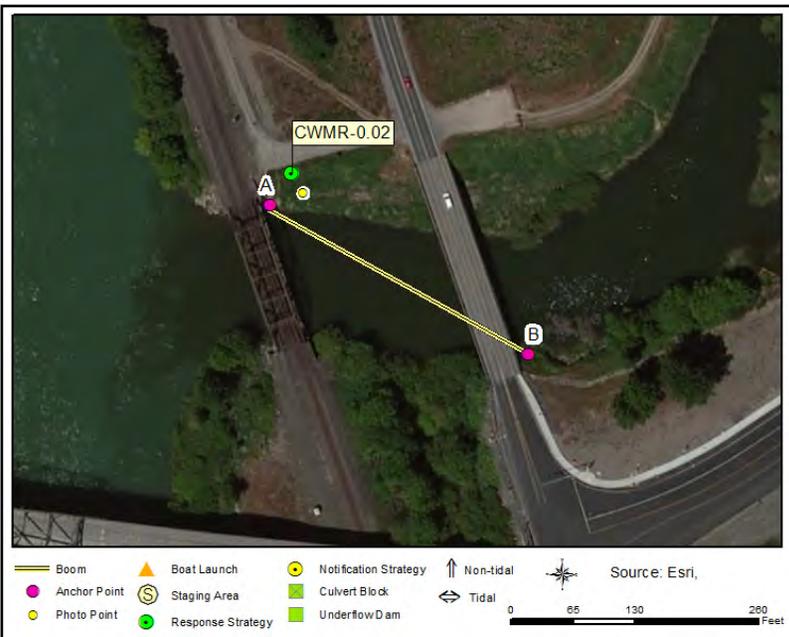
Staging Area: Onsite: Stage equipment along gravel road

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Deploy strategy by a boat launched at a different

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

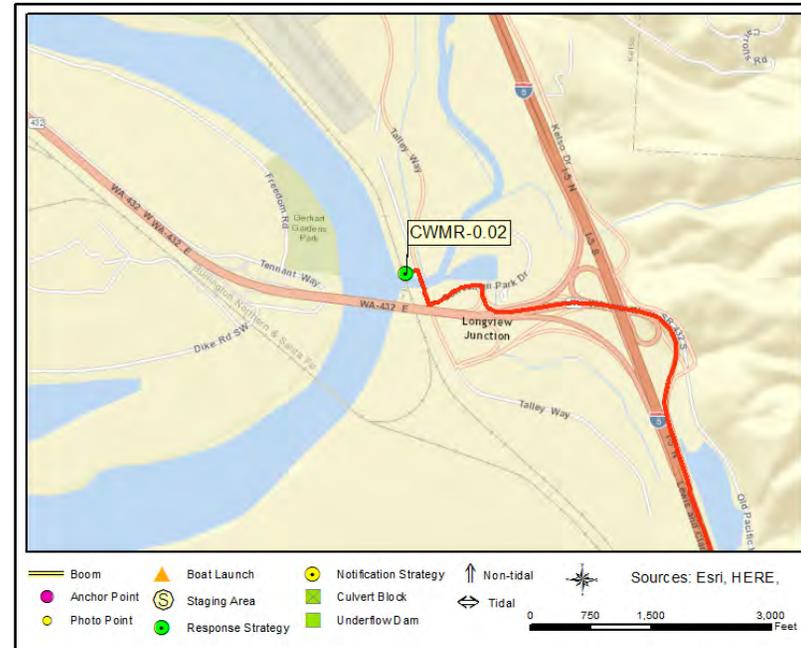
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River at mouth

CWMR-0.02



CWMR-0.02 Photo: Photo taken from river right looking East



Site Contact

Burlington Northern Santa Fe Railroad
 Primary Contact :

 WA
 800-832-5452

Nearest Address

2514 Talley Way
 Kelso, WA 98626

Driving Directions

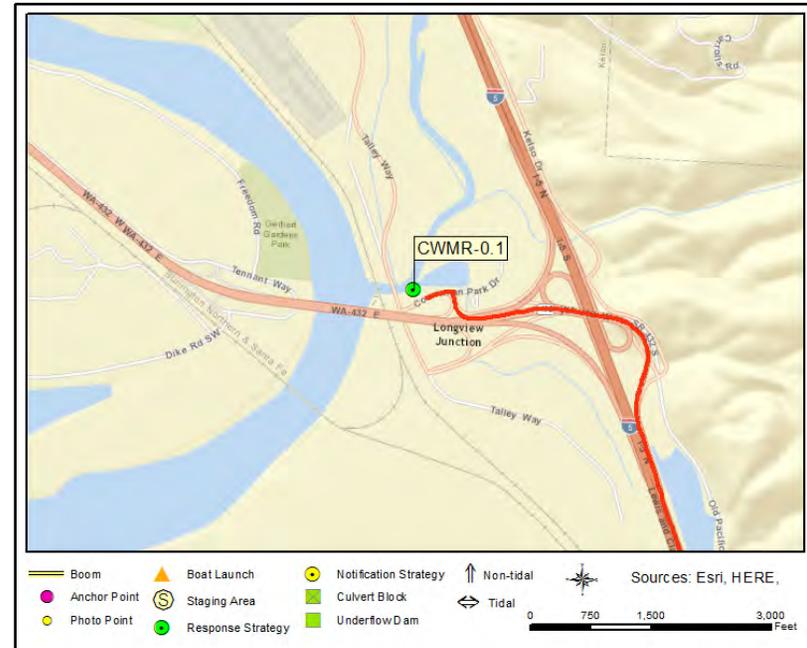
1. From Vancouver, take I5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.32 miles)
5. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
6. Turn left on Coweeman Park Dr (0.14 miles)
7. Turn right on Talley Way (0.01 miles)
8. After bridge, turn left onto gravel road
9. Site is on the left

Coweeman River at Coweeman Park Dr

CWMR-0.1



CWMR-0.1 Photo: Photo taken from river left looking East



Site Contact

No Information
Not Determined :

Nearest Address

Kelso, WA 98626

Driving Directions

1. From Vancouver, take I5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.32 miles)
5. Take exit toward Talley Way/Kelso Indust. Area (0.1 miles)
6. Turn left on Coweeman Park Dr (0.02 miles)
7. Site is on the right

Coweeman River at Talley Way CWMR-0.15

Position - Location: 46° 6.441', -122° 53.307' 46° 6' 26.4", -122° 53' 18.4" 46.10735, -122.88845 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water. Steep, cut bank would make it difficult to hand launch a boat. Use a boat launch upstream to launch boat and boom.

Staging Area: Onsite: Stage equipment in gravel lot

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Gain access to the dike path by unlocking the gate at the gravel lot

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

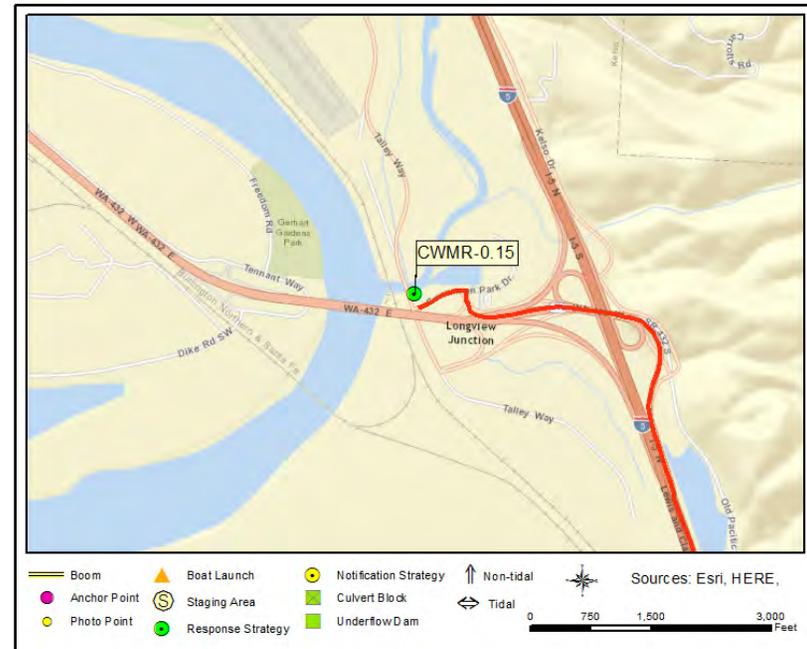
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River at Talley Way

CWMR-0.15



CWMR-0.15 Photo: Photo taken from river right looking East



Site Contact

Nearest Address

2600 Coweeman Park Dr
 Kelso, WA 98626

Driving Directions

1. From Vancouver, take I5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.32 miles)
5. Take exit toward Talley Way/Kelso Indust. Area (0.1 miles)
6. Turn left on Coweeman Park Dr (0.02 miles)
7. Site is on the right

Coweeman River along dike path CWMR-0.2

Position - Location: 46° 6.585', -122° 53.243' 46° 6' 35.1", -122° 53' 14.6" 46.10975, -122.88738 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water. Use boat launch upstream to launch boat and boom.

Staging Area: Onsite: Stage equipment along dike path

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes:

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

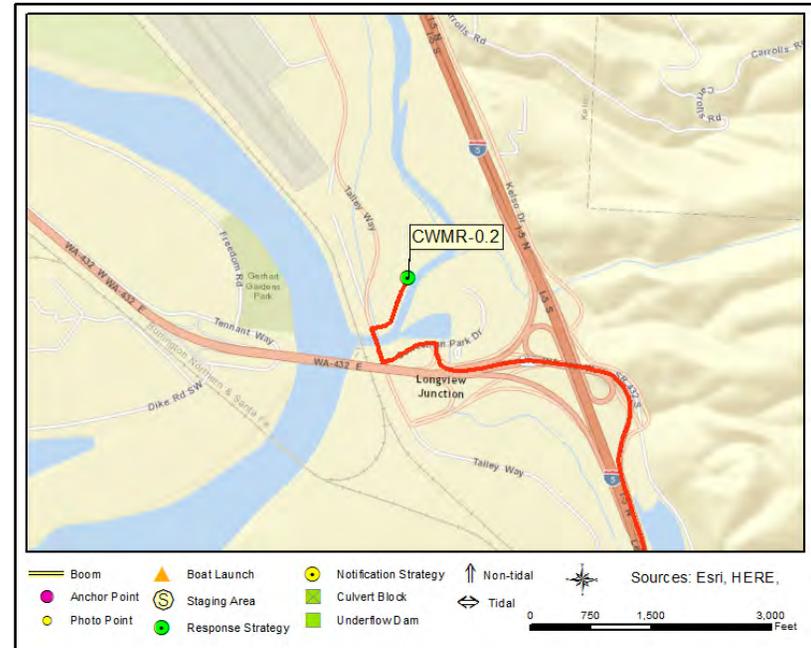
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River along dike path

CWMR-0.2



CWMR-0.2 Photo: Photo taken from river right looking NE



Site Contact

No Information
Not Determined :

Nearest Address

2514 Talley Way
Kelso, WA 98626

Driving Directions

1. From Vancouver, take I5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
4. Continue on WA-432 (0.32 miles)
5. Take exit toward Talley Way/ Kelso Indust. Area 0.1 miles)
6. Turn left on Coweeman Park Dr (0.14 miles)
7. Turn right on Talley Way (0.23 miles)
8. Immediately after bridge, turn right onto gravel road.
9. Follow dike path to site on the right.

Coweeman River near Coweeman Park Dr **CWMR-0.35**

Position - Location: 46° 6.646', -122° 53.097' 46° 6' 38.8", -122° 53' 5.8" 46.11077, -122.88495 Kelso

Strategy Objective: Exclusion : Exclude oil from entering marsh

Implementation: Hand-launch small workboat from staging area and transport 300ft boom to site. Secure end of boom to bank on creek right near Point A . Extend boom SE across mouth of marsh, securing boom near Point B. Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water.

Staging Area: Onsite: Stage equipment on river right along dike path

Site Safety: Slips, Trips, Falls; Water Hazard;

Field Notes: Use workboat to tow boom to site

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

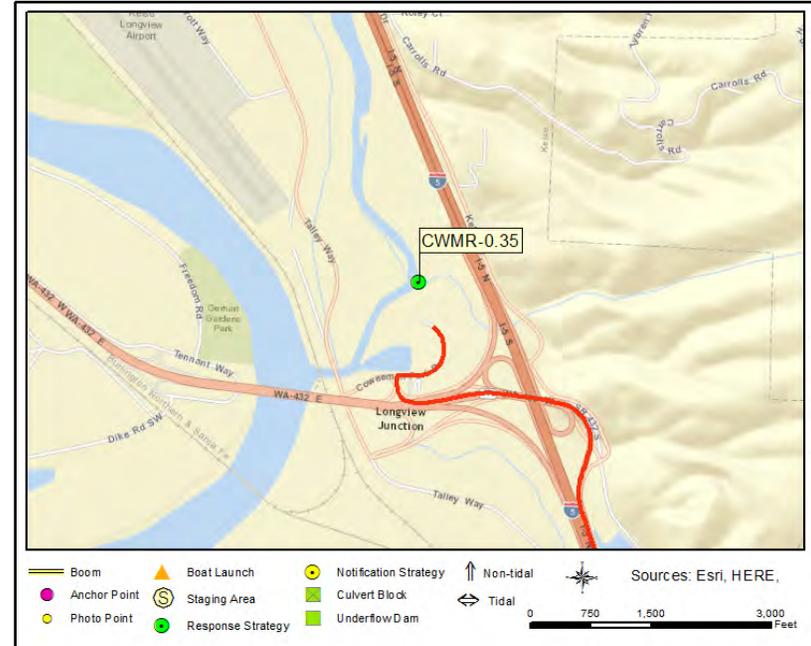
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River near Coweeman Park Dr

CWMR-0.35



CWMR-0.35 Photo: Photo taken from river right looking East towards site



Site Contact

No Information
Not Determined :

Nearest Address

Kelso, WA 98626

Driving Directions

- From Kalama, take I-5 N
3. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
4. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
5. Continue on WA-432 (0.32 miles)
6. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
7. Turn right on Coweeman Park Dr (0.21 miles)
8. Finish at 2690 Coweeman Park Dr, 98626, on the right

Coweeman River along dike trail CWMR-0.5

Position - Location: 46° 6.765', -122° 53.250' 46° 6' 45.9", -122° 53' 15.0" 46.11275, -122.88750 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water. Use boat launch upstream to launch boat and boom. River boom should be positioned in a manner that prevents sorbents from moving downstream if breakaway occurs. Use vac-truck or skimmer with storage for collection.

Staging Area: Onsite: Stage equipment along dike trail

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: It would be possible to hand launch boom and/or small skiff. To collect product a skimmer could be carried by hand to the collection point on the river.

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

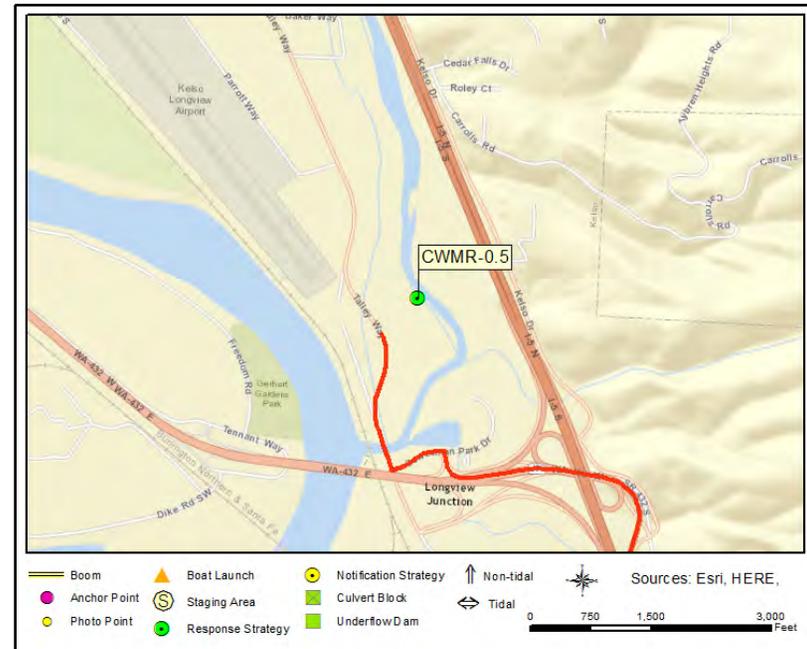
1	Boat Operator
2	Laborer
	Supervisor

Coweeman River along dike trail

CWMR-0.5



CWMR-0.5 Photo: Photo taken from river right looking NW



Site Contact

No Information
Not Determined :

Nearest Address

2510 Talley Way
Kelso, WA 98626

Driving Directions

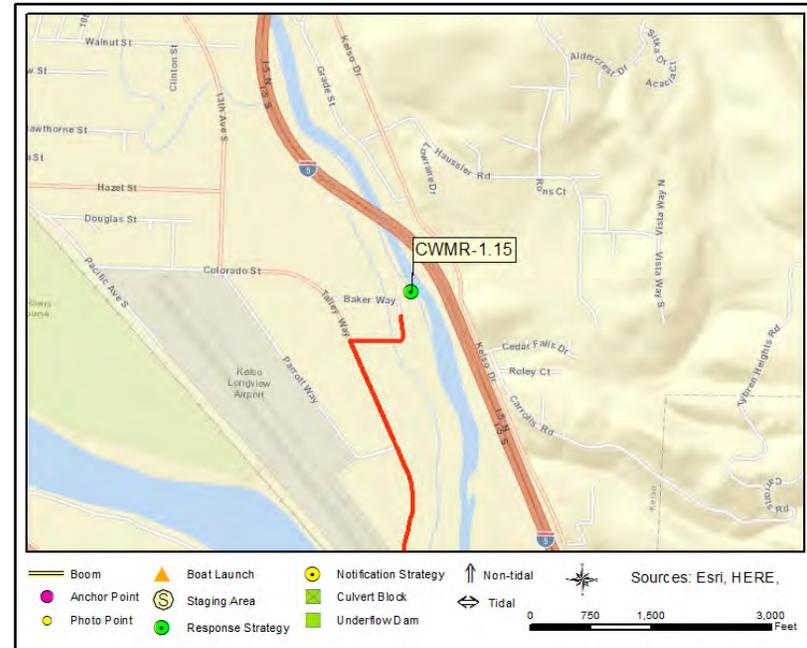
1. From Kalama, take I-5 N
3. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
4. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
5. Continue on WA-432 (0.32 miles)
6. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
7. Turn left on Coweeman Park Dr (0.14 miles)
8. Turn right on Talley Way (0.32 miles)
9. Finish at 2510 Talley Way,98626, on the right

Coweeman River along Dike path

CWMR-1.15



CWMR-1.15 Photo: Photo taken from river right looking NW



Site Contact

No Information
Not Determined :

Nearest Address

1809 Baker Way
Kelso, WA 98626

Driving Directions

1. From Kalama, take I-5 N
3. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
4. At fork keep left on WA-432 W toward WA-4/Longview/Long Beach (0.3 miles)
5. Continue on WA-432 (0.32 miles)
6. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
7. Turn left on Coweeman Park Dr (0.14 miles)
8. Turn right on Talley Way (1.02 miles)
9. Make sharp right on Baker Way (0.19 miles)
10. Finish at 1809 Baker Way, 98626, on the right

Coweeman River near Grade St **CWMR-1.3**

Position - Location: 46° 7.955', -122° 54.032' 46° 7' 57.3", -122° 54' 1.9" 46.13258, -122.90053 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

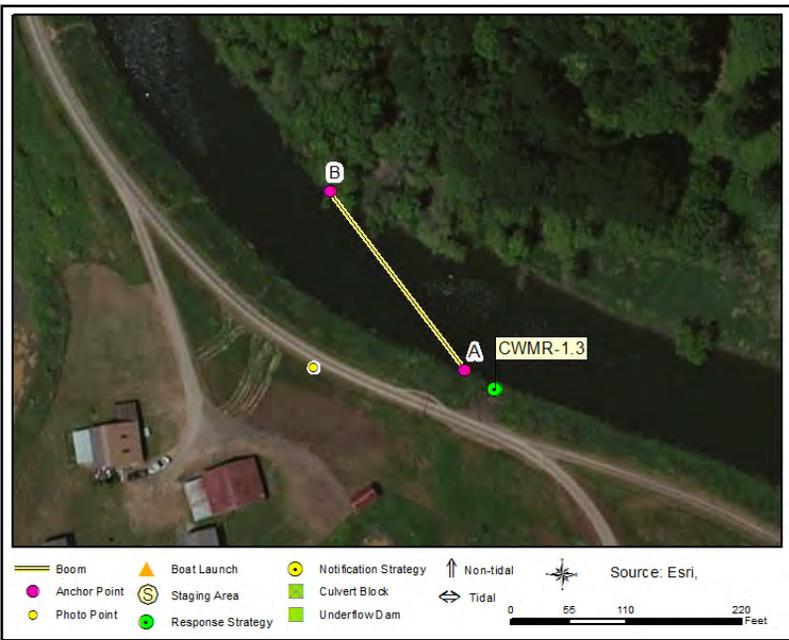
Staging Area: Onsite: Stage equipment at pump house

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation

Field Notes: Access from a paved jogging path. Steep bank with grass and/or rip-rap

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

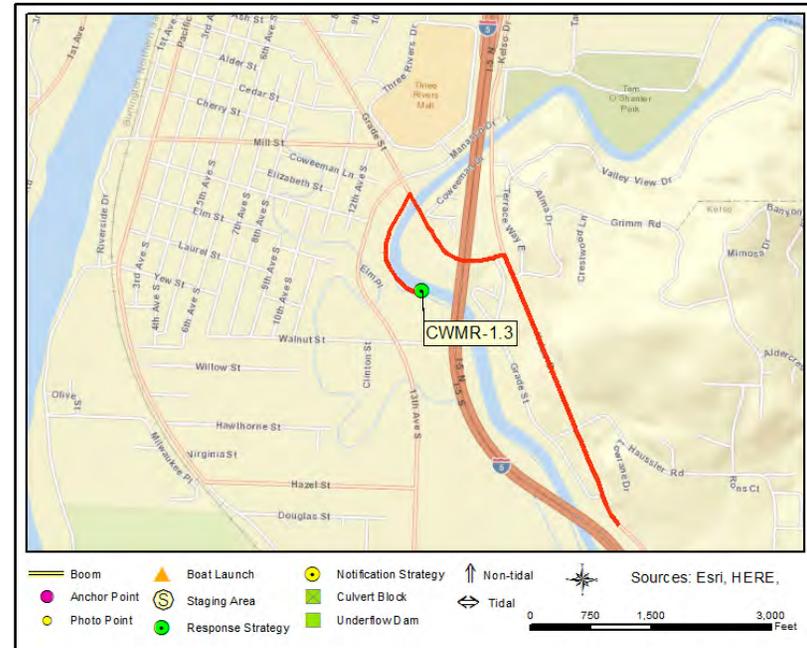
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River near Grade St

CWMR-1.3



CWMR-1.3 Photo: Photo taken from dike path looking NW



Site Contact

No Information
Not Determined :

Nearest Address

1301 Elm Pl
Kelso, WA 98626

Driving Directions

1. From Vancouver, take I5 N
2. Take exit 36 to Longview/ Long Beach/ WA432 W/ WA-4
3. Keep right, follow signs for Kelso Dr/ Carrolls
4. Turn right onto S Kelso Dr (0.69 miles)
5. Turn left on Grade St (0.35 miles)
6. Turn left onto the bike path immediately past the bridge over the Coweeman River.
7. Follow path to gate.

Coweeman River at 13th Ave CWMR-1.4

Position - Location: 46° 8.152', -122° 54.064' 46° 8' 9.1", -122° 54' 3.8" 46.13587, -122.90106 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: From jogging path, secure end of ~300ft length of river boom to bank on creek right near Point A. Extend boom across to river left and secure to bank near Point B. Use multiple layers of sorbent boom and/or sweep across creek within boomed area (between boom and culverts). River boom should be positioned in a manner that prevents sorbents from moving downstream if breakaway occurs. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer with storage for collection.

Staging Area: Onsite: Stage equipment in parking lot on the north side of the road

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard

Field Notes: Access via jogging path. Site is located off a well used public road. Possible to secure boom to a tree on the east bank, might need to pound stakes or some sort of ground anchor to secure boom on the west bank.

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
400	Feet	Boom - Sorbent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

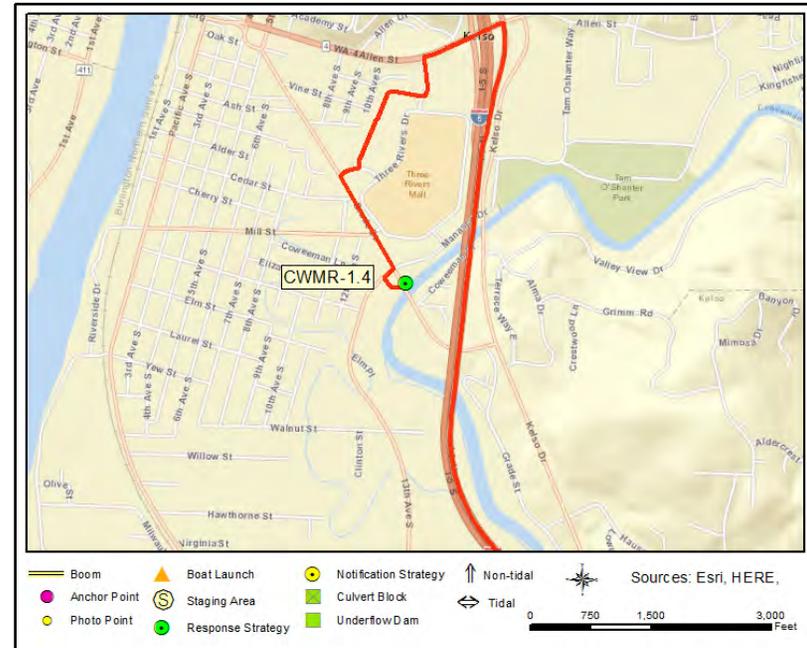
1	Boat Operator
4	Laborer
1	Supervisor

Coweeman River at 13th Ave

CWMR-1.4



CWMR-1.4 Photo: Photo taken from dike path looking NE



Site Contact

No Information
Not Determined :

Nearest Address

1000 S 13th Ave
Kelso, WA 98626

Driving Directions

1. From Kalama, head north on I-5
2. At exit 39 bear right onto ramp to WA-4 W toward Kelso (0.3 miles)
3. Turn left on WA-4 (Allen St) (0.2 miles)
4. Turn left on Three Rivers Dr (0.1 miles)
5. Turn right (0.28 miles)
6. Turn right on Three Rivers Dr (0.05 miles)
7. Turn left on Grade St (0.25 miles)
8. Turn right on 13th Ave S (0.07 miles)
9. Turn left into parking lot
10. Access to dike path is through parking lot
11. Site is on the right just past the bridge

Coweeman River at Coweeman Dr CWMR-1.6

Position - Location: 46° 8.231', -122° 53.890' 46° 8' 13.9", -122° 53' 53.4" 46.13719, -122.89817 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: From gravel lot under the I-5 bridge, secure end of ~300ft length of river boom to bank on creek right near Point A. Extend boom across to river right and secure to bank near Point C. Use multiple layers of sorbent boom and/or sweep across river within boomed area. River boom should be positioned in a manner that prevents sorbents from moving downstream if breakaway occurs. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer with storage for collection.

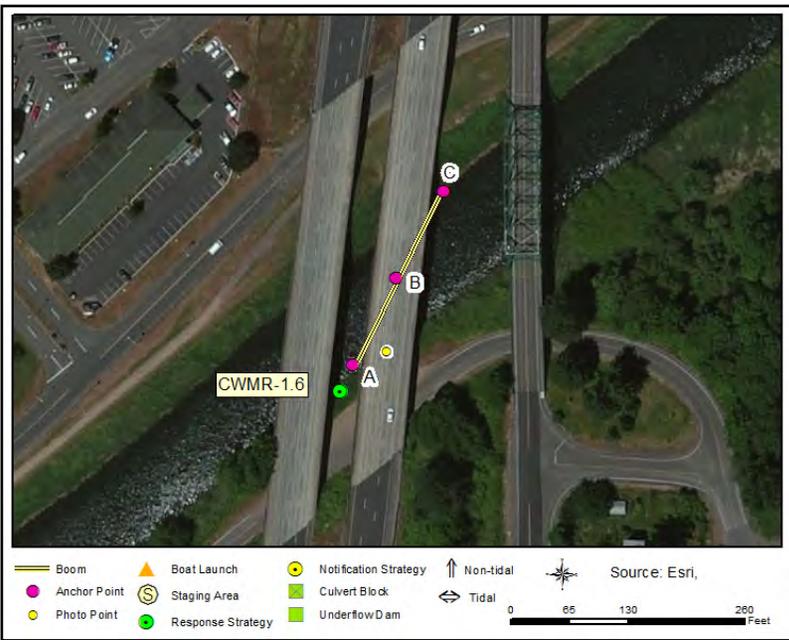
Staging Area: Onsite: Room for a vacuum truck or other equipment to collect product.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard

Field Notes: Gravel parking area under the bridge is large enough to stage some trucks and equipment.

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

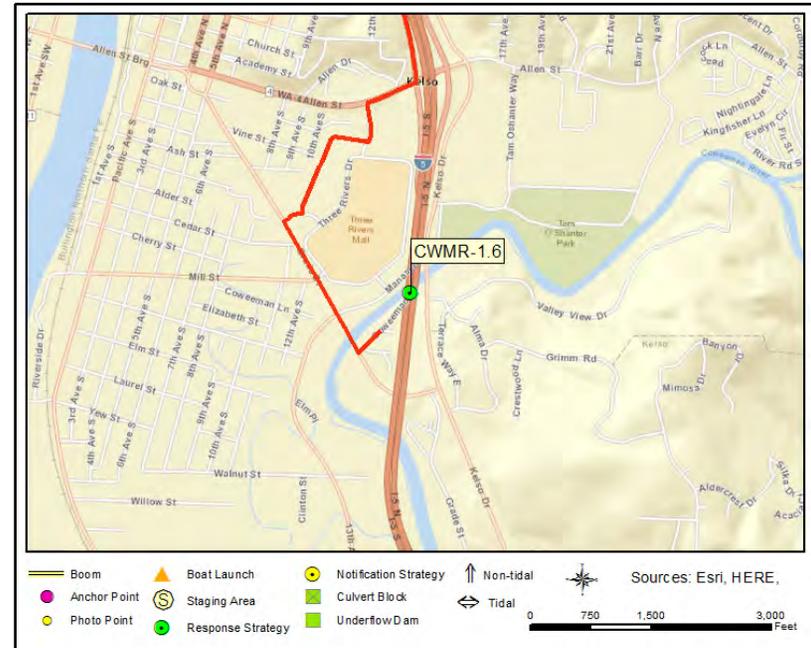
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River at Coweeman Dr

CWMR-1.6



CWMR-1.6 Photo: Photo taken looking North



Site Contact

No Information
Not Determined :

Nearest Address

1513 Coweeman Dr
Kelso, WA 98626

Driving Directions

1. Head South on I-5 to Kelso
2. Take exit 39 and bear right onto ramp to WA-4(0.32 miles)
4. Turn right on WA-4 (Allen St) (0.12 miles)
5. Turn left on Three Rivers Dr (0.1 miles)
6. Turn right (0.28 miles)
7. Turn right on Three Rivers Dr (0.05 miles)
8. Turn left on Grade St (0.35 miles)
9. Turn left on Coweeman Dr (0.07 miles)
10. Staging area is under the I-5 bridge

Coweeman River near Manasco Drive

CWMR-1.75

Position - Location: 46° 8.313', -122° 53.801' 46° 8' 18.8", -122° 53' 48.0" 46.13856, -122.89668 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300ft length of boom to shore on Coweeman River near Point A. Then extend boom ~300ft and secure remaining boom end to shore at/near Point B. Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water.

Staging Area: Onsite: Stage equipment in parking lot approximately 400ft north.

Site Safety: Slips, Trips, Falls; Water Hazard;

Field Notes: Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

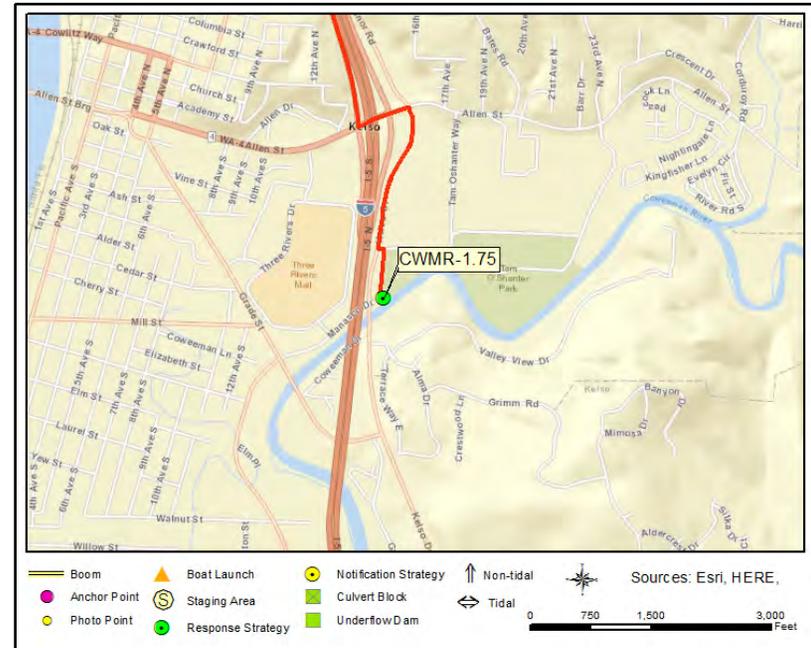
1	Boat Operator
3	Laborer
1	Supervisor

Coweeman River near Manasco Drive

CWMR-1.75



CWMR-1.75 Photo: Photo taken from trail looking NE



Site Contact

No Information
Not Determined :

Nearest Address

658 Manasco Dr
Kelso, WA 98626

Driving Directions

1. Go south on I-5
2. At exit 39 bear right onto ramp to WA-4 toward Kelso (0.32 miles)
3. Turn left on WA-4 (Allen St) (0.08 miles)
4. Continue on Allen St (0.05 miles)
5. Turn right on Kelso Dr (0.36 miles)
6. Turn left on Tam Oshanter Way (0.02 miles)
7. Turn right on Manasco Dr (0.2 miles)
8. Staging area will be on the left

Coweeman River at O'Shanter Park CWMR-2.0

Position - Location: 46° 8.385', -122° 53.617' 46° 8' 23.1", -122° 53' 37.0" 46.13975, -122.89362 Kelso

Strategy Objective: Collection : Collect oil moving downstream on the Coweeman River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water. Use boat launch upstream to launch boat and boom.

Staging Area: Onsite: Stage equipment in park

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Duckbill water discharges on the shore, river right, with signs warning of sudden discharge.

Watercourse: River - Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

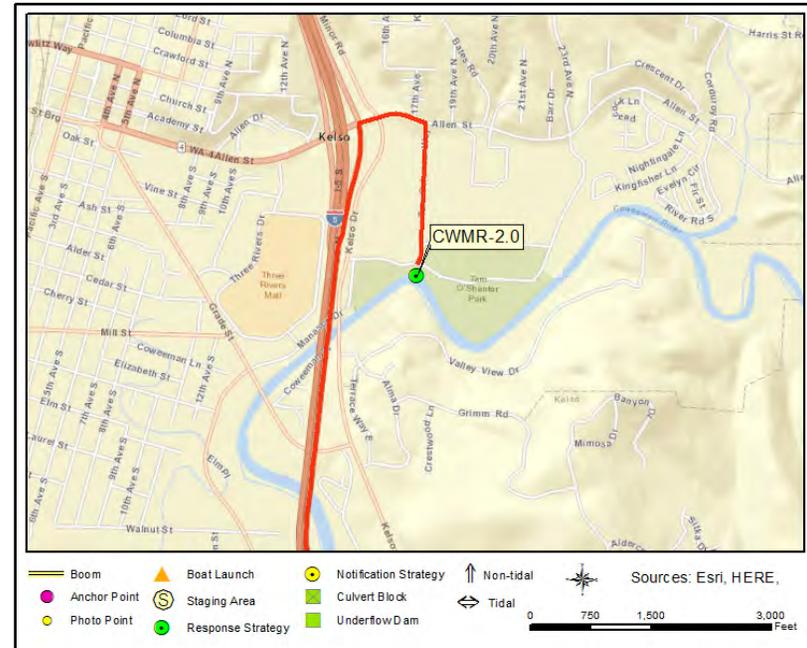
1	Boat Operator
2	Laborer
1	Supervisor

Coweeman River at O'Shanter Park

CWMR-2.0



CWMR-2.0 Photo: Photo taken from discharge site facing East



Site Contact

City of Kelso
 Municipality (County/City) :
 203 S. Pacific #218
 Kelso, WA 98626
 360-423-1371

Nearest Address

Tam O'Shanter Way
 Kelso, WA 98626

Driving Directions

1. From Kalama, take I5 N
2. Take exit 39 to WA-4 W toward Kelso (0.3 miles)
3. Turn right on Allen St (0.16 miles)
4. Turn right on Tam Oshanter Way (0.25 miles)
5. Site is just past baseball fields.

Unnamed Tributary to Coweeman River **CWMRT-0.35**

Position - Location: 46° 6.574', -122° 52.772' 46° 6' 34.4", -122° 52' 46.3" 46.10956, -122.87953 Kelso

Strategy Objective: Culvert Block : Collect oil moving downstream

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, install culvert block at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

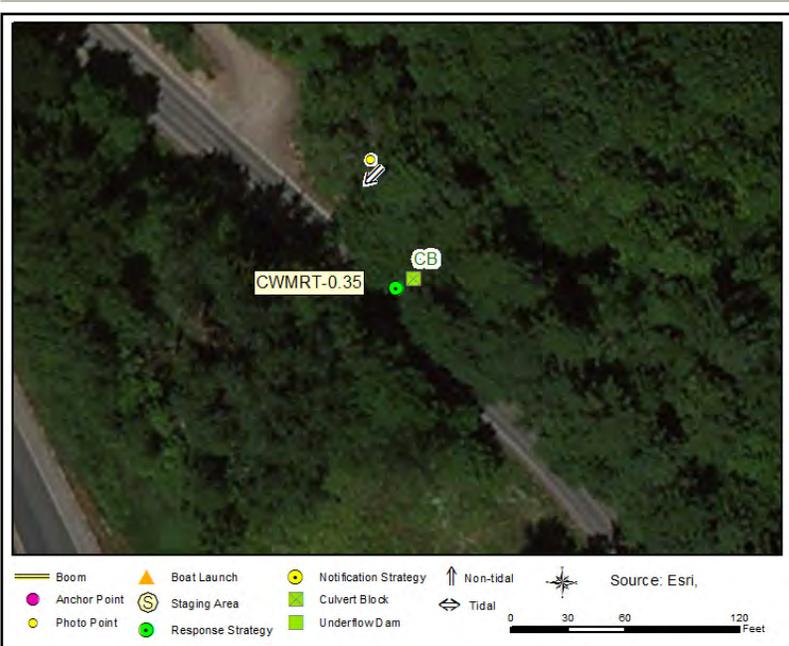
Staging Area: Onsite: Very limited room for equipment. Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Road is busy, not much room. Culvert is accessible.

Watercourse: Creek - Unnamed Tributary to Coweeman River

Resources at Risk: Freshwater Wildlife



Recommended Equipment

100	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
1	Roll	Plastic Sheeting
4	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

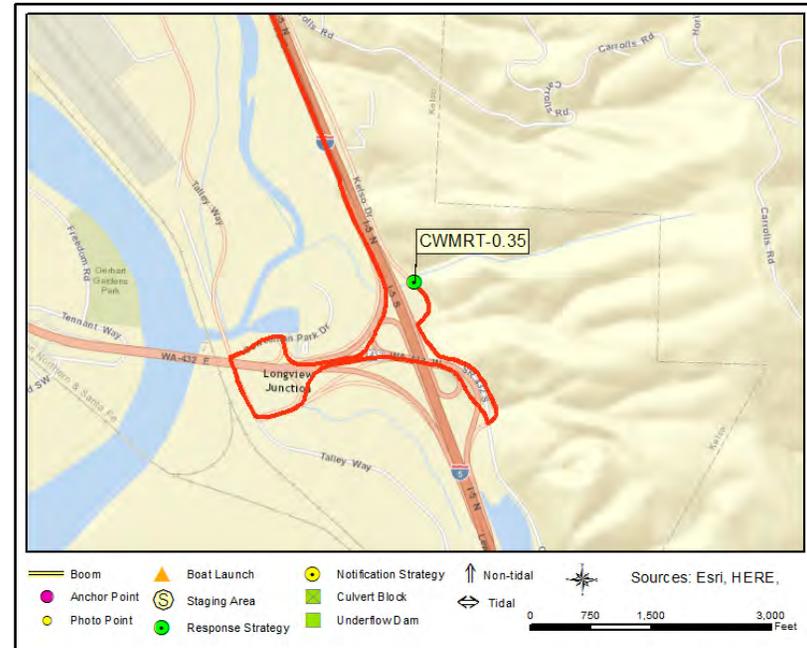
2	Laborer
1	Supervisor

Unnamed Tributary to Coweeman River

CWMRT-0.35



CWMRT-0.35 Photo: Photo taken from above culvert looking West



Site Contact

No Information
Not Determined :

Nearest Address

2601 S Kelso Dr
Kelso, WA 98626

Driving Directions

1. From Kelso, head south on I-5 toward 40 (3.86 miles)
2. At exit 36 bear right onto ramp to WA-432 W toward US-30/Longview/Kelso (0.46 miles)
3. Continue on WA-432 (0.11 miles)
4. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
5. Turn left on Coweeman Park Dr (0.14 miles)
6. Turn left on Talley Way (0.17 miles)
7. Take ramp toward E (0.22 miles)
8. Continue on WA-432 (0.31 miles)
9. Continue on SR 432 S (0.14 miles)
10. Turn left toward Seattle (0.33 miles)
11. Turn right on Kelso Dr (0.05 miles)
12. Finish at 2601 S Kelso Dr, 98626, on the left

Tributary to Coweeman River near Allen Street Road CWMRTB-0.6

Position - Location: 46° 8.639', -122° 52.668' 46° 8' 38.3", -122° 52' 40.1" 46.14398, -122.87780 Kelso

Strategy Objective: Culvert Block : Collect oil moving along tributary of Coweeman River and protect wetland

Implementation: Use boom and sorbent on both sides of culvert for initial containment. If time allows, install culvert block at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

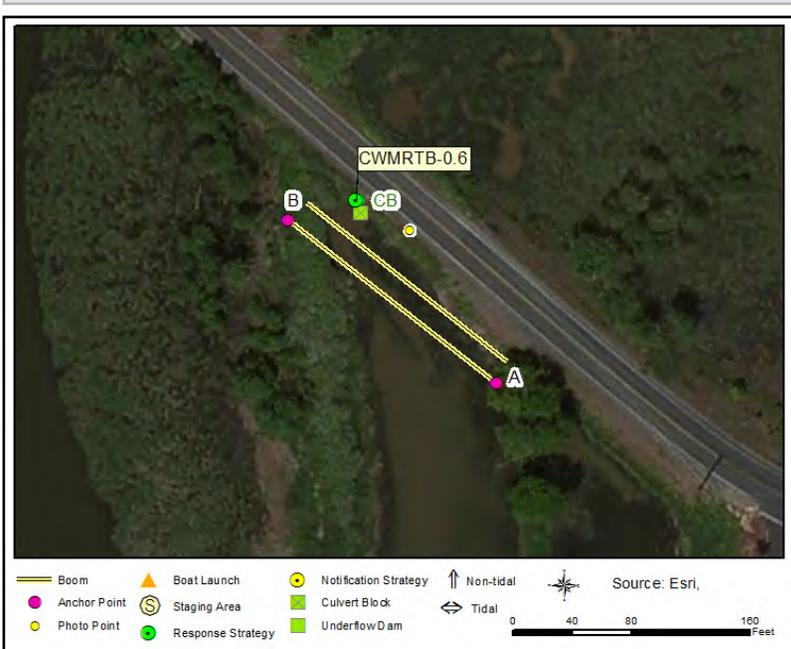
Staging Area: Onsite: Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway. Culvert hard to access due to high water.

Watercourse: Creek - Unnamed tributary to Coweeman River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
400	Feet	Boom - Sorbent
1	Roll	Plastic Sheeting
8	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

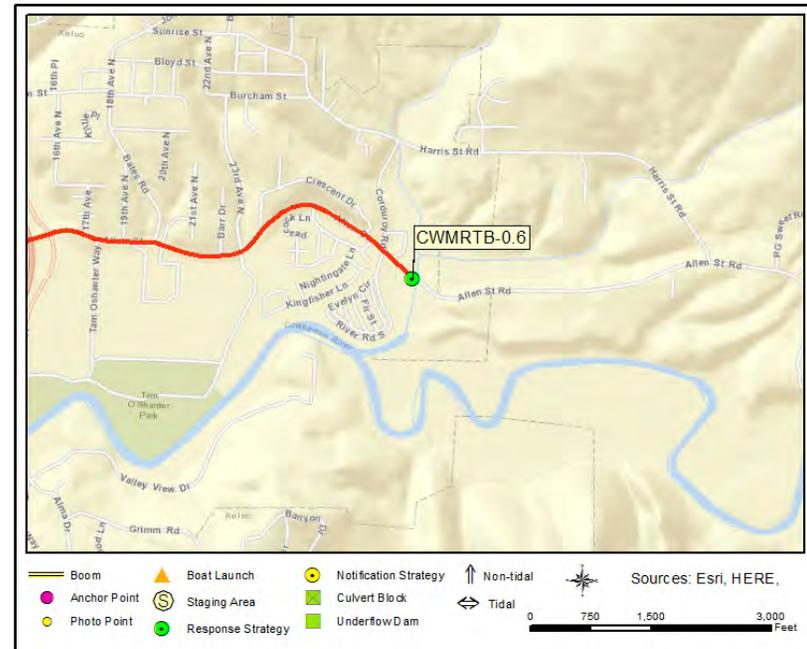
2	Laborer
1	Supervisor

Tributary to Coweeman River near Allen Street Road

CWMRTB-0.6



CWMRTB-0.6 Photo: Photo taken from shoulder of road looking North



Site Contact

No Information
Not Determined :

Nearest Address

2700 Allen St
Kelso, WA 98626

Driving Directions

1. From Castle Rock, take I-5
2. Take exit 39 to WA-4 toward Kelso (0.32 miles)
3. Turn left on WA-4 (Allen St) (0.08 miles)
4. Continue on Allen St (0.89 miles)
5. Finish at GRP location, just past Corduroy Rd on the right

Davis Creek on Rose Valley Rd **DAVSC-1.8**

Position - Location: 46° 5.599', -122° 51.602' 46° 5' 36.0", -122° 51' 36.1" 46.09332, -122.86004 Kelso

Strategy Objective: Underflow Dam : Collect oil moving downstream on Davis Creek

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam approximately 100ft upstream from culvert where depth and current is less. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection

Staging Area: Onsite: Stage equipment on the side of the road. Can park several trucks.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Creek has a relatively strong current here. With a strong current you would want to make an underflow dam. Easiest spot to make a dam was approximately 100ft upstream from culvert where depth and current is less.

Watercourse: Creek - Davis Creek

Resources at Risk: Freshwater Wildlife



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
10	Each	Pipe(s), PVC (8 inch x 8ft)
1	Each	Vac Truck or Skimmer and Storage (if collection)

Recommended Personnel

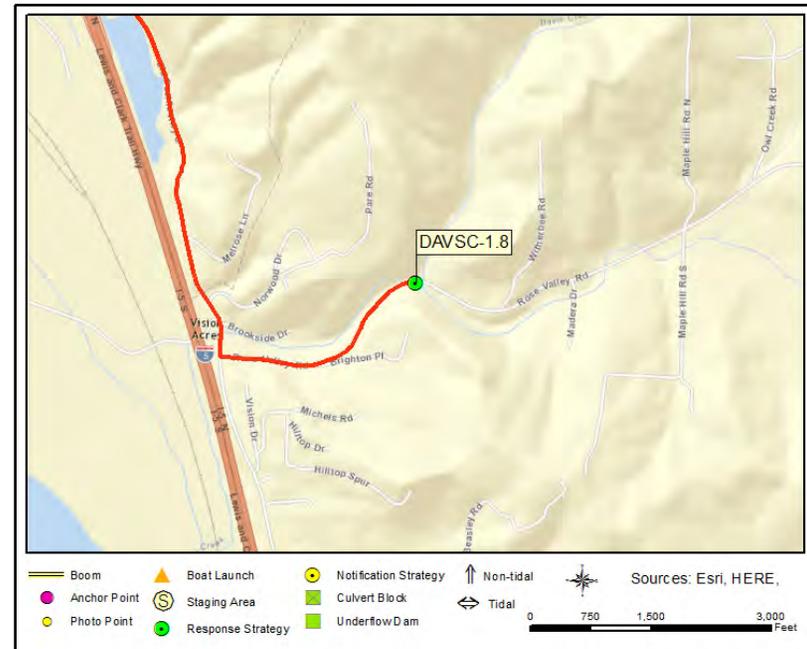
3	Laborer
1	Supervisor

Davis Creek on Rose Valley Rd

DAVSC-1.8



DAVSC-1.8 Photo: Photo taken from shoulder of road looking East. Creek is on the right.



Site Contact

No Information
Not Determined :

Nearest Address

322 Rose Valley Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, head south on I-5 toward 40 (3.83 miles)
2. At exit 36 bear right onto ramp to WA-432 W toward US-30/Longview/Kelso (0.46 miles)
3. Continue on WA-432 (0.11 miles)
4. Take ramp on the right toward Kelso Indust. Area (0.1 miles)
5. Turn left on Coweeman Park Dr (0.14 miles)
6. Turn left on Talley Way (0.17 miles)
7. Take ramp toward E (0.22 miles)
8. Continue on WA-432 (0.31 miles)
9. Continue on SR 432 S (0.14 miles)
10. Continue on Old Pacific Hwy S (Old Wa-99 S) (1.06 miles)
11. Turn left on Rose Valley Rd (0.46 miles)
12. Finish just past 322 Rose Valley Rd. Creek and staging will be on the right.

East Fork Lewis River mouth ELEWR - 0.2

Position - Location: 45° 51.951', -122° 42.973' 45° 51' 57.1", -122° 42' 58.4" 45.86585, -122.71621 Ridgefield

Strategy Objective: Collection : Collect oil moving downstream on the East Fork Lewis River

Implementation: Using workboat, secure one end of 300 ft length of boom to shore at Point A. Then extend boom across the river to Point B using shoreside anchoring points, trees, or existing structures to secure boom to shore. Use additional anchoring systems as needed to keep boom secure in water.

Staging Area: Onsite: Stage equipment at small parking lot at site.

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation

Field Notes: Inform/coordinate response activities with nearby property owners as needed.

Watercourse: River - East Fork Lewis River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

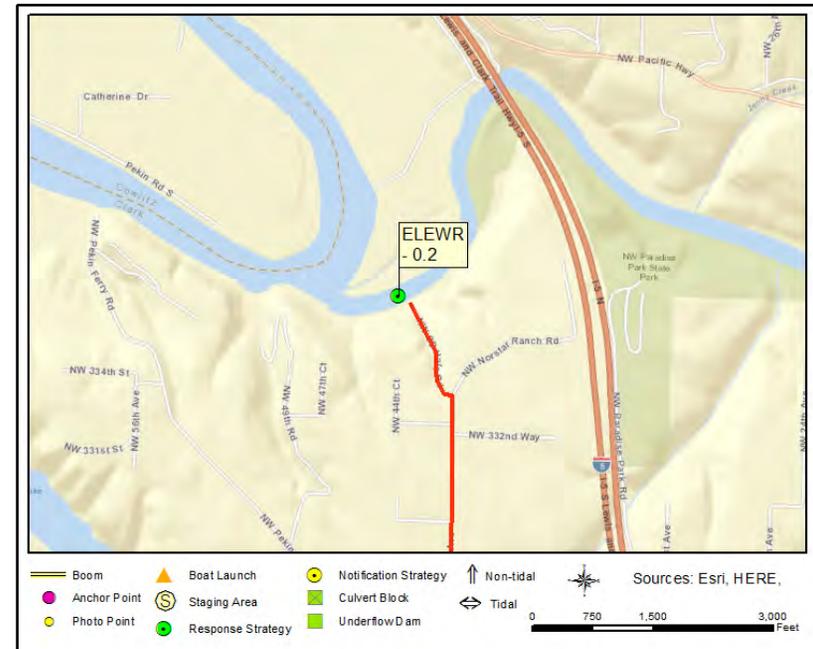
1	Boat Operator
2	Laborer
1	Supervisor

East Fork Lewis River mouth

ELEWR - 0.2



ELEWR - 0.2 Photo: Photo taken from river left looking North



Site Contact

No Information
Not Determined :

Nearest Address

33402 NW 41st Ave
Ridgefield, WA 98642

Driving Directions

1. From Vancouver, take I5 N
3. Take exit 16 to Nw La Center Rd toward La Center (0.34 miles)
4. Turn left on NW 319th St (NW La Center Rd) (0.54 miles)
5. Continue on NW 41st Ave (0.75 miles)
6. Turn left on NW Cd Hale Rd ()
7. Follow NW Cd Hale Rd down the hill to the river.

Foster Creek at Jackson Highway South FOSTC-1.8

Position - Location: 46° 24.414', -122° 53.259' 46° 24' 24.8", -122° 53' 15.5" 46.40690, -122.88765 Toledo

Strategy Objective: Collection, Sorbent : Collect oil moving downstream on Foster Creek

Implementation: Deploy hard boom on upstream/east side of box culvert at Jackson Highway South. Deploy multiple lengths of sorbent boom on upstream side of hard boom and on downstream/west side of roadway. Use anchor posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage from roadway, but must follow WSDOT work zone traffic control guidelines for lane closure.

Staging Area: Onsite: Stage on shoulder of roadway (NE corner has small pullout) - Work Truck Only - NO TRAILERS.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Shoulder); Heavy Vegetation; Fiber Optic Cable Crossing

Field Notes: Fiber Optic Cable crosses Foster Creek on upstream/east side of roadway. Contact Sprint before digging in area; call 1-800-521-0579. Limited shoulder - NO TRAILERS; if needed, stage trailer at WDFW "I-5" Water Access Site (SA-CWLZR-29.8).

Watercourse: Creek - Foster Creek

Resources at Risk: Downstream Resources, Salmon - Coho, Steelhead



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line

Recommended Personnel

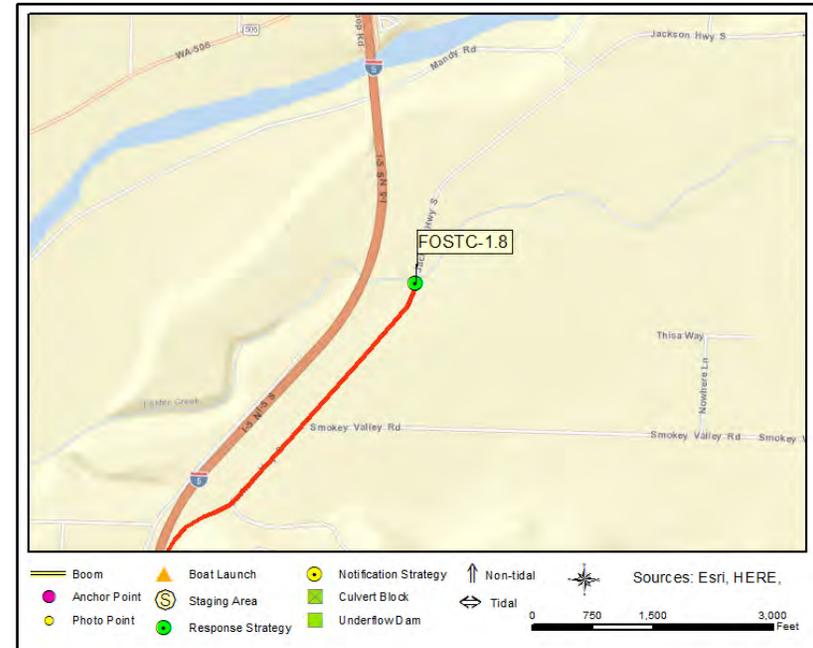
2	Laborer
1	Supervisor

Foster Creek at Jackson Highway South

FOSTC-1.8



FOSTC-1.8 Photo: At strategy location off Jackson Highway South, downstream side of roadway on creek right looking towards box culvert and creek left. Roadway at top of photograph.



Site Contact

Nearest Address

904 Jackson Hwy S
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn left at the end of exit ramp to travel east on Rogers Road
3. After 0.2mi, turn left to head north on Jackson Highway South
4. After 1.4mi, you have reached the strategy location. Stage work truck on shoulder of roadway after creek at small pullout after guardrail – NO TRAILERS. If needed, trailer can be staged at WDFW "I-5" Water Access Site (SA-CWLZR-29.8) located about 1.2mi away (Left on Mandy Rd ~0.6mi down the road, then stay on Mandy Rd for 0.6mi and WDFW site will be on your right).

Gee Creek - N Main Avenue **GEEC-3.8**

Position - Location: 45° 49.565', -122° 44.811' 45° 49' 33.9", -122° 44' 48.7" 45.82608, -122.74685 Ridgefield

Strategy Objective: Collection : Collect oil moving downstream on Gee Creek

Implementation: Using 100ft length of boom, line banks to form collection pocket on upstream/east side of roadway in front of culvert. Deploy multiple lengths of sorbent boom within hard boom area to collect product moving downstream. If needed, use vac-truck or skimmer with storage for collection. Use line to secure ends of boom to anchoring posts, trees, or existing structures. Replace saturated sorbents as needed. Use line to secure ends of sorbent boom to bridge, anchoring posts, or existing structures nearby. Limited shoulder area - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

Staging Area: Onsite: Stage on small pull-out on east side of roadway near site at start of private driveway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard/Traffic; Heavy Vegetation; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is very limited at this location and on the shoulder of the roadway - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

Watercourse: Creek - Gee Creek

Resources at Risk: Downstream Resources, Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Chinook



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage (if collection)

Recommended Personnel

2	Laborer
1	Supervisor

Gee Creek - Abrams Park **GEEC-4.7**

Position - Location: 45° 49.075', -122° 44.322' 45° 49' 4.5", -122° 44' 19.3" 45.81791, -122.73870 Ridgefield

Strategy Objective: Collection : Collect oil moving downstream on Gee Creek

Implementation: Secure end of 100ft length of boom to bank on creek left on downstream side of roadway bridge near Point A (45.81792, -122.738854) at entrance to park. Using line, extend boom across to creek right and secure to concrete bank wall near walking bridge and downstream (Point B). Use multiple layers of sorbent boom or sweep across creek within boomed area and upstream. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

Staging Area: Onsite: Stage in parking area near entrance of Abrams Park (near bridge)

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway/Bridge Hazard; Vegetation; Steep Banks/Concrete Structures

Field Notes: Contact City of Ridgefield for After-Hours Access: call 360-518-8146

Watercourse: Creek - Gee Creek

Resources at Risk: Downstream Resources, Freshwater Wildlife, Salmon - Chinook



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage (if collection)

Recommended Personnel

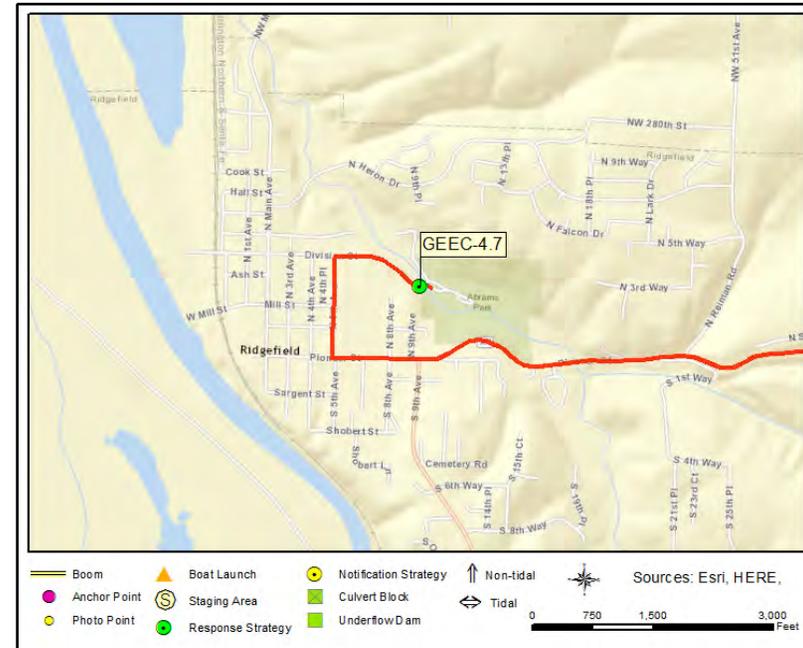
2	Laborer
1	Supervisor

Gee Creek - Abrams Park

GEEC-4.7



GEEC-4.7 Photo: At strategy location in Abrams Park, looking downstream/NW from roadway bridge near park entrance.



Site Contact

City of Ridgefield - Public Works
 Land/Property Contact : Afterhours: 360-518-8146
 301 N 3rd Avenue
 Ridgefield, WA 98642
 360-887-3897

Nearest Address

445 Abrams Park Rd
 Ridgefield, WA 98642

Driving Directions

1. Head south on Interstate-5 and Take Exit 14 (Hwy 501 Ridgefield/Battle Ground))
2. Turn right at the end of exit ramp to travel west on NW269th Street/Pioneer Street
3. After 0.1mi, stay straight through the traffic circle to remain on NW 269th Street/Pioneer Street (Hwy 501).
4. After 0.6mi, stay straight through the traffic circle to remain on NW 269th Street/Pioneer Street (Hwy 501).
5. After 2.0mi, turn right onto N 5th Avenue
6. After 0.2mi, turn right onto Division Street
7. After 0.2mi, at bottom of hill, you have reached the strategy site. Cross bridge into park and stage in parking area closest to bridge. Notify City of Ridgefield Public Works; call 360-887-3897 (after-hours call 360-518-8146).

Gee Creek at NW Royle Road GEEC-6.9

Position - Location: 45° 47.981', -122° 42.379' 45° 47' 58.9", -122° 42' 22.8" 45.79969, -122.70632 Ridgefield

Strategy Objective: Sorbent : Collect oil moving downstream on Gee Creek using sorbents

Implementation: Deploy multiple lengths of sorbent boom on upstream/SE side of creek off NW Royle Road. Use line to secure ends of sorbent boom to anchoring posts, trees, or existing structures nearby. Replace saturated sorbents as needed.

Staging Area: Onsite: Stage on shoulder of road or field access dirt road (just west of strategy site) - NO TRAILERS

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard/Fast Traffic; Heavy Vegetation; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Parking is extremely limited at this location and on the shoulder of the roadway - DO NOT BRING AN EQUIPMENT TRAILER to this site.

Watercourse: Creek - Gee Creek

Resources at Risk: Downstream Resources, Freshwater Wildlife, Salmon - Chinook



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

2	Laborer
1	Supervisor

Gee Creek at NW Royle Road

GEEC-6.9



GEEC-6.9 Photo: On Royle Road near strategy location looking WSW. Parking extremely limited in area including roadway shoulder.



Site Contact

No Information
Not Determined :

Nearest Address

1984 NW Royle Rd
Ridgefield, WA 98642

Driving Directions

1. Head south on Interstate-5 and Take Exit 14 (Hwy 501 Ridgefield/Battle Ground))
2. Turn right at the end of exit ramp to travel west on NW269th Street/Pioneer Street
3. After 0.1mi, stay straight through the traffic circle to remain on NW 269th Street/Pioneer Street (Hwy 501).
4. After 0.6mi, take the 3rd exit within the traffic circle to head south on S 45th Ave (becomes NW Royle Road).
5. After 1.0mi, the strategy location will be on your left near the bottom of the hill. Stage on shoulder of road or field access dirt road (just west of strategy site) - follow WSDOT work zone traffic control guidelines. **WORK TRUCK ONLY - NO TRAILERS.**

Gee Creek Tributary - Interstate-5 Rest Area (Nort) GEECTG-1.1

Position - Location: 45° 46.600', -122° 40.179' 45° 46' 36.0", -122° 40' 10.8" 45.77667, -122.66966 Ridgefield

Strategy Objective: Sorbent : Collect oil moving downstream on tributary to Gee Creek using sorbent

Implementation: Deploy multiple lengths of sorbent boom on upstream and downstream sides of Gee Creek Tributary from walking trail west of auto parking side of Interstate Rest Area (walking trail is on west side of parking lot south of fenced retention pond area). Use anchor posts, trees, or existing structures to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed. Additionally, consider using catch basin socks or sorbent material in parking area catch basins if spill is from automobile or commercial truck at rest area.

Staging Area: Onsite: Stage in west side/automobile parking lot at Interstate-5 Gee Creek Rest Area off Exit 11 (North Bound)

Site Safety: Slips, Trips, Falls; Water Hazard; Trail Hazards; Vegetation; Mud/Muddy; Vehicle Traffic in Parking Area

Field Notes: Rest Area maintained by WSDOT Southwest Region - Maintenance (Area 1); 360-905-2240 or 360-905-2136. WSDOT Environmental/Hazmat at 360-905-2186.

Watercourse: Creek - Gee Creek Tributary

Resources at Risk: Downstream Resources, Freshwater Wildlife, Salmon - Chinook



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

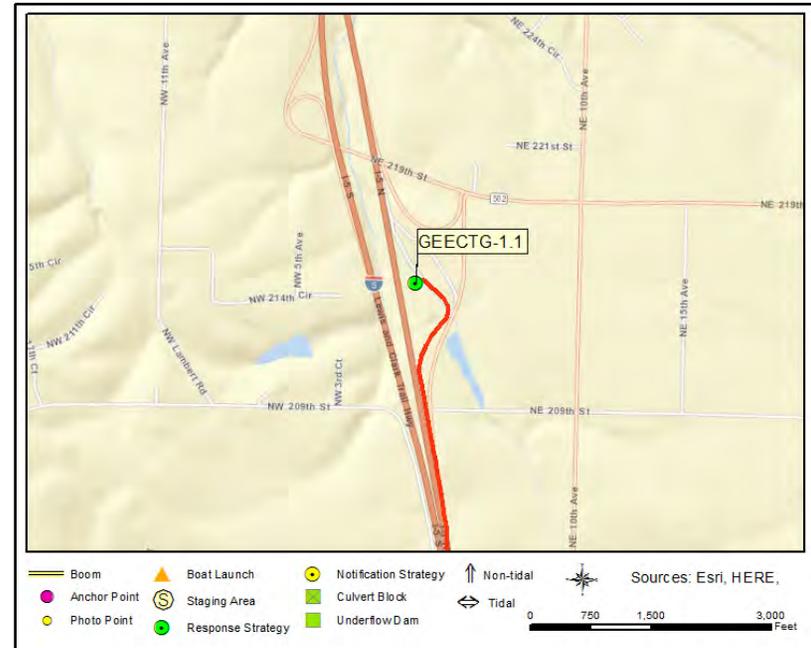
2	Laborer
1	Supervisor

Gee Creek Tributary - Interstate-5 Rest Area (North)

GEECTG-1.1



GEECTG-1.1 Photo: Looking at creek from walking trail on west side of Interstate-5 Gee Creek Rest Area off Exit 11 (North Bound)



Site Contact

WSDOT Southwest Region
 Land/Property Contact : Maintenance Office
 4200 Main Street
 Vancouver, WA 98668
 360.905.2240

Nearest Address

21512 NE 10th Ave
 Ridgefield, WA 98642

Driving Directions

1. Head north on Interstate 5 and take Exit 11 (NE 219th Street)
2. Keep left within ramp and follow road towards Gee Creek Rest Area
3. After 0.3 miles, keep left to enter the car/automobile side of the rest area.
4. After 0.1mi, park in spaces to your left (west side) near walking trail and fenced area. Stage equipment in parking area. Follow trail to creek/strategy location.

Hill Creek at Miekler Road HILLC-0.9

Position - Location: 46° 22.038', -122° 55.760' 46° 22' 2.3", -122° 55' 45.6" 46.36731, -122.92933 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Hill Creek

Implementation: On upstream (north) side of roadway, deploy hard boom across creek with multiple lengths of sorbent boom upstream of the hard boom so product moving downstream can be collected. Also deploy sorbent boom downstream of hard boom for secondary collection. Use anchoring posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use Vac Truck from roadway or skimmer/portable storage for collection.

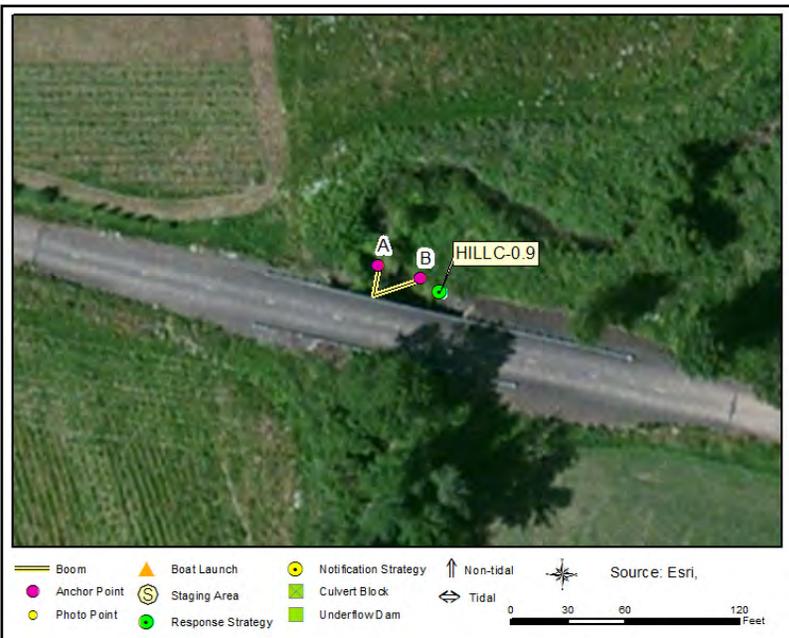
Staging Area: Onsite: Stage work truck on shoulder of roadway before or after bridge; NO TRAILERS.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway - Limited Shoulder; Heavy Vegetation; Mud/Muddy; Unstable Banks

Field Notes: Limited shoulder area - DO NOT BRING AN EQUIPMENT TRAILER to this site; stage trailers at SA-CWLZR-24.7 (end of Miekler Rd). Follow WSDOT work zone traffic control guidelines.

Watercourse: Creek - Hill Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

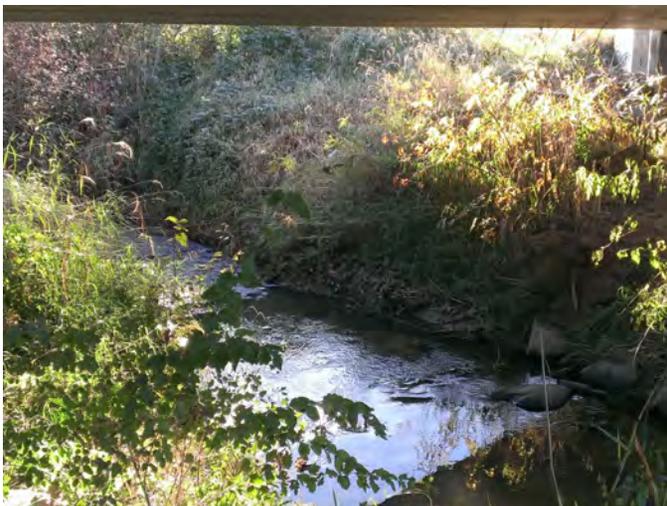
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line

Recommended Personnel

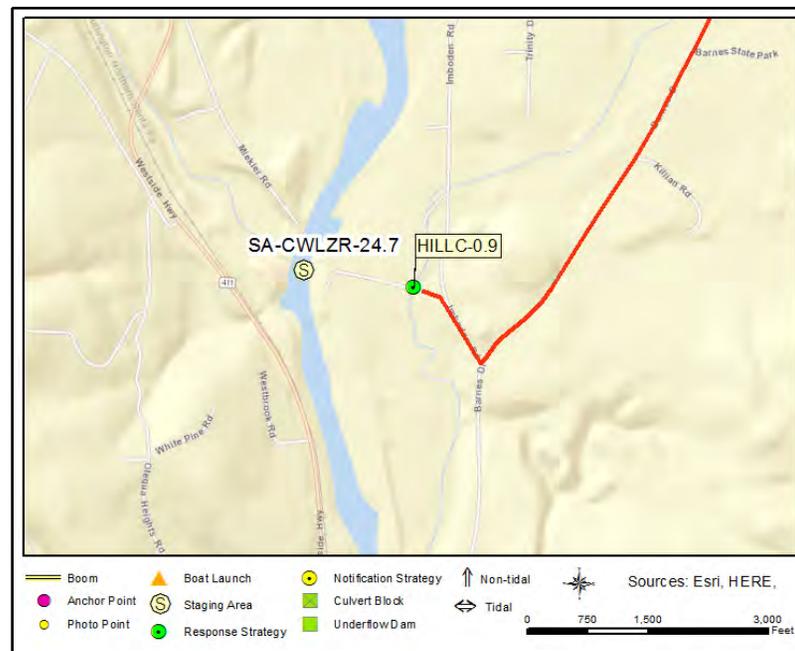
2	Laborer
1	Supervisor

Hill Creek at Miekler Road

HILLC-0.9



HILLC-0.9 Photo: At strategy location on Hill Creek (creek left) looking down stream to creek right from the underside of Miekler Road Bridge over the creek.



Site Contact

Nearest Address

9800 Barnes Dr
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road
3. After ~0.1mi, turn left onto Barnes Drive
4. After 2.1mi, turn right onto Imboden Road
5. After 0.2mi, stay left to travel on Miekler Road
6. After ~0.1mi, you have reached the strategy location. Stage on roadway shoulder before or after bridge. NO TRAILERS – Trailers can be staged at end of road at WDFW Olequa Creek Water Access (SA-CWLZR24.7).

Hill Creek at Barnes Drive HILLC-2.1

Position - Location: 46° 22.697', -122° 54.847' 46° 22' 41.8", -122° 54' 50.8" 46.37829, -122.91412 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Hill Creek

Implementation: On downstream (west) side of roadway bridge, form collection pocket by deploying hard boom across downstream side of small pool area. Then deploy multiple lengths of sorbent boom within the pool, upstream of the hard boom so product moving downstream can be collected. Also deploy sorbent boom downstream of hard boom for secondary collection. Use anchoring posts, trees, or existing structures to secure boom to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use Vac Truck from roadway or skimmer/storage for collection.

Staging Area: Onsite: Stage work truck on shoulder of roadway before or after bridge; NO TRAILERS.

Site Safety: lips, Trips, Falls; Water Hazard; Roadway - Limited Shoulder; Heavy Vegetation; Mud/Muddy; Unstable Banks

Field Notes: Follow WSDOT work zone traffic control guidelines - limited shoulder area, DO NOT BRING AN EQUIPMENT TRAILER to this site; they can be staged at corner of Barnes Drive and Rogers Road (1.0mi NE of site).

Watercourse: Creek - Hill Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

2	Anchoring System(s)- Shoreside
100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Heaving Line(s)
100 Feet	Line - 1/2" poly line

Recommended Personnel

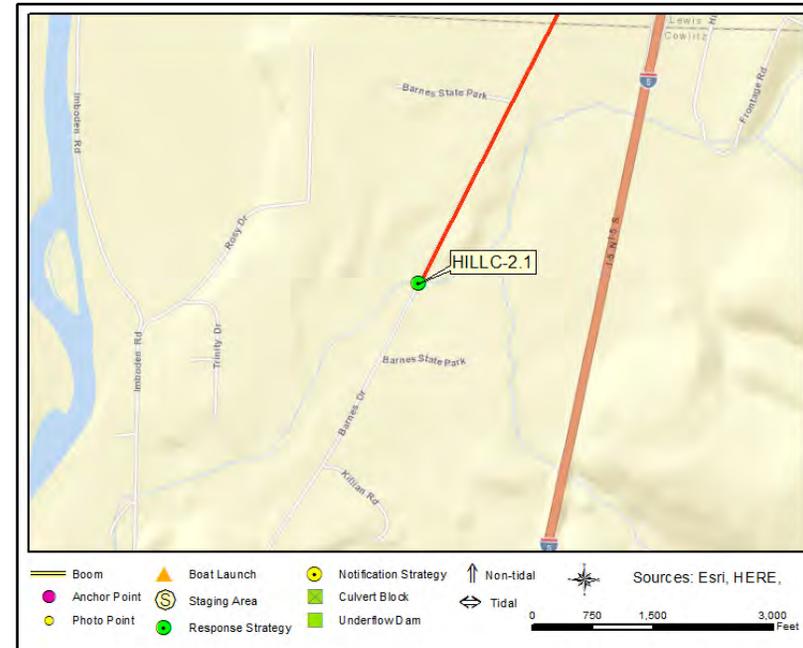
2	Laborer
1	Supervisor

Hill Creek at Barnes Drive

HILLC-2.1



HILLC-2.1 Photo: At strategy location on Hill Creek looking at small pool area on downstream side of bridge from Barnes Road.



Site Contact

Nearest Address

10050 Barnes Dr
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road
3. After 0.1mi, turn left onto Barnes Drive
4. After 1.0mi, the strategy location will be on your right. Stage work truck on roadway shoulder before or after bridge over the creek. Follow WSDOT work zone traffic control guidelines - limited shoulder area.

WDFW Boat Launch on Kalama River (WA)

KLMAR-0.7

Position - Location: 46° 2.320', -122° 51.882' 46° 2' 19.2", -122° 51' 52.9" 46.03867, -122.86470 Kalama

Strategy Objective: Collection, Deflection : Collect oil coming downstream on Kalama River to prevent it from entering Columbia River

Implementation: From WDFW ramp, Crew 2 launch workboat towing line attached to 700 ft of boom onshore river right. Crew 1 remain onshore river right at boat launch and feed boom across to Crew 2 on river left. Crew 2 use shoreside anchor posts to anchor to river left upstream of side channel; anchor to river center to create steep deflection/collection angle. Anchor every 100-150ft. along boom length or as appropriate for flow conditions. Crew 1 anchor to river right just upstream of boat ramp. Collect oil with vac truck staged at boat ramp.

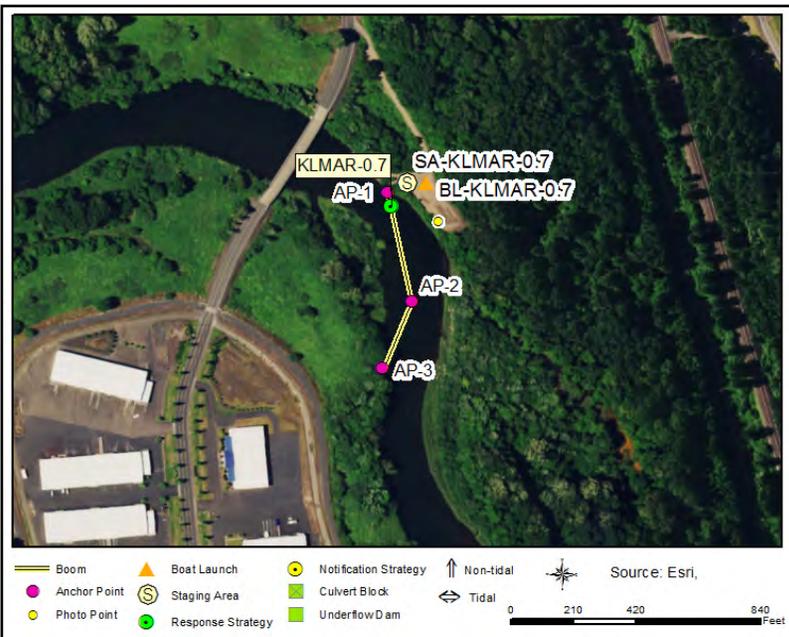
Staging Area: Onsite: Stage at SA-KLMAR-0.7, WDFW boat launch parking area.

Site Safety: Slips, trips, and falls. Use caution near heavily vegetated shoreline and beware of possible submerged hazards.

Field Notes: Site is a WDFW boat launch used frequently by boaters and fishermen. River bends, widens, and slows in this location.

Watercourse: River - With Tidal Influence - Kalama River

Resources at Risk: Downstream Resources



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

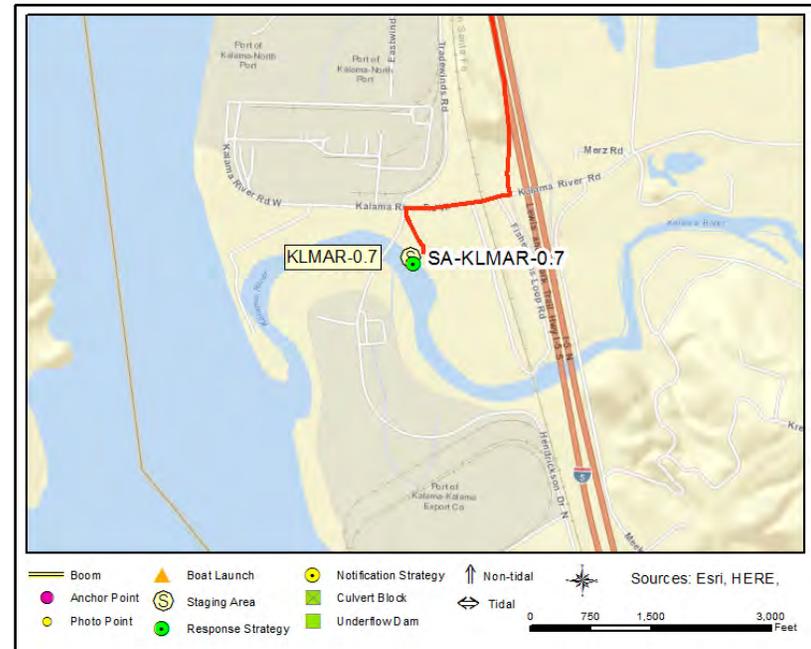
1	Boat Operator
4	Laborer
1	Supervisor

WDFW Boat Launch on Kalama River (WA)

KLMAR-0.7



KLMAR-0.7 Photo: River right on Kalama River at south end of boat launch parking area



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

222 Kalama River Rd.
 Kalama, WA 98625

Driving Directions

From I-5 S, Longview, WA

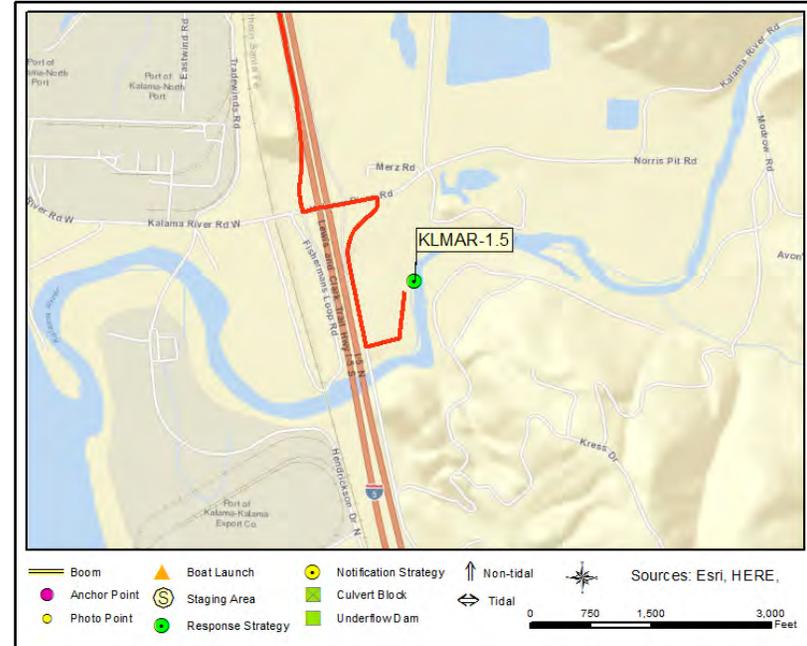
1. Go south on I-5
2. At exit 32 bear right onto ramp to Kalama River Road (0.26 miles)
3. Turn right on Kalama River Rd (0.5 miles)
4. Turn left on N Hendrickson Drive and take immediate left down dirt road to boat launch.

Kalama River near Camp Kalama RV Park

KLMAR-1.5



KLMAR-1.5 Photo: Photo taken looking North



Site Contact

No Information
Not Determined :

Nearest Address

5055 Meeker Dr
Kalama, WA 98625

Driving Directions

1. From Kelso, head south on I-5
2. At exit 32 bear right onto ramp to Kalama River Road (0.26 miles)
3. Turn left on Kalama River Rd (0.18 miles)
4. Turn right on Meeker Dr (0.21 miles)
5. Finish at Camp Kalama RV Park on the right 5055 Meeker Dr, 98625

Lacamas Creek at Highway 506 LCMSC-0.3

Position - Location: 46° 24.705', -122° 55.566' 46° 24' 42.3", -122° 55' 34.0" 46.41175, -122.92610 Toledo

Strategy Objective: Collection : Collect oil moving downstream on Lacamas Creek

Implementation: On upstream/north side of Hwy 506 Bridge over creek, deploy hard boom at an angle from creek left upstream and across to creek right (best achievable angle based on stream flow and safe access). Deploy multiple lengths of sorbent boom upstream and downstream of hard boom. Use anchoring posts or trees to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/storage for collection on creek left (booster pump needed). Shoulder space limited – NO TRAILERS.

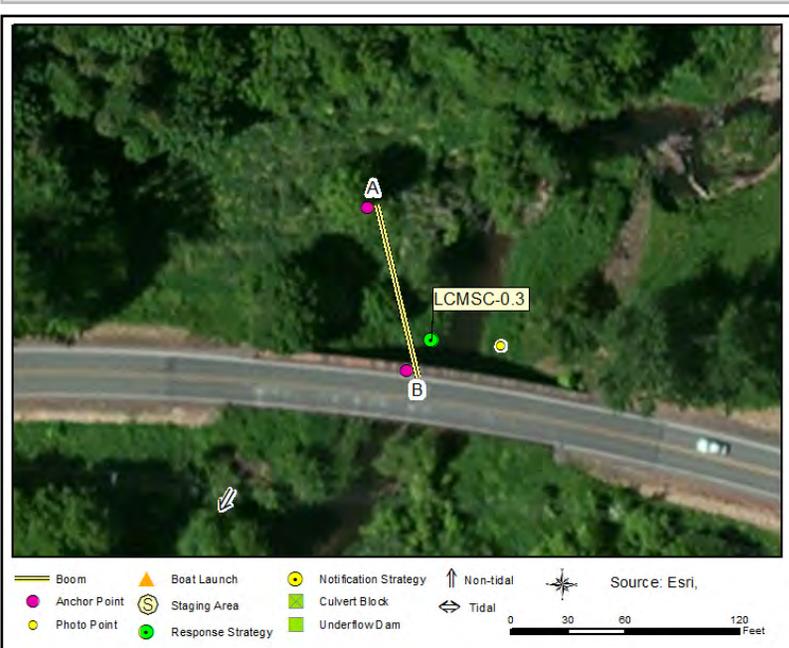
Staging Area: Onsite: Stage work truck on north shoulder of roadway before or after bridge; limited shoulder space - NO TRAILERS.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway/Traffic Hazard; Steep Banks on Creek Right; Vegetation; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited. Slope down to creek left is steep; use 1/2" line for safe descent if needed.

Watercourse: Creek - Lacamas Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line
100	Feet	Line - 3/8" poly line
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

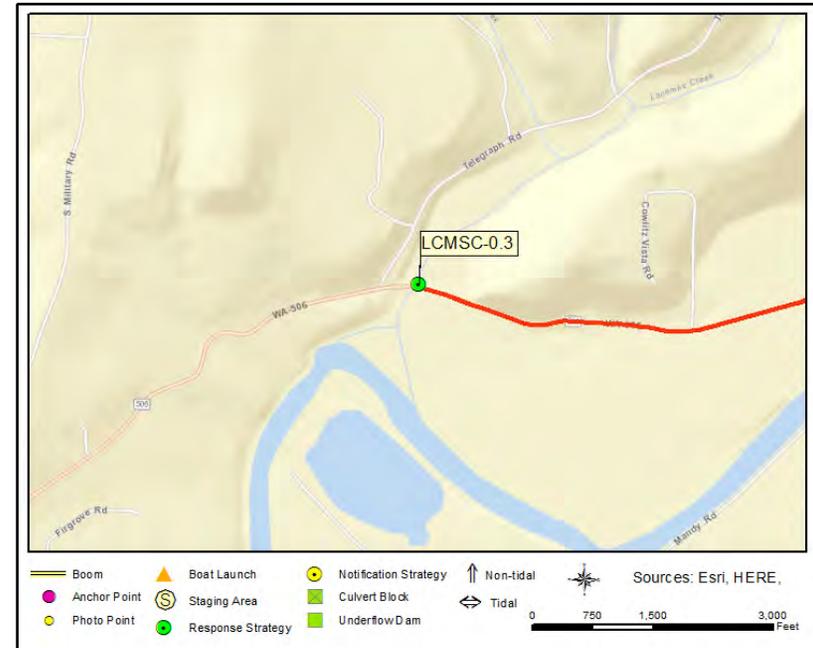
2	Laborer
1	Supervisor

Lacamas Creek at Highway 506

LCMSC-0.3



LCMSC-0.3 Photo: At strategy location on upstream side of Hwy 506 bridge over creek (creek left), looking west and across to creek right. Bridge deck visible on left side of photo.



Site Contact

Nearest Address

774 Washington 506
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 1.8mi, the strategy location will be under the Hwy-506 Bridge over the creek. Stage work truck on north shoulder of roadway before or after bridge; limited shoulder space - NO TRAILERS.

Lacamas Creek at Drews Prairie Road LCMSC-4.2

Position - Location: 46° 27.204', -122° 52.790' 46° 27' 12.2", -122° 52' 47.4" 46.45339, -122.87984 Toledo

Strategy Objective: Collection, Sorbent : Collect oil moving downstream on Lacamas Creek

Implementation: Deploy hard boom under bridge from upstream creek right to downstream creek left. Place multiple lengths of sorbent boom across creek upstream of the hard boom. Also place multiple lengths of sorbent boom across creek on downstream side of bridge. Use anchor posts or existing structures to secure boom to banks; actual shoreside anchor points may vary depending on flow. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage from roadway. Follow WSDOT work zone traffic control guidelines.

Staging Area: Onsite: Stage on shoulder of road before bridge.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Shoulder); Heavy Vegetation; Steep Banks; Mud/Muddy

Field Notes: Waders or hip boots recommended. Depending on flow, equipment can be lower to creek left from bridge using line or crane truck, but must follow WSDOT work zone traffic control guidelines for lane closure.

Watercourse: Creek - Lacamas Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line

Recommended Personnel

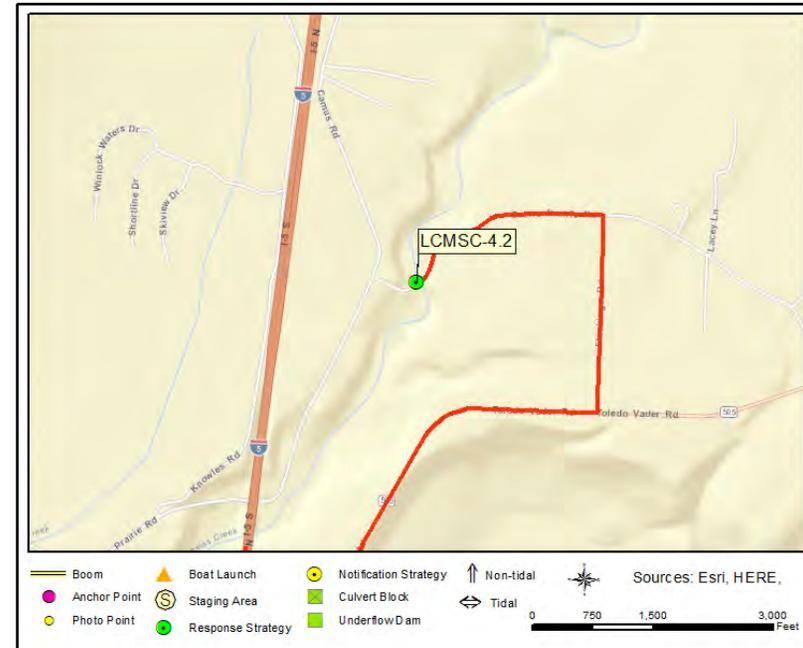
2	Laborer
1	Supervisor

Lacamas Creek at Drews Prairie Road

LCMSC-4.2



LCMSC-4.2 Photo: At strategy location on Lacamas Creek under the Drews Prairie Road Bridge, looking upstream.



Site Contact

Nearest Address

349 Drews Prairie Rd
Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 60 (Toledo-Vader Road)
2. Turn left at the end of exit ramp to travel east on Highway WA506/Toledo-Vader Road
3. After 1.3mi, turn left onto Fluckinger Road
4. After 0.5mi, turn left onto Drews Prairie Road
5. After 0.5mi, you have reached the strategy location. Stage on shoulder of road to the right/north immediately before bridge guardrail or in pullout to the right/north just after the bridge.

Carrolls Channel - S End (WA) LCR-71.5M

Position - Location: 46° 3.322', -122° 52.580' 46° 3' 19.3", -122° 52' 34.8" 46.05537, -122.87633 Kalama

Strategy Objective: Collection : Collect and recover oil at south end of Carrolls Channel.

Implementation: From BL-LCR-72.7R, launch workboat to the south end of Cottonwood Island with two 700ft. lengths of boom. Angle BM-1 upriver into main channel to collect oil, and BM-2 across Carrolls Channel to enhance collection. Anchor at AP-1 and AP-3 using shoreside anchor posts. Anchor at AP-2 and AP-4, and every 100-150ft. along boom length or as appropriate for conditions. Collect oil in collection pocket using portable skimmer and storage.

Staging Area: Remote: Stage at SA-LCR-72.7R, Sportsmen's Club

Site Safety: Shallow water and pillings. Recreational and commercial boat traffic.

Field Notes: Boat access only. Large beach area.

Watercourse: River - With Tidal Influence - Carrolls Channel

Resources at Risk: Downstream Habitat, Wetland Habitat



Recommended Equipment

12	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1400	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Carrolls Channel - S End (WA)

LCR-71.5M



LCR-71.5M Photo: From entrance to Carrol's Channel looking NW at south end of Cottonwood Island



Site Contact

No Information
Not Determined :

Nearest Address

32 Sportsmen's Club Rd
Kalama, WA 98625

Driving Directions

Directions to SA-LCR-72.7R
From I-5 S, Kelso, WA

1. At exit 32 bear right onto ramp to Kalama River Road
2. Turn right on Kalama River Rd W
3. Turn left on Sportsmens Club Rd
4. Finish at 32 Sportsmens Club Rd, 98625, on the left

Carrolls Channel - S end (WA) LCR-71.6R

Position - Location: 46° 3.152', -122° 52.494' 46° 3' 9.1", -122° 52' 29.7" 46.05253, -122.87491 Kalama

Strategy Objective: Collection, Deflection : Divert oil into collection pocket and prevent it from entering Carrolls Channel.

Implementation: From BL-LCR-72.7R, Crew 2 deploy workboat to south opening of Carrolls Channel. Crew 1 stage 800ft. of boom onshore at Port of Kalama property and pass line to Crew 2 using line-throwing device or other means. Crew 2 anchor boom at AP-2 and every 100-150ft. along boom length or as appropriate for conditions. Crew 1 anchor at AP-1 using shoreside anchor posts. If oil is travelling upstream through channel, collect using vac truck staged on Port of Kalama property or skimmer and portable storage.

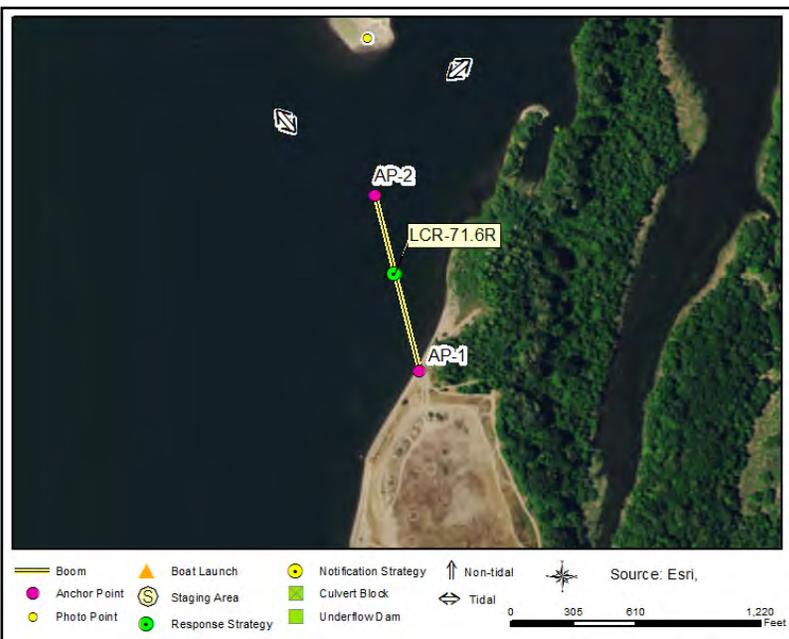
Staging Area: Remote: Stage at SA-LCR-72.7R, Sportsmen's Club

Site Safety: Slips, trips, and falls. Water hazards. Commercial and recreational boat traffic. Boom will need to be monitored and lighted at night.

Field Notes: Vehicle access from east shore, Port of Kalama property.

Watercourse: River - Side Channel - Carrolls Channel

Resources at Risk: Downstream Resources, Wetland Habitat



Recommended Equipment

7	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Line throwing gun(s) or device(s)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Carrolls Channel - S end (WA)

LCR-71.6R



LCR-71.6R Photo: From entrance to Carrolls Channel, looking NE at SE side of Cottonwood Island



Site Contact

Port of Kalama
 Land/Property Owner :

 WA
 360-673-2325

Nearest Address

32 Sportsmen's Club Rd
 Kalama, WA 98625

Driving Directions

- Directions to SA-LCR-72.7R
 From I-5 S, Kelso, WA
1. At exit 32 bear right onto ramp to Kalama River Road
 2. Turn right on Kalama River Rd W
 3. Turn left on Sportsmens Club Rd
 4. Finish at 32 Sportsmens Club Rd, 98625, on the left

Goble Creek (OR) LCR-73.7L

Position - Location: 46° 1.231', -122° 52.593' 46° 1' 13.9", -122° 52' 35.6" 46.02052, -122.87656 Rainier

Strategy Objective: Exclusion : Prevent oil from entering Goble Creek.

Implementation: Launch workboat with 100ft. boom from Goble Marina boat launch, BL-LCR-74.5L. Deploy boom across creek mouth and anchor at AP-1 and AP-2 using natural anchors or shoreside anchor posts. Anchor along boom length as necessary for conditions.

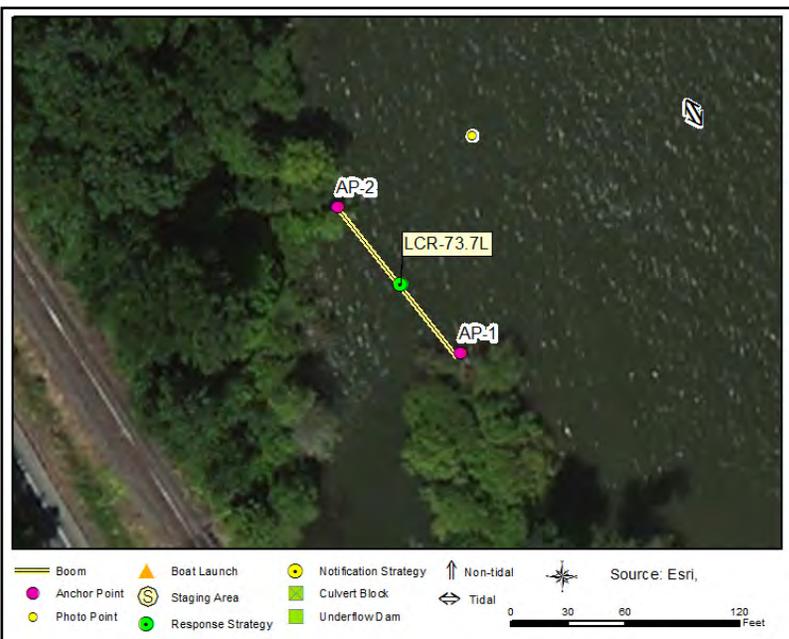
Staging Area: Remote: Stage at SA-LCR-74.5L, Goble Marina. Launch at same BL-LCR-74.5L.

Site Safety: Slips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not allow

Field Notes: Railroad tracks and US-30 cross Goble Creek at this site. Salmon habitat. Peak times are Sept - Oct, Apr - May.

Watercourse: River - With Tidal Influence - Columbia River

Resources at Risk: Salmon Concentrations and Habitat



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

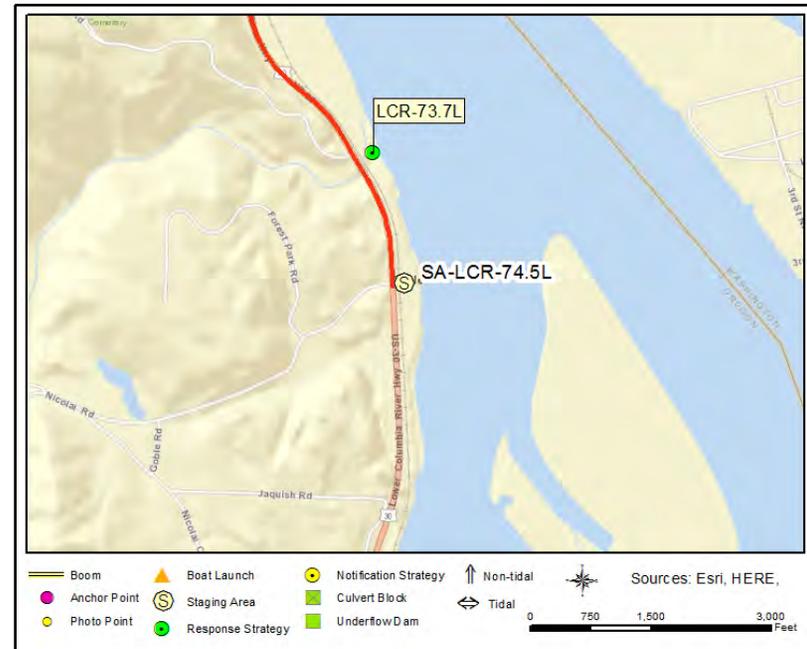
1	Boat Operator
2	Laborer
1	Supervisor

Goble Creek (OR)

LCR-73.7L



LCR-73.7L Photo: View looking SW at mouth of Goble Creek.



Site Contact

No Information
Not Determined :

Nearest Address

70360 Columbia River Hwy
Rainier, OR 97048

Driving Directions

1. Start at I-5 S, Kelso WA
2. Go southeast on I-5 (1.88 miles)
3. At exit 36 bear right onto ramp to WA-432 W toward US-30/Longview/Kelso (0.46 miles)
4. Continue on WA-432 (3.26 miles)
5. Bear left on WA-433 (Oregon Way) (1.8 miles)
6. Continue on Lewis And Clark Brg (0.63 miles)
7. Continue (0.28 miles)
8. Make sharp left on US-30 (Lower Columbia River Hwy) (8.38 miles)
9. Finish at 70360 Columbia River Hwy, 97048, on the left

Lewis River (A) (WA) LEWR-0.4

Position - Location: 45° 51.486', -122° 46.430' 45° 51' 29.2", -122° 46' 25.8" 45.85811, -122.77383 Woodland

Strategy Objective: Collection : Collect oil coming downstream on Lewis River.

Implementation: From BL-LEWR-0.4 Crew 2 launch workboat and Crew 1 remain onshore and pass line attached to 600' of boom to Crew 2. Crew 1 anchor to AP-1 using shoreside anchor posts. Crew 2 anchor to AP-2 and anchor every 100-150ft. along boom length or as appropriate for conditions. Collect oil using vac truck staged at boat ramp.

Staging Area: Onsite: Stage onsite at Stevens' Moorage, SA-LEWR-0.4

Site Safety: Slips, trips, and falls. Water hazards.

Field Notes: Site access is through Stevens' Moorage, a privately owned boat launch and RV park. Contact manager before deploying strategy.

Watercourse: River - With Tidal Influence - Lewis River

Resources at Risk: Downstream Resources, Wetland Habitat



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Line throwing gun(s) or device(s)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

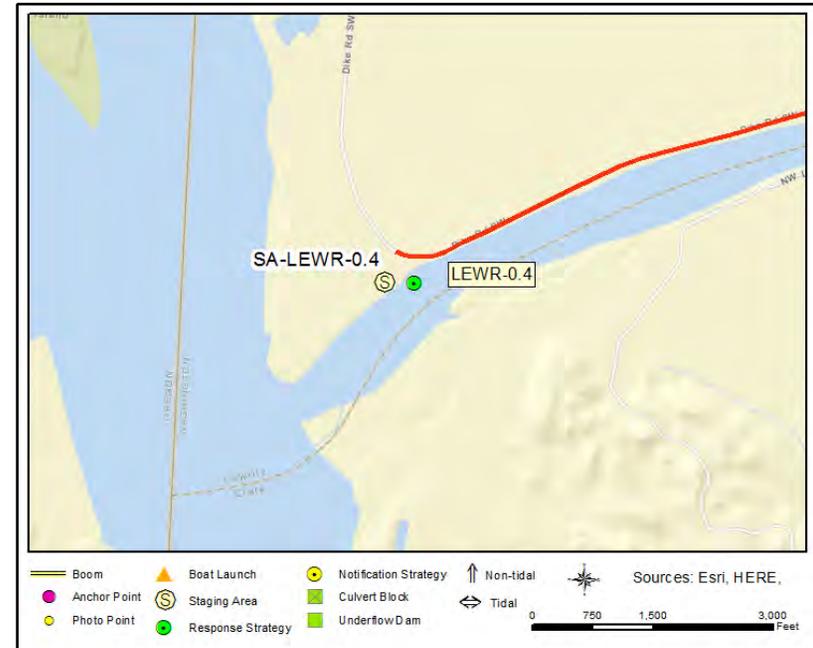
1	Boat Operator
3	Laborer
1	Supervisor

Lewis River (A) (WA)

LEWR-0.4



LEWR-0.4 Photo: River right looking at boat launch looking S toward collection point



Site Contact

Stevens' Moorage
 Primary Contact : General Manager
 4005 Dike Rd.
 Woodland, WA 98674
 360-989-7367

Nearest Address

4005 Dike Rd.
 Woodland, WA 98674

Driving Directions

Directions to SA-LEWR-0.4
 From I-5 S, Ridgefield, WA
 1. Make U-turn and go back on I-5 (0.11 miles)
 2. At exit 21 bear right onto ramp to WA-503 E toward Woodland/Cougar (0.25 miles)
 3. Turn left on WA-503 (Lewis River Rd) (0.14 miles)
 4. Bear left on Goerig St (0.31 miles)
 5. Bear left (0.12 miles)
 6. Turn left on 2nd St (0.03 miles)
 7. Bear right on Dunham Ave (0.14 miles)
 8. Turn left on 5th St (0.13 miles)
 9. Continue on Pekin Rd S (0.53 miles)
 10. Bear right on Whalen Rd (0.54 miles)
 11. Turn left on Kuhn Rd (1.6 miles)
 12. Bear right on Dike Rd SW (1.37 miles)
 13. Finish at 4005 Dike Rd., 98674, on the left

Lewis River - NW Lancaster Road LEWR-1.9

Position - Location: 45° 51.873', -122° 44.986' 45° 51' 52.4", -122° 44' 59.2" 45.86454, -122.74977 Ridgefield

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (45.865447, -122.749419; mid-river about 600ft upstream from mid-span of RR Bridge) and Point B (45.863633, -122.750118; downstream end of boat ramp on river left). After anchors are set, tow boom upstream and secure to anchor at Point A, then all remaining anchor points between Points A & B. At Point B secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point B.

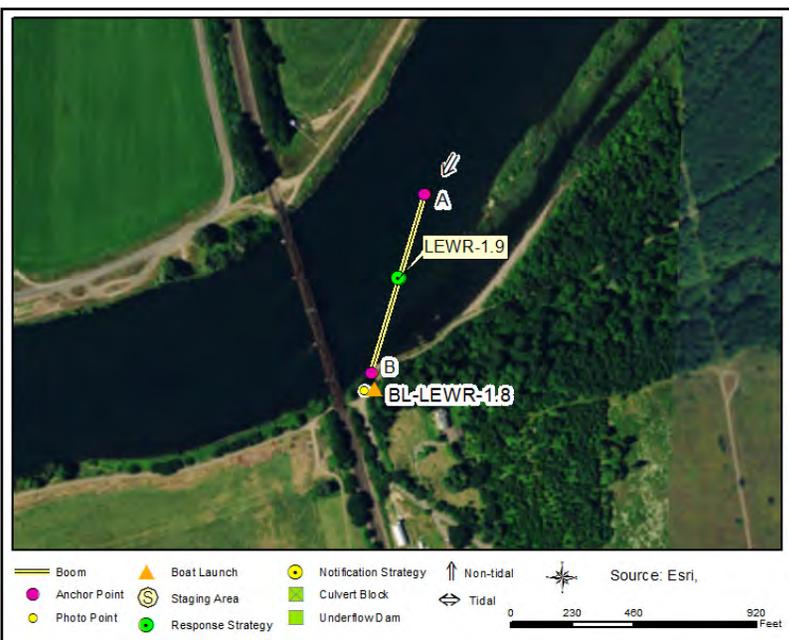
Staging Area: Onsite: Stage equipment at end of roadway near top of boat ramp (BL-LEWR-1.8)

Site Safety: Slips, Trips, Falls; Water Hazard; Road/Trail Hazards; Vegetation/Snag Hazards; Mud.

Field Notes: Entry is gated and may be locked (or appear locked); If locked, notify BNSF at 800-832-5452 before entry. This site is located below RR Bridge on south side of Lewis River in Washington State at BNSF Rail Mile 119 on the Seattle Line (52).

Watercourse: River - With Tidal Influence - Lewis River

Resources at Risk: Downstream Resources, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead, Wetland Habitat



Recommended Equipment

7	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

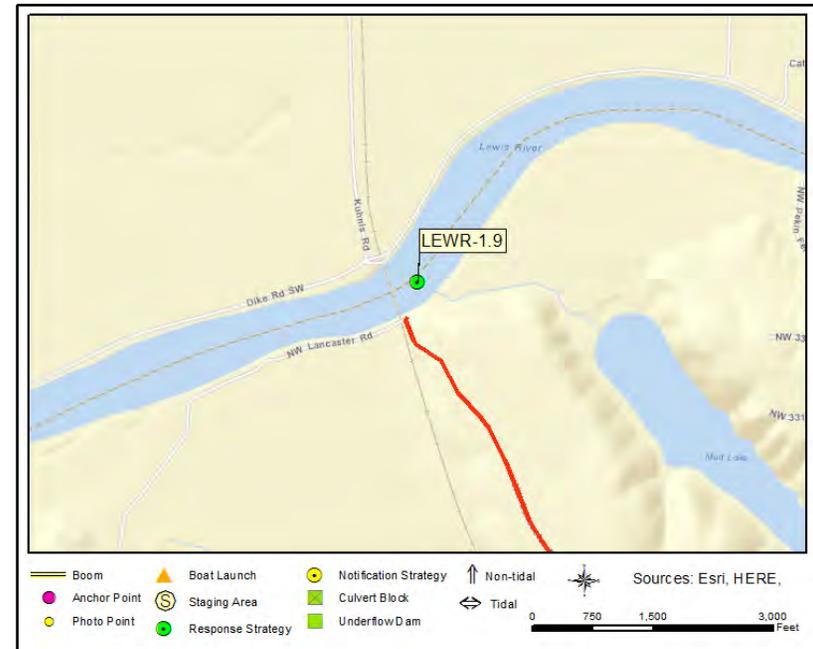
1	Boat Operator
3	Laborer
1	Supervisor

Lewis River - NW Lancaster Road

LEWR-1.9



LEWR-1.9 Photo: At strategy location on river left looking NE towards boat ramp and the Lewis River.



Site Contact

Burlington Northern Santa Fe Railroad
 Land/Property Contact :

 WA
 800-832-5452

Nearest Address

33301 NW Lancaster Rd
 Ridgefield, WA 98642

Driving Directions

1. Head south on Interstate 5 and take Exit 14 (Hwy 501 towards Ridgefield/Battle Ground)
2. At end of ramp turn right onto Hwy 501 (NW 269th St/Pioneer St)
3. After 0.1mi, stay straight through the traffic circle to stay on NW269th St/Pioneer Street
4. After 0.6mi, take the first right within the traffic circle, onto N 45th Ave (becomes NW 31st Ave after 0.5mi)
5. After 1.0mi, turn left onto NW 289th Street
6. After 1.5mi, take slight right onto NW 61st Ave (becomes NW 291st Street after 400ft)
7. After ~0.5mi, turn right onto NW 71st Avenue (becomes NW Lancaster Rd after 1.6mi)
8. After 2.3mi, at the end of Lancaster Road, the boat ramp will be to your right (lower dirt path).

Lewis River along dike road LEWR-2.3

Position - Location: 45° 52.314', -122° 44.476' 45° 52' 18.8", -122° 44' 28.6" 45.87190, -122.74127 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

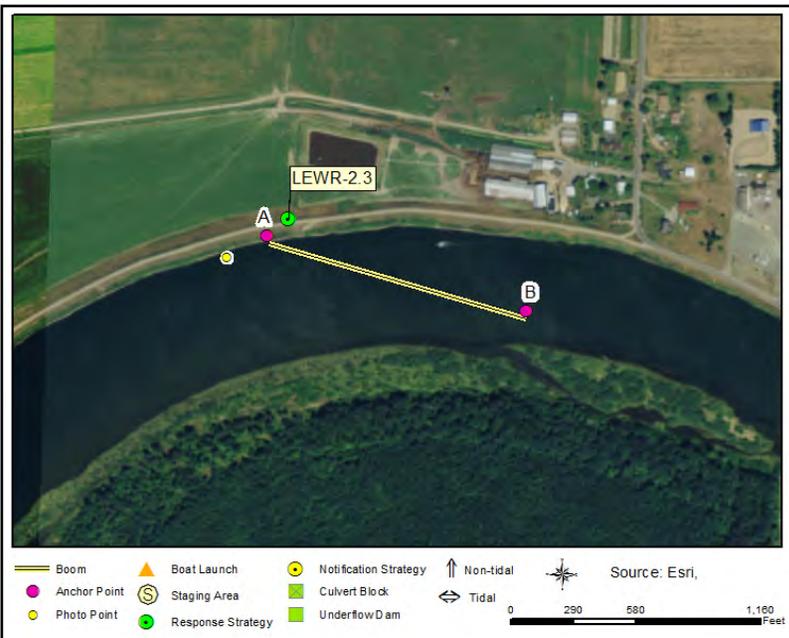
Staging Area: Onsite: Stage equipment along dike path.

Site Safety: Slips, Trips, Falls; Water Hazard;

Field Notes: Use workboat to tow boom to site

Watercourse: River - Lewis River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

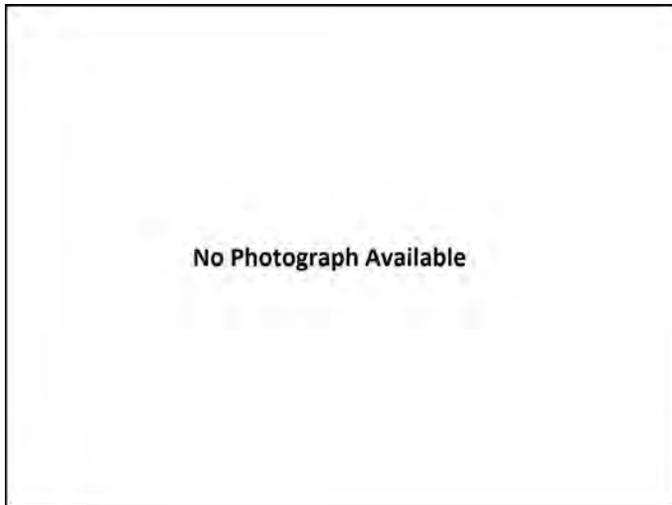
4	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

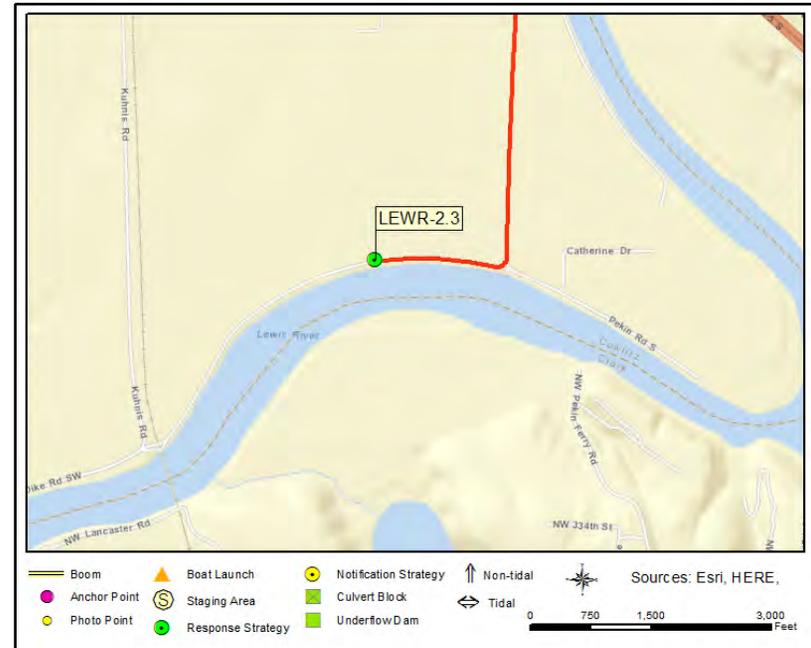
1	Boat Operator
2	Laborer
	Supervisor

Lewis River along dike road

LEWR-2.3



LEWR-2.3 Photo: No photograph currently available



Site Contact

No Information
Not Determined :

Nearest Address

1123 Pekin Rd S
Woodland, WA 98674

Driving Directions

1. From Kalama, take I-5 S
2. Take exit 21 to WA-503 E toward Woodland/Cougar (0.25 miles)
3. Turn right onto Scott Rd (0.14 miles)
4. Turn left on N Pekin Rd(0.02 miles)
5. Turn left onto Davidson Ave (0.8 miles)
6. Turn right at second cross street onto 5th St (0.55 miles)
7. Continue onto Pekin Rd S (1.43 miles)
8. Turn left onto Dike Rd.

Lewis River - WDFW Water Access Site "Martin" LEWR-3.4

Position - Location: 45° 52.011', -122° 43.423' 45° 52' .7", -122° 43' 25.4" 45.86686, -122.72372 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems about every 100ft in relatively straight line between Point A (45.865988, -122.722649) on river left and Point B (45.867794, -122.725006) downstream on river right. Tow 900ft boom upstream and across to river left and secure to shore at/near Point A. Extend boom downstream towards river right, securing it to all in-river anchor points as you go. Finally, secure boom to shore at/near Point B on river right along upstream side of boat ramp. Use anchoring posts, trees, or existing structures to secure boom to banks. Vac-truck or skimmer collection at Point B.

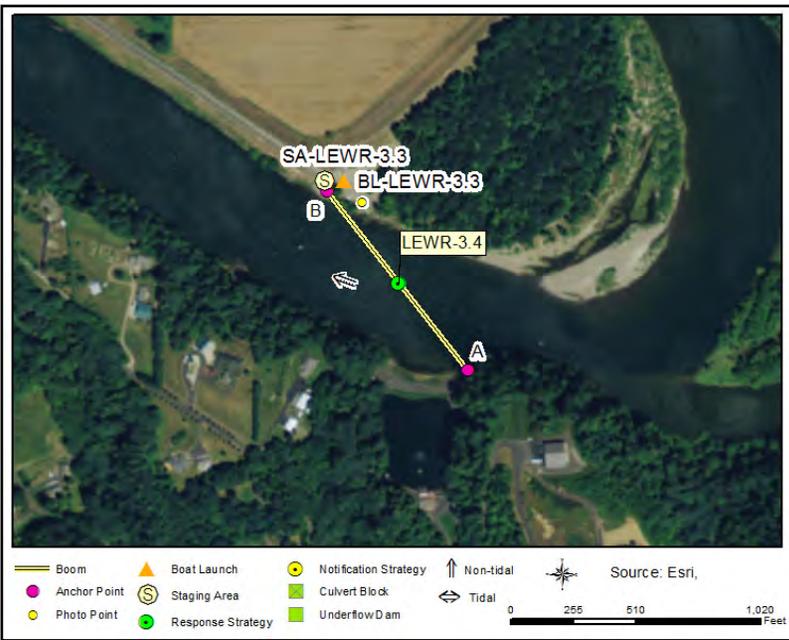
Staging Area: Onsite: Stage in parking lot of WDFW Water Access Site "Martin" near boat ramp (SA-LEWR-3.3)

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Along Shore; Vehicle Hazard (Parking Area); Vegetation

Field Notes: Upstream side of strategy is along "Two Rivers" development off NW Pekin Ferry Road. Downstream side of strategy lands on upstream side of boat ramp at WDFW Water Access Site "Martin" (open year round).

Watercourse: River - With Tidal Influence - Lewis River

Resources at Risk: Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

8	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
900	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Lewis River **LEWR-4.1**

Position - Location: 45° 52.351', -122° 43.395' 45° 52' 21.1", -122° 43' 23.7" 45.87252, -122.72324 Woodlawn

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Remote: Stage equipment along dike trail

Site Safety: Slips, Trips, Falls; Water Hazard;

Field Notes: Use workboat to tow boom to site. Lots of open farmland on the west side of the bank. Room to park equipment

Watercourse: River - Lewis River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

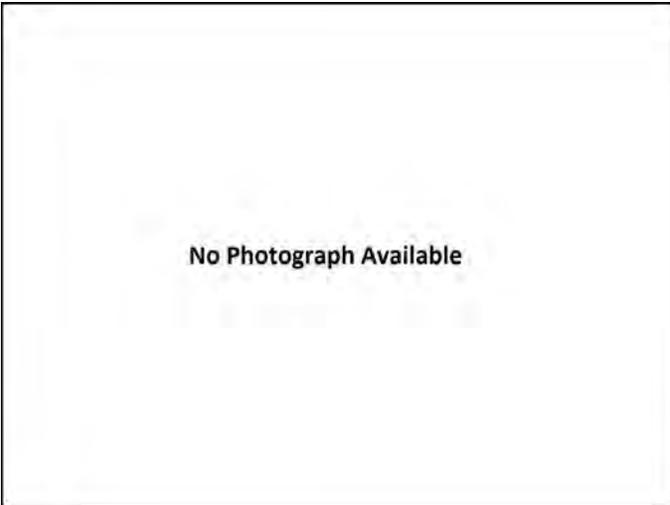
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

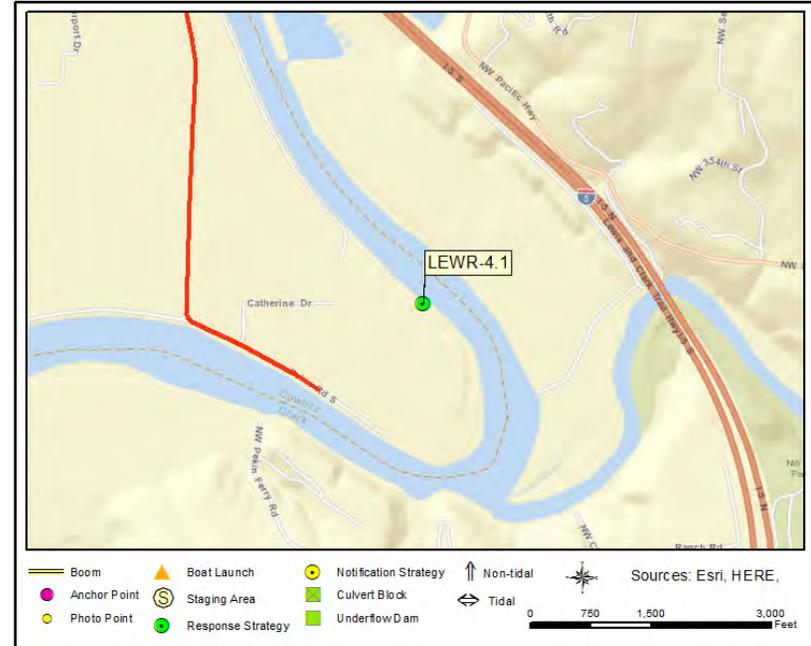
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River

LEWR-4.1



LEWR-4.1 Photo: No photograph currently available



Site Contact

No Information
Not Determined :

Nearest Address

1148 Pekin Rd S
Woodlawn, WA 98674

Driving Directions

1. From Kalama, take I-5 S
2. Take exit 21 to WA-503 E toward Woodland/Cougar (0.25 miles)
3. Turn right onto Scott Rd (0.14 miles)
4. Turn left on N Pekin Rd(0.02 miles)
5. Turn left onto Davidson Ave (0.8 miles)
6. Turn right at second cross street onto 5th St (0.55 miles)
7. Continue onto Pekin Rd S (1.43 miles)
8. Turn left onto Dike Rd.

Lewis River along dike path **LEWR-5.0**

Position - Location: 45° 52.868', -122° 43.964' 45° 52' 52.1", -122° 43' 57.9" 45.88114, -122.73274 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B. After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point A.

Staging Area: Onsite: Stage equipment on dike path

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation

Field Notes: Inform/coordinate response activities with nearby property owners as needed.

Watercourse: River - Lewis River

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

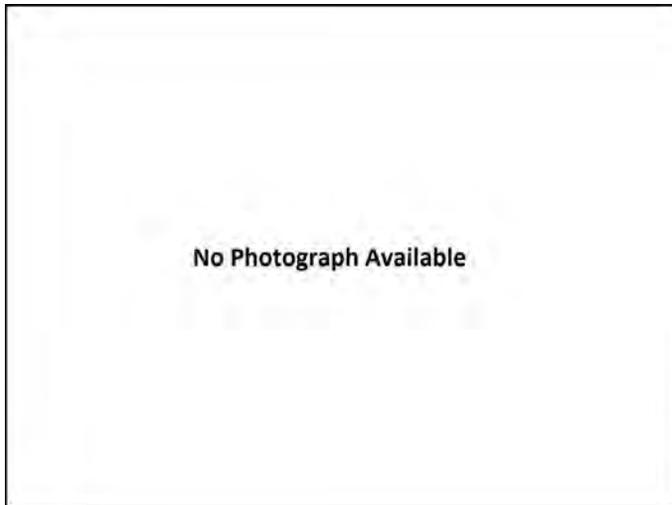
4	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

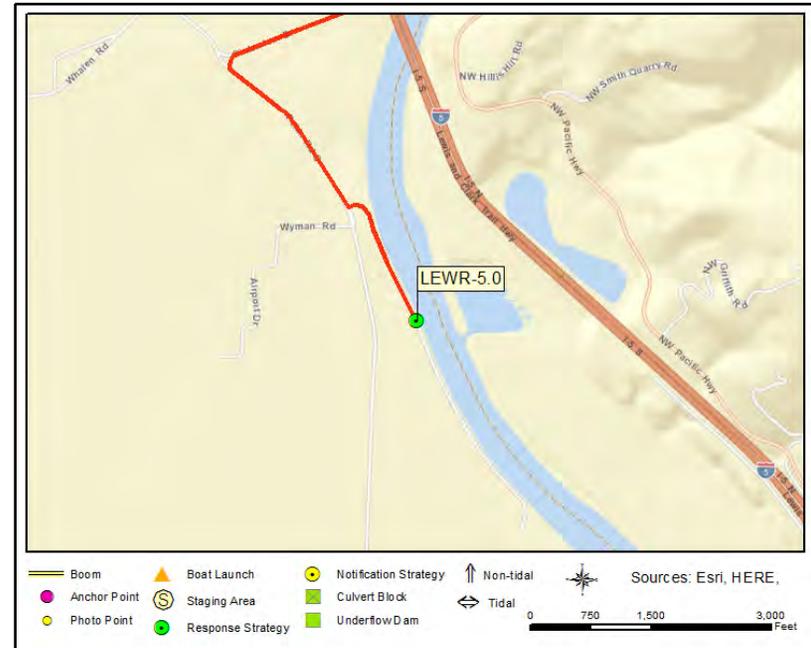
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River along dike path

LEWR-5.0



LEWR-5.0 Photo: No photograph currently available



Site Contact

No Information
Not Determined :

Nearest Address

676 S Pekin Rd
Woodland, WA 98674

Driving Directions

1. From Kalama, take I-5 S
4. Take exit 21 to WA-503 E toward Woodland/Cougar (0.25 miles)
5. Turn left on WA-503 (Lewis River Rd) (0.14 miles)
6. Bear left on Goerig St (0.02 miles)
7. Turn left on Lakeshore Dr (0.8 miles)
8. Continue on Pinkerton Dr (0.55 miles)
9. Turn left on Pekin Rd S (0.38 miles)
10. Turn left onto dike trail and follow to site.

Lewis River - North of NW 15th Avenue LEWR-11.5

Position - Location: 45° 56.268', -122° 41.095' 45° 56' 16.1", -122° 41' 5.7" 45.93779, -122.68492 Woodland

Strategy Objective: Exclusion : Prevent oil from entering side channel on river left

Implementation: Using workboat, transport 200ft hard boom downstream about ~0.9mi to strategy location on river left at entrance to side channel. Secure end of boom to bank immediately upstream of channel entrance at/near Point A (45.93781, -122.684623). Float boom downstream and across channel entrance (riverside of the pilings), pull boom tight, and secure to bank immediately downstream of channel entrance at/near Point B (45.937796, -122.685193). Use anchoring posts, trees, or existing structures to secure boom to river banks. Back hard boom with multiple lengths of sorbent to reduce sheen.

Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area; Pilings at Side Channel Entrance

Field Notes: Strategy location is on river left at entrance to side channel about ~0.9mi downstream from Lewis River Golf Club Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4). Use caution - pilings present at side channel entrance.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

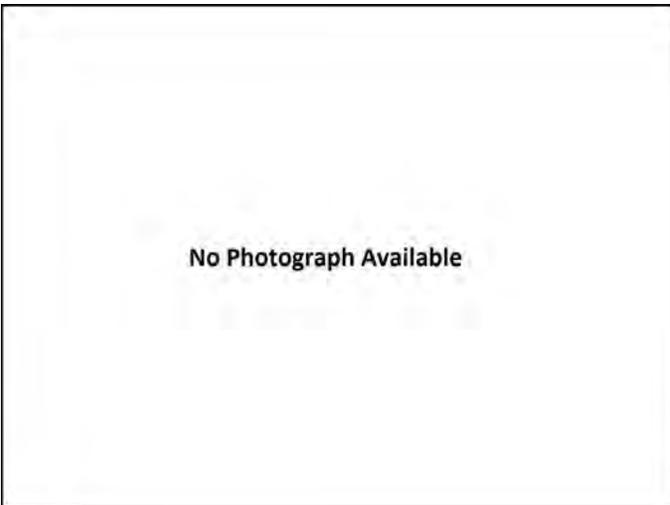
2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

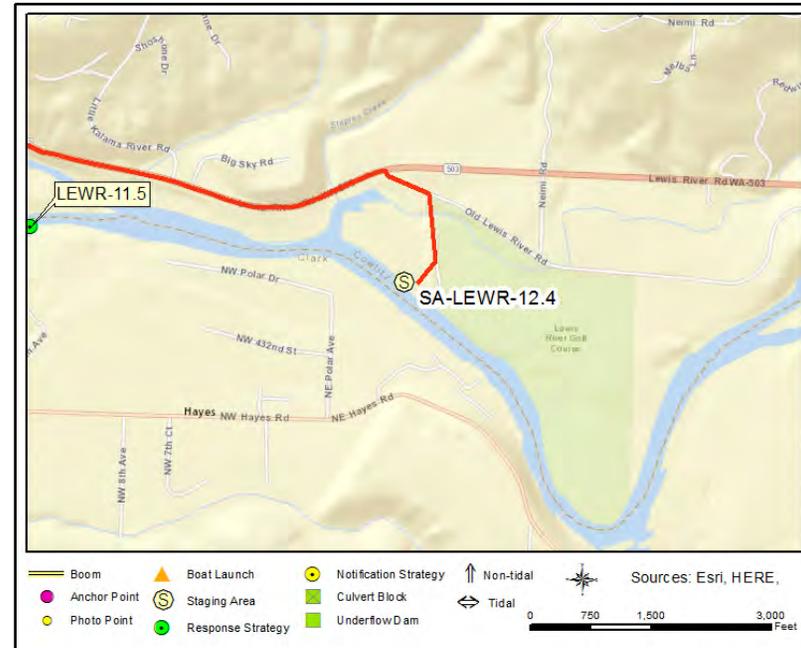
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - North of NW 15th Avenue

LEWR-11.5



LEWR-11.5 Photo: No photograph currently available



Site Contact

Nearest Address

3209 Old Lewis River Rd
Woodland, WA 98674

Driving Directions

To Staging Area and Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4)

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 5.5mi, turn right onto Old Lewis River Road.
5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp. Strategy location is ~0.9mi downstream on river left.

Lewis River at WDFW Water Access Site "Island" LEWR-11.7

Position - Location: 45° 56.337', -122° 40.923' 45° 56' 20.2", -122° 40' 55.4" 45.93895, -122.68205 Woodland

Strategy Objective: Collection : Collect oil moving downstream on Lewis River (Right Channel)

Implementation: Using workboat, transport 400ft hard boom upstream and across to right channel left and secure end of boom to shore at/near Point A (45.938581, -122.681752). From Point A, float boom downstream and across to river right, anchoring boom every 100ft or as needed based on stream flow conditions. Finally, pull boom tight and secure to river right at/near Point B (45.939372, -122.682394; south side of boat ramp at BL-LEWR-11.7). Use anchor posts or existing structures to secure boom ends to river banks. Use vac-truck or skimmer/portable storage for collection at/near Point B.

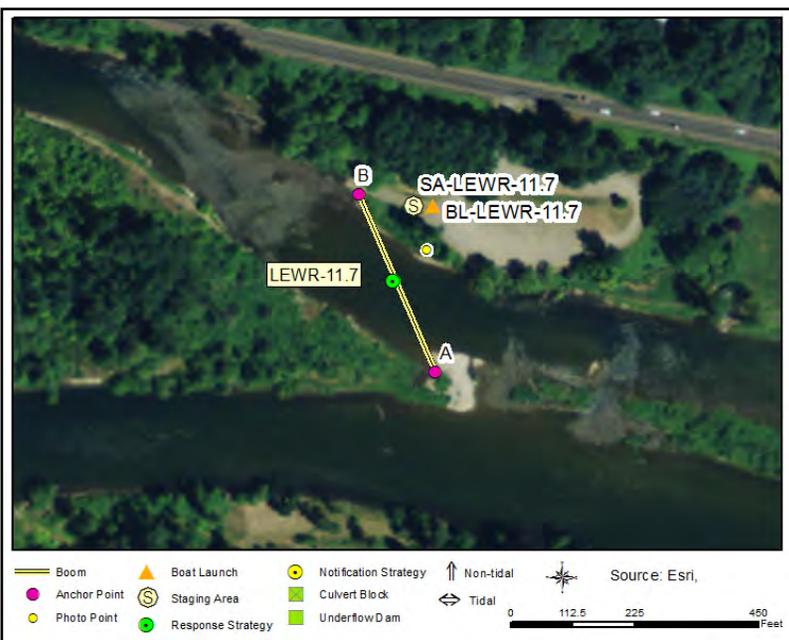
Staging Area: Onsite: Stage in parking area of WDFW Water Access Site "Island" (SA-LEWR-11.7 / BL-LEWR-11.7)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area

Field Notes: Site located at WDFW "Island" Water Access Site. Location is open year round; for more information contact WDFW Region 5 at 360-696-6211 or TeamVancouver@dfw.wa.gov.

Watercourse: River - Below a Dam - Lewis River (Right Channel)

Resources at Risk: Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

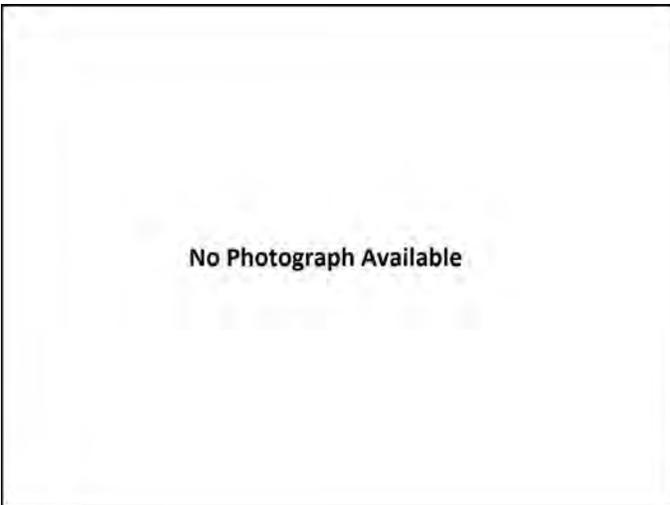
3	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

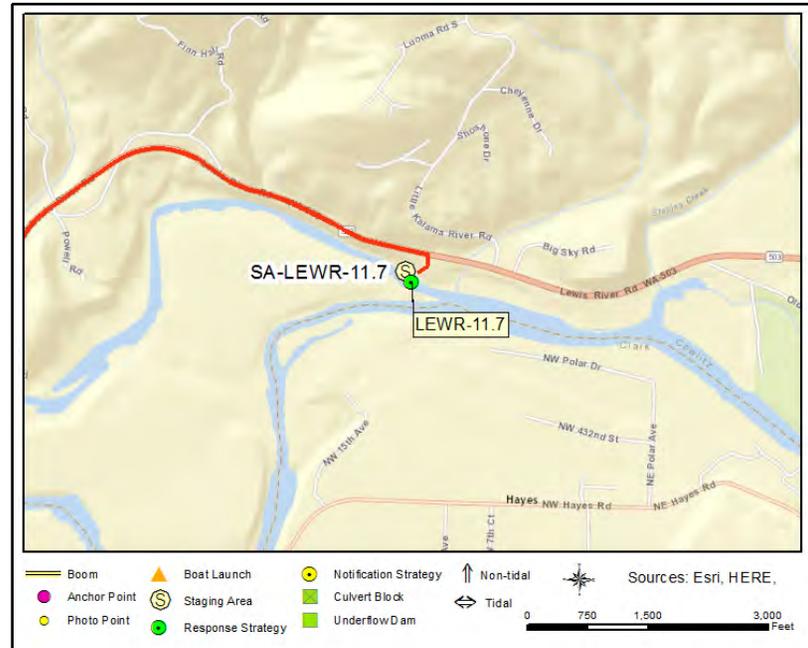
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River at WDFW Water Access Site "Island"

LEWR-11.7



LEWR-11.7 Photo: No photograph currently available



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

3020 Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 4.9mi, turn right into WDFW Lewis River Water Access Site. Stage in parking lot near boat ramp.

Lewis River - Northwest of NW Polar Drive **LEWR-11.8**

Position - Location: 45° 56.282', -122° 40.805' 45° 56' 16.9", -122° 40' 48.3" 45.93804, -122.68008 Woodland

Strategy Objective: Deflection : Deflect oil away from side channel on river right

Implementation: Using workboat, transport 200ft hard boom downstream about ~0.6mi to strategy location on river right, ~200ft upstream from end of island at side channel entrance. Secure boom end to river right at/near Point A (45.938113, -122.679661) using anchoring posts or trees. Float boom downstream and out into the river, anchoring end of boom at/near Point B (45.938009, -122.680423). Ensure additional anchor(s) are utilized as boom is deployed. Number of anchors needed and actual boom angle greatly depend on stream flow conditions; modify strategy as needed to achieve deflection.

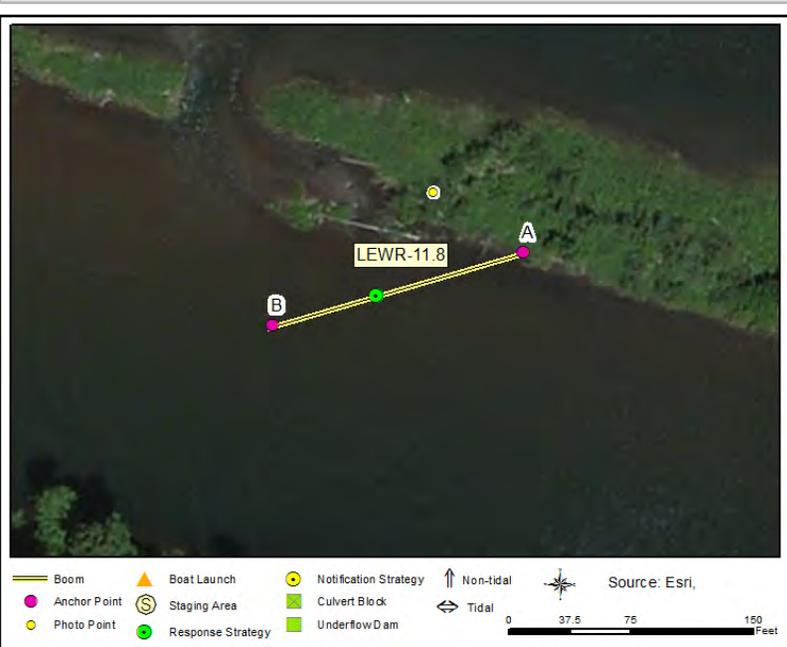
Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area; Vegetation on River Banks

Field Notes: Strategy location is on river right at entrance to side channel about ~0.6mi downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4).

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

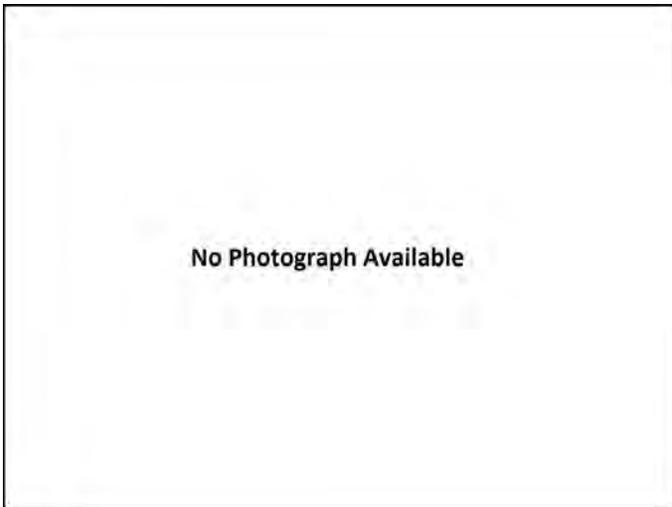
2	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

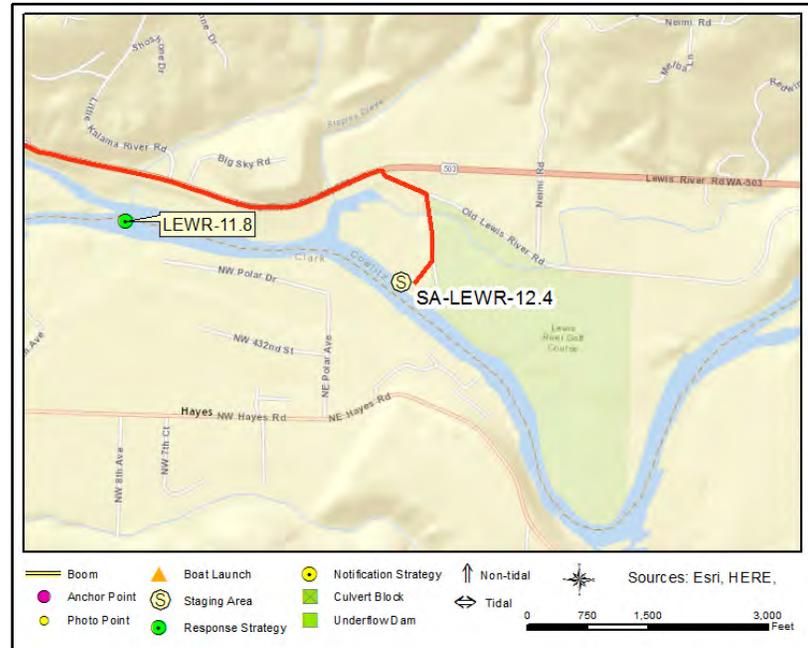
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Northwest of NW Polar Drive

LEWR-11.8



LEWR-11.8 Photo: No photograph currently available



Site Contact

Nearest Address

3209 Old Lewis River Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4)
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 5.5mi, turn right onto Old Lewis River Road.
 5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
 6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp. Strategy location is ~0.6mi downstream on river right.

Lewis River - Fish Pens at Side Channel Entrance t LEWR-12.2

Position - Location: 45° 56.264', -122° 40.207' 45° 56' 15.8", -122° 40' 12.4" 45.93773, -122.67012 Woodland

Strategy Objective: Deflection : Deflect oil away from fish pens near entrance to Houghton Creek

Implementation: Using workboat, transport 300ft hard boom downstream about ~0.2mi to strategy location on river right (about ~200ft upstream from fish pens). Secure boom end to river right at/near Point A (45.937679, -122.669443) using anchoring posts or trees. Float boom across side channel entrance, riverside of the fish pens. Anchor remaining boom end at/near Point B (45.937773, -122.670562). Ensure additional anchors are utilized as boom is deployed. Number of anchors and actual boom angle greatly depend on stream flow conditions; modify strategy as needed to achieve deflection.

Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area; Vegetation on River Banks

Field Notes: Strategy location is on river right about ~200ft upstream of fish pens, ~0.2mi downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4).

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Fish Pens



Recommended Equipment

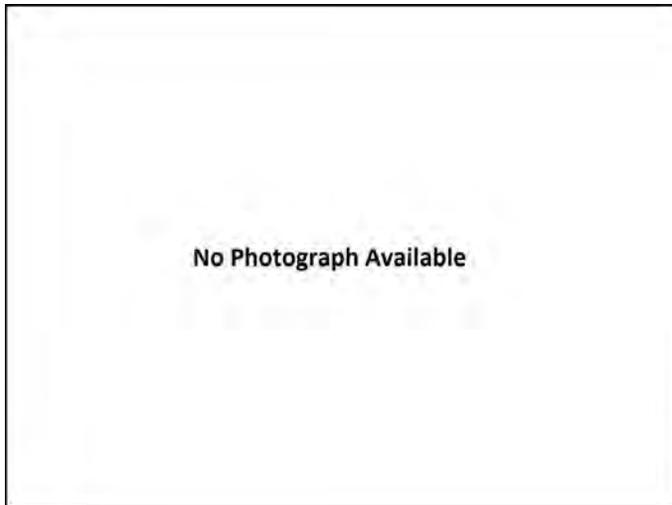
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

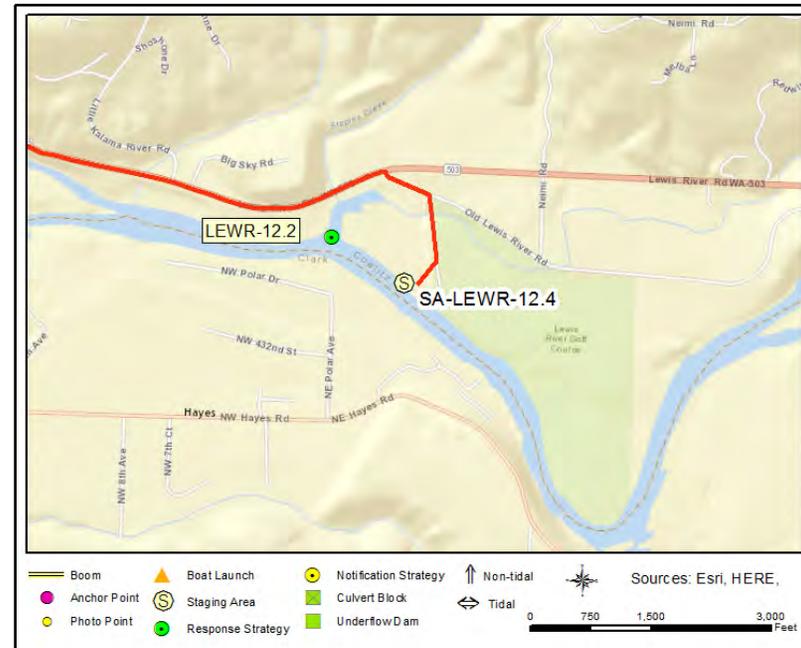
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Fish Pens at Side Channel Entrance t

LEWR-12.2



LEWR-12.2 Photo: No photograph currently available



Site Contact

Nearest Address

3209 Old Lewis River Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4)
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 5.5mi, turn right onto Old Lewis River Road.
 5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
 6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp. Strategy location is ~0.2mi downstream on river right.

Lewis River - Downstream from Lewis River Golf Cou LEWR-12.3a

Position - Location: 45° 56.191', -122° 40.042' 45° 56' 11.5", -122° 40' 2.5" 45.93652, -122.66736 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (45.936139, -122.667075; about ~200ft west/riverside of boat ramp) and Point B (45.93684, -122.667576; on river right ~400ft downstream from ramp. After anchors are set, tow boom out from boat ramp and secure end to anchor at/near Point A, then all remaining anchor points between Points A and B as boom is deployed. Finally, secure boom end to bank at Point B using anchor posts. Use vac-truck or skimmer/portable storage for collection at/near Point B.

Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area; Vegetation on River Banks

Field Notes: Strategy shoreside location (Point B) is on river right about ~400ft downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4). Dirt road that leads NW from ramp will take you to strategy shoreside location.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

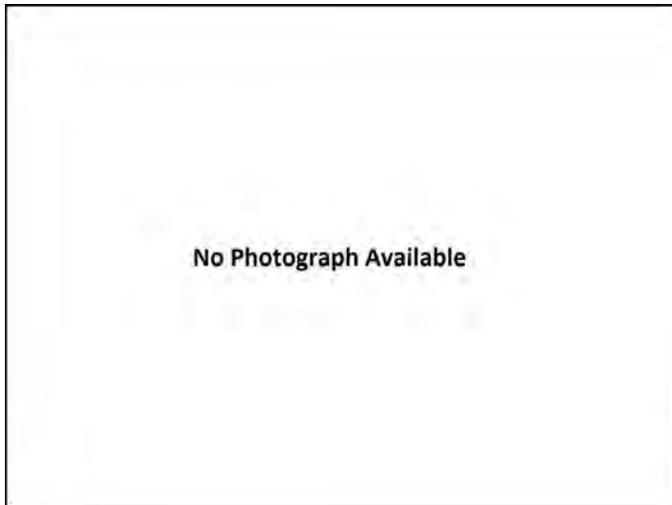
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

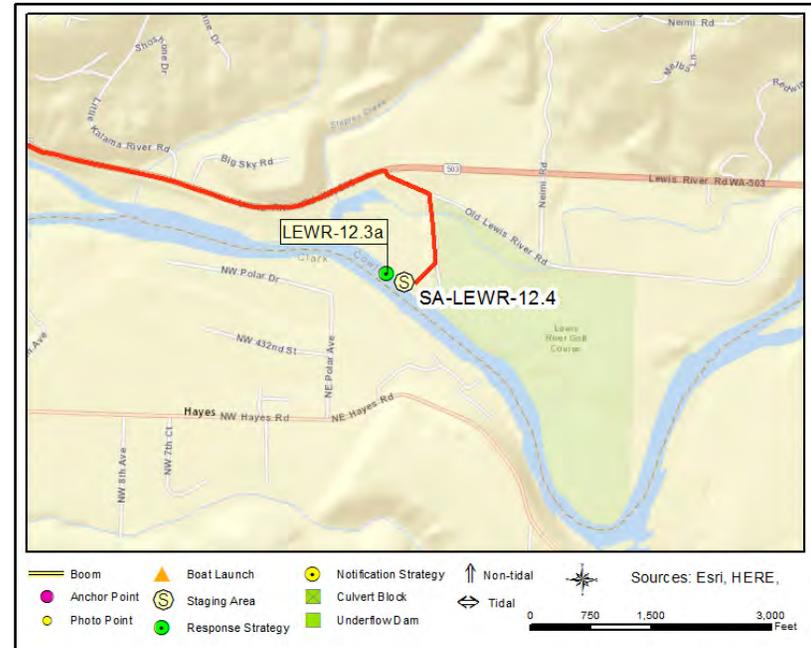
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Downstream from Lewis River Golf Cou

LEWR-12.3a



LEWR-12.3a Photo: No photograph currently available



Site Contact

Nearest Address

3209 Old Lewis River Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4)
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 5.5mi, turn right onto Old Lewis River Road.
 5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
 6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp. Strategy shoreside location is at end of 400ft dirt road that leads NW from boat ramp area.

Lewis River - Downstream from Lewis River Golf Cou **LEWR-12.3b**

Position - Location: 45° 56.220', -122° 40.100' 45° 56' 13.2", -122° 40' 6.0" 45.93700, -122.66833 Woodland

Strategy Objective: Deflection : Deflect oil away from river right on the Lewis River

Implementation: Using workboat, transport 300ft hard boom downstream about ~500ft to strategy's shoreside location on river right. Secure boom end to bank at/near Point A (45.936981, -122.667798), using anchoring posts or trees. Float boom downstream and out into river, anchoring the remaining boom end at/near Point B (45.937091, -122.668902; ~120ft out from river right). Ensure additional anchors are utilized as boom is deployed. Number of anchors and actual boom angle greatly depend on stream flow conditions; modify strategy as needed to achieve deflection.

Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area; Vegetation on River Banks

Field Notes: Strategy shoreside location (Point A) is on river right about ~500ft downstream from Lewis River Golf Course Boat Ramp (SA-LEWR-12.4, BL-LEWR-12.4). Trail at end of dirt road that leads NW from ramp will take you to strategy shoreside location.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Fish Pens



Recommended Equipment

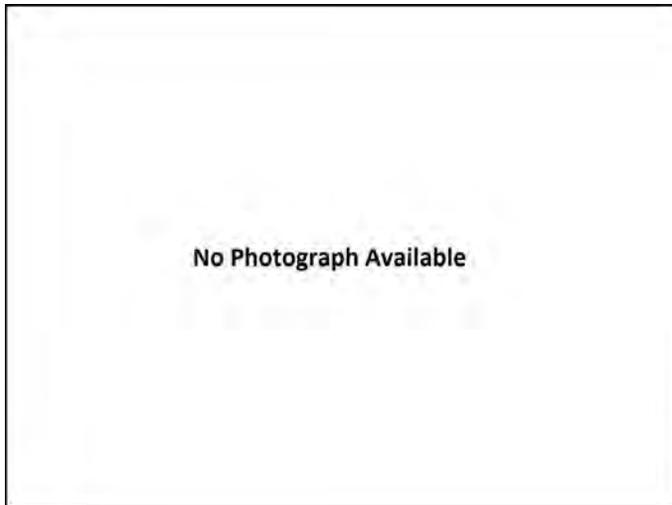
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

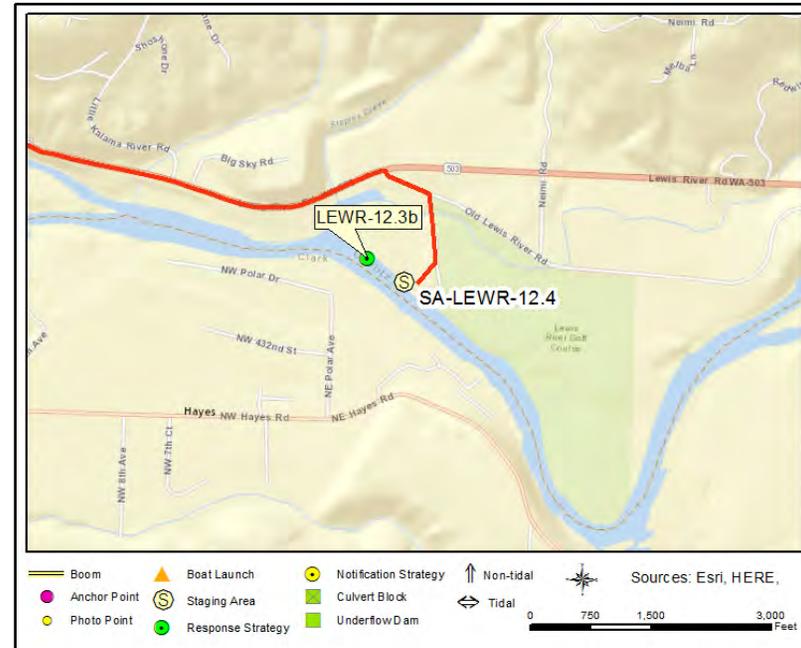
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Downstream from Lewis River Golf Cou

LEWR-12.3b



LEWR-12.3b Photo: No photograph currently available



Site Contact

Nearest Address

3209 Old Lewis River Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-12.4, BL-LEWR-12.4)
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 5.5mi, turn right onto Old Lewis River Road.
 5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
 6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp. Strategy shoreside location is on trail about ~80ft beyond end of 400ft dirt road that leads NW from boat ramp area.

Lewis River at the Lewis River Golf Course LEWR-12.5

Position - Location: 45° 56.120', -122° 39.925' 45° 56' 7.2", -122° 39' 55.5" 45.93533, -122.66541 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (45.935021, -122.665124, ~145ft out from river right) and Point B (45.935676, -122.665716; on river right ~230ft upstream from boat ramp). After anchors are set, tow boom upstream secure end to anchor at/near Point A, then all remaining anchor points between Points A and B as boom is deployed. Finally, secure remaining boom end to bank at Point B using anchor posts. Use skimmer/portable storage for collection at/near Point B.

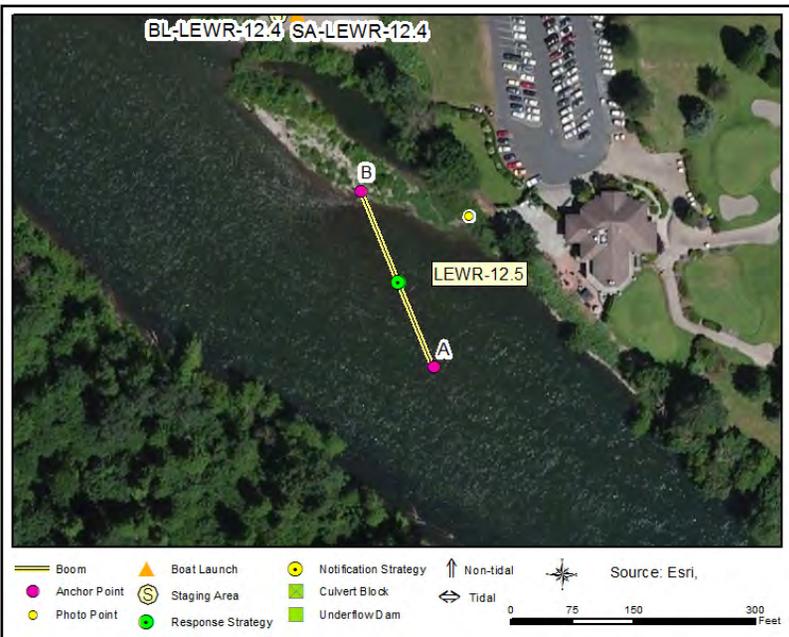
Staging Area: Remote: Stage in parking area of Lewis River Golf Course Boat Launch (SA-LEWR-12.4 / BL-LEWR-12.4)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles; Vegetation on River Banks, Steep Banks

Field Notes: Site is located about 275ft down slope from parking lot at Club House for Lewis River Golf Course; with a 26ft drop. Use of vac-truck from parking area not recommended.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - East of NE 12th Avenue LEWR-13.3

Position - Location: 45° 55.706', -122° 39.264' 45° 55' 42.4", -122° 39' 15.8" 45.92843, -122.65439 Woodland

Strategy Objective: Exclusion : Keep oil out of side channel on Lewis River (river left)

Implementation: Using workboat, transport 100ft hard boom downstream about ~1.4mi to strategy location on river left at entrance to side channel. Secure end of boom to bank immediately upstream of channel entrance at/near Point A (45.92853, -122.654264). Float boom downstream and across channel entrance, pull boom tight, and secure to bank immediately downstream of channel entrance at/near Point B (45.928368, -122.654519). Use anchoring posts, trees, or existing structures to secure boom to river banks. Back hard boom with multiple lengths of sorbent to reduce sheen.

Staging Area: Remote: Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles; Vegetation on River Banks, Partially Submerged Logs

Field Notes: Strategy is located on river left about ~1.4mi downstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

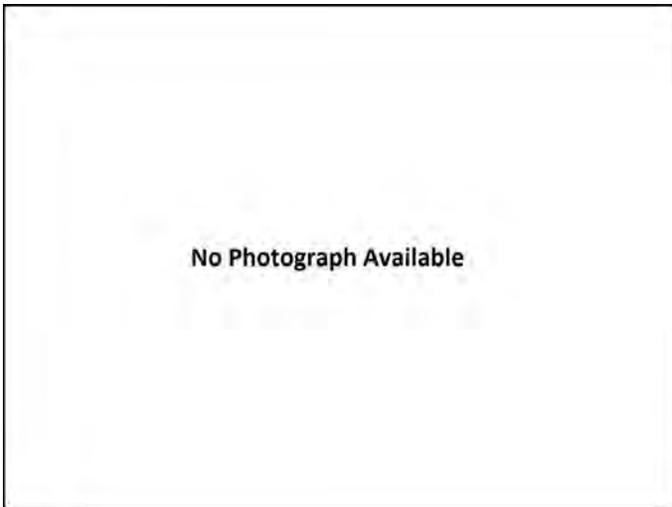
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

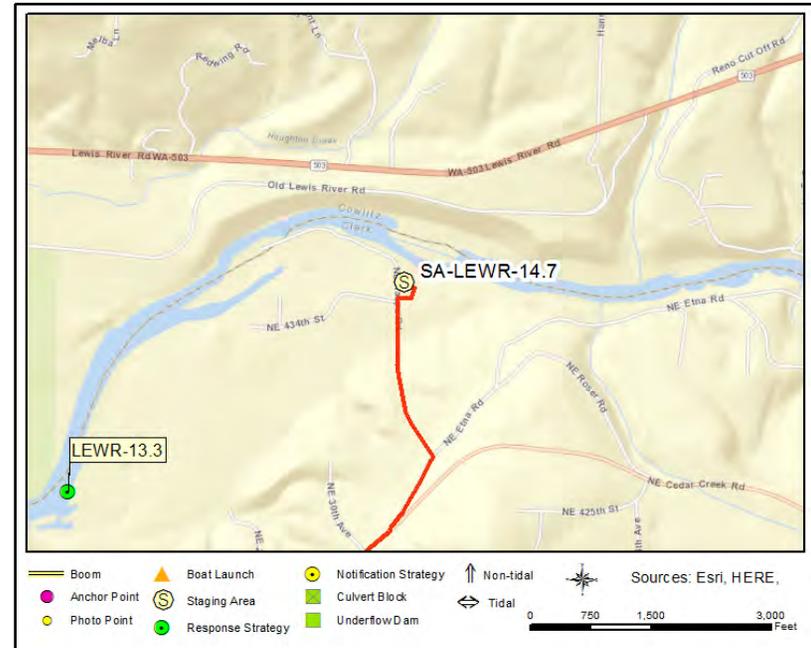
1	Boat Operator
2	Laborer
	Supervisor

Lewis River - East of NE 12th Avenue

LEWR-13.3



LEWR-13.3 Photo: No photograph currently available



Site Contact

Nearest Address

43309 NE Haapa Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-14.7 / BL-LEWR-14.7); Happa Boat Launch
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 0.1mi, turn right onto E CC Street.
 5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
 6. After 5.3mi, roadway becomes NE Cedar Creek Road
 7. After 0.6mi, stay to left and travel on NE Etna Road
 8. After 0.2mi, turn left onto NE Haapa Road
 9. After 0.4, roadway curves to the right and becomes Haapa Pit. Entrance to Haapa Park is on the left. Stage equipment in parking area near boat ramp.

Lewis River - West of 434th Street LEWR-13.8

Position - Location: 45° 55.994', -122° 39.093' 45° 55' 59.6", -122° 39' 5.6" 45.93323, -122.65155 Woodland

Strategy Objective: Exclusion : Keep oil out of side channel on Lewis River (river left)

Implementation: Using workboat, transport 100ft hard boom downstream about ~0.9mi to strategy location on river left at entrance to side channel. Secure end of boom to bank immediately upstream of channel entrance at/near Point A (45.933315, -122.65139). Float boom downstream and across channel entrance, pull boom tight, and secure to bank immediately downstream of channel entrance at/near Point B (45.933207, -122.65165). Use anchoring posts, trees, or existing structures to secure boom to river banks. Back hard boom with multiple lengths of sorbent to reduce sheen.

Staging Area: Remote: Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles; Vegetation on River Banks, Partially Submerged Logs

Field Notes: Strategy is located on river left about ~0.9mi downstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

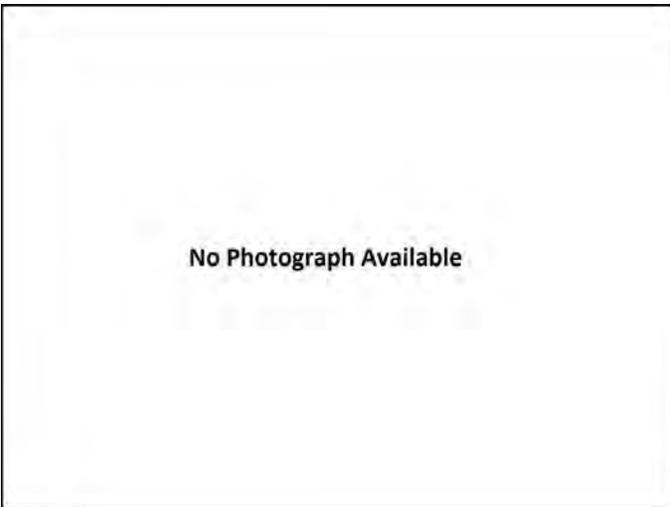
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

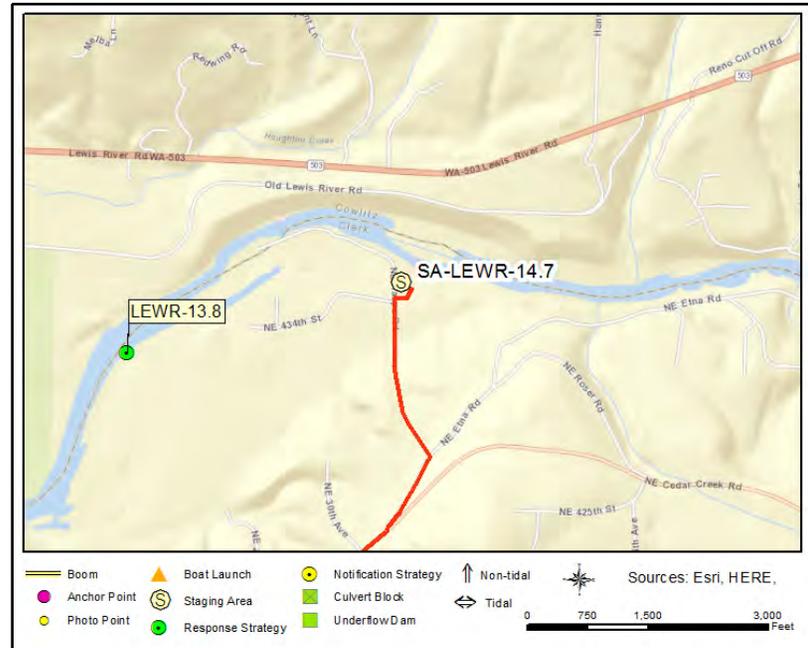
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - West of 434th Street

LEWR-13.8



LEWR-13.8 Photo: No photograph currently available



Site Contact

Nearest Address

43309 NE Haapa Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-14.7 / BL-LEWR-14.7); Happa Boat Launch
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 0.1mi, turn right onto E CC Street.
 5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
 6. After 5.3mi, roadway becomes NE Cedar Creek Road
 7. After 0.6mi, stay to left and travel on NE Etna Road
 8. After 0.2mi, turn left onto NE Haapa Road
 9. After 0.4, roadway curves to the right and becomes Haapa Pit. Entrance to Haapa Park is on the left. Stage equipment in parking area near boat ramp.

Lewis River - Upstream from Happa Boat Launch LEWR-14.9

Position - Location: 45° 56.193', -122° 38.020' 45° 56' 11.6", -122° 38' 1.2" 45.93655, -122.63367 Woodland

Strategy Objective: Deflection : Deflect oil away from river right on the Lewis River

Implementation: Using workboat, transport 300ft hard boom upstream about ~1100ft to strategy's shoreside location on river right. Secure boom end to bank at/near Point A (45.936643, -122.633147), using anchoring posts or trees. Float boom downstream and out into river, anchoring the remaining boom end at/near Point B (45.936513, -122.634218; ~190ft out from river right, ~150ft upstream from island). Ensure additional anchors are utilized as boom is deployed. Number of anchors and actual boom angle greatly depend on stream flow conditions; modify strategy as needed to achieve deflection.

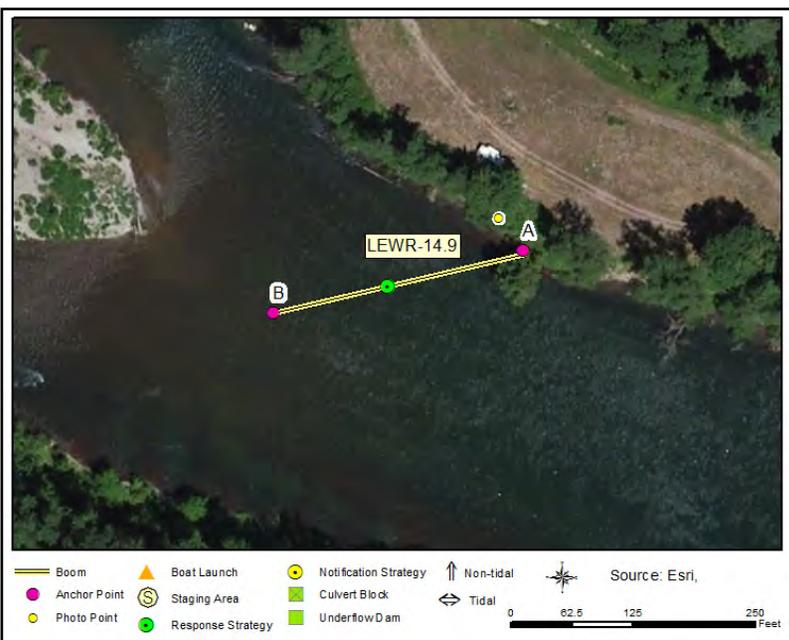
Staging Area: Remote: Stage in parking lot of Lewis River - Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7)

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles; Vegetation on River Banks, Partially Submerged Logs

Field Notes: Strategy is located on river right about ~0.2mi upstream from Happa Boat Launch (SA-LEWR-14.7/BL-LEWR-14.7).

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

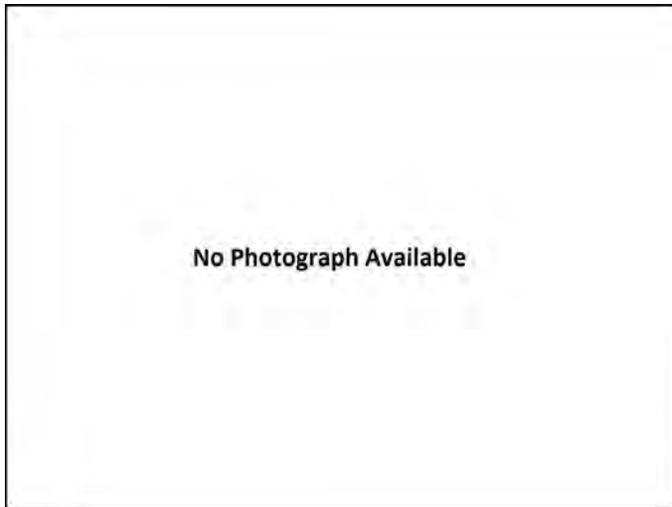
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

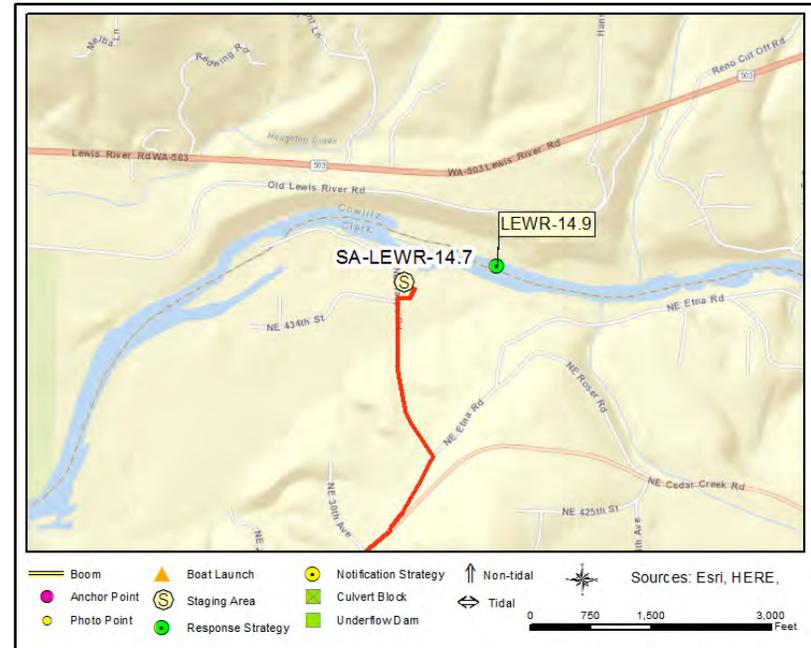
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Upstream from Happa Boat Launch

LEWR-14.9



LEWR-14.9 Photo: No photograph currently available



Site Contact

Nearest Address

43309 NE Haapa Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch (SA-LEWR-14.7 / BL-LEWR-14.7); Happa Boat Launch
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 0.1mi, turn right onto E CC Street.
 5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
 6. After 5.3mi, roadway becomes NE Cedar Creek Road
 7. After 0.6mi, stay to left and travel on NE Etna Road
 8. After 0.2mi, turn left onto NE Haapa Road
 9. After 0.4, roadway curves to the right and becomes Haapa Pit. Entrance to Haapa Park is on the left. Stage equipment in parking area near boat ramp.

Lewis River Fish Hatchery - Downstream Water Intak LEWR-15.5a

Position - Location: 45° 56.224', -122° 37.207' 45° 56' 13.5", -122° 37' 12.4" 45.93707, -122.62012 Woodland

Strategy Objective: Exclusion : Keep oil away from fish hatchery water intakes.

Implementation: Secure end of 200ft length of boom to bank on river right at/near Point A (45.937139, -122.619931; about ~40ft upstream of water intake pipes). Using workboat, float boom downstream and out from river right, anchoring boom in river at/near Point B (45.937036, -122.620126; ~35ft out from pipe structure). Float remaining boom downstream and back to river right, securing it to shore at/near Point C (45.937131, -122.620355, ~40ft downstream from intake pipes). Deploy sorbent boom within hard boom area as needed to reduce sheen or recover product.

Staging Area: Remote: Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5). Use boat launch BL-LEWR-15.5.

Site Safety: Slips, Trips, Falls; Water Hazard; Steep Banks

Field Notes: Strategy location is at downstream water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Cal 360-225-4390.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Water Intakes



Recommended Equipment

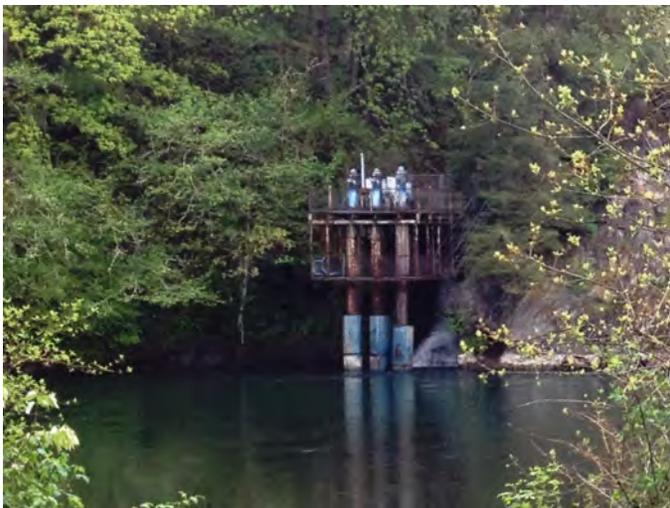
1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

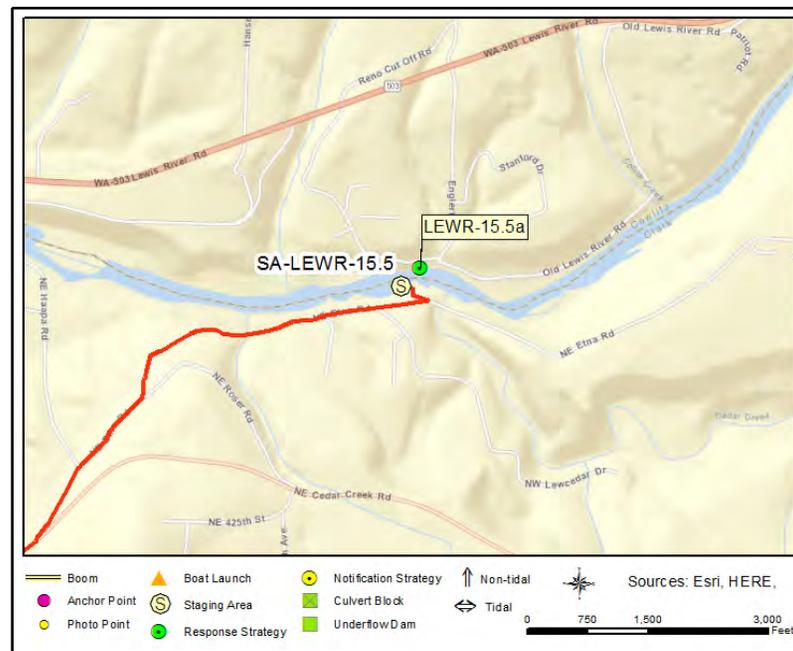
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River Fish Hatchery - Downstream Water Intak

LEWR-15.5a



LEWR-15.5a Photo: On river left near boat launch BL-LEWR-15.5, looking across Lewis River towards fish hatchery water intakes on river right.



Site Contact

WDFW - Merwin Hatchery
 Land/Property Contact : Hatchery Manager
 111 Merwin Hatchery Court
 Ariel, WA 98603-9727
 360-225-4390

Nearest Address

5100 NE Etna Rd
 Woodland, WA 98674

Driving Directions

To Staging Area and Boat Launch SA-LEWR-15.5 and BL-LEWR-15.5

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.

NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

Lewis River at WDFW Water Access Site "Cedar Creek" LEWR-15.5b

Position - Location: 45° 56.201', -122° 37.199' 45° 56' 12.0", -122° 37' 11.9" 45.93668, -122.61998 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A (45.936742, -122.619328; about ~150ft out from tree line on river left) and Point B (45.936657, -122.620459; the upstream side of boat ramp at BL-LEWR-15.5). After anchors are set, tow boom upstream and secure to Point A, then all remaining anchor points between Points A and B as boom is deployed. Finally, secure boom end to bank at Point B using anchor posts or existing structures. Use vac-truck or skimmer/portable storage at/near Point B for collection.

Staging Area: Onsite: Staging Area and Boat Launch SA-LEWR-15.5 and BL-LEWR-15.5 are onsite

Site Safety: Slips, Trips, Falls; Water Hazard; Moving Vehicles in Parking/Boat Launch Area

Field Notes: Site located at WDFW "Cedar Creek" Water Access Site. Location is open year round; for more information contact WDFW Region 5 at 360-696-6211 or TeamVancouver@dfw.wa.gov.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Downstream Resources, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

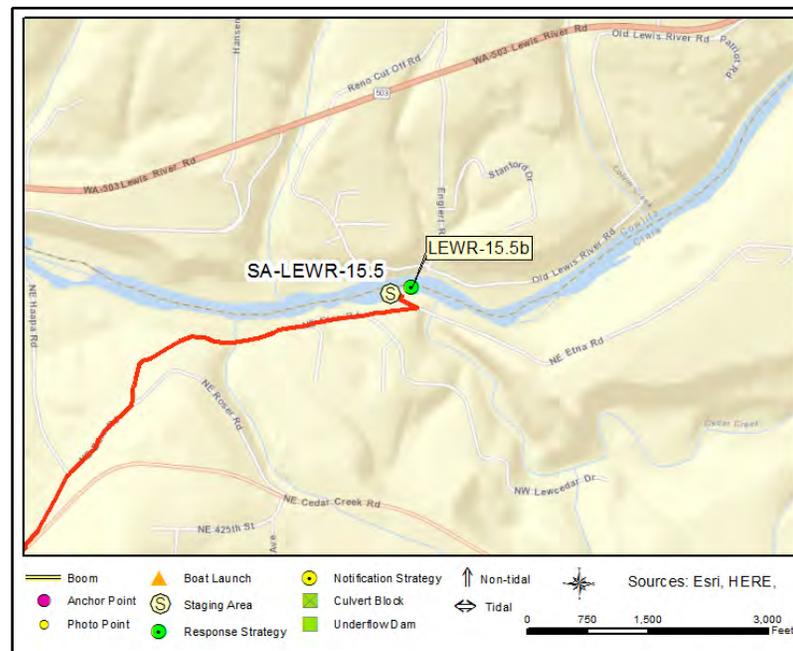
1	Boat Operator
2	Laborer
	Supervisor

Lewis River at WDFW Water Access Site "Cedar Creek"

LEWR-15.5b



LEWR-15.5b Photo: At WDFW "Cedar Creek" Water Access Site boat launch on river left of Lewis River looking upstream/east towards river with river right in background.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

5100 NE Etna Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 0.1mi, turn right onto E CC Street.
 5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
 6. After 5.3mi, roadway becomes NE Cedar Creek Road
 7. After 0.6mi, stay to left and travel on NE Etna Road
 8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.
- NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

Lewis River off NE Etna Road LEWR-15.6a

Position - Location: 45° 56.151', -122° 37.089' 45° 56' 9.0", -122° 37' 5.3" 45.93585, -122.61815 Woodland

Strategy Objective: Exclusion : Keep oil out of Cedar Creek Fork of Lewis River

Implementation: Transport equipment to site using workboat (jet drive) from BL-LEWR-15.5. Secure end of 100ft boom to upstream side of backwater area on river left at/near Point A (45.935749, -122.617925). Using workboat, float remaining end downstream and across backwater area, remove slack in boom and secure to shore on river left at/near Point B (45.935916, -122.618233). In same manner deploy multiple lengths of sorbent boom across backwater area behind hard boom. Replace saturated sorbents as needed. Use anchoring posts, trees, or existing structures to secure boom to river bank.

Staging Area: Remote: Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5); use boat launch at same location.

Site Safety: Slips, Trips, Falls; Water Hazard; Submerged/Partially Submerged Rock in Area

Field Notes: Site is located about ~700ft upstream from boat launch BL-LEWR-15.5; backwater area just upstream from Cedar Creek Fork entrance across from Lewis River Fish Hatchery.

Watercourse: River - Below a Dam - Lewis River - Cedar Creek Fork

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

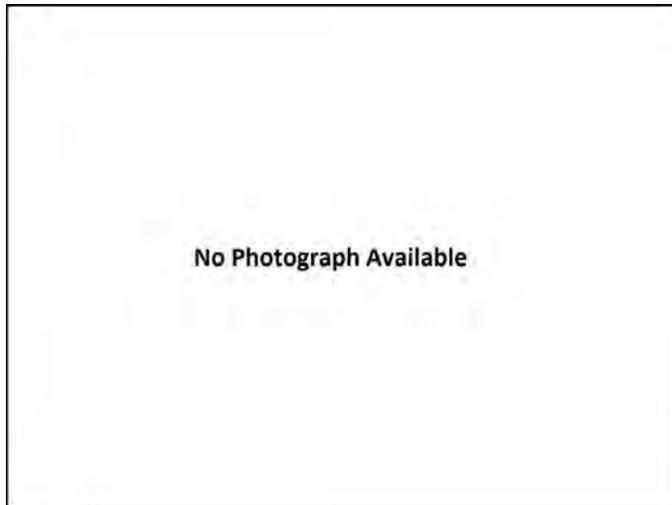
4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

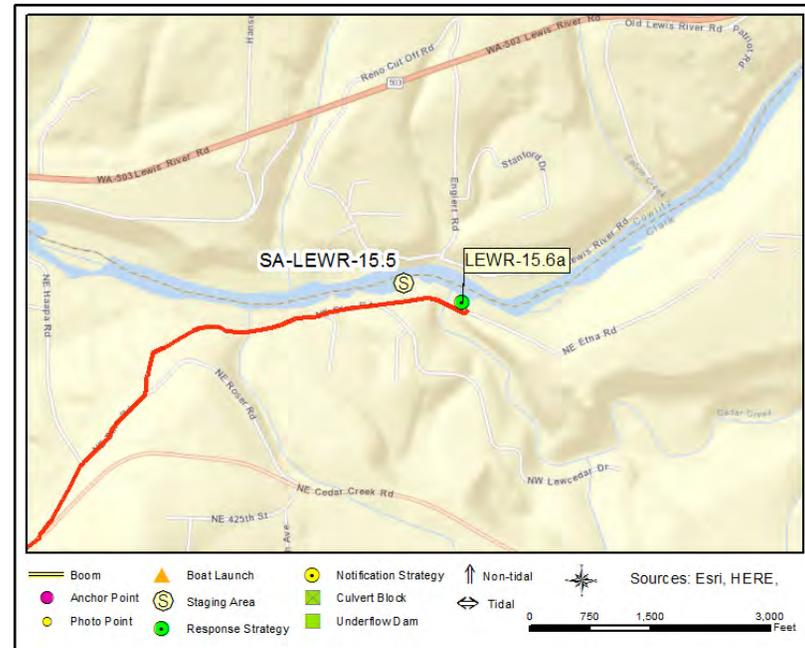
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River off NE Etna Road

LEWR-15.6a



LEWR-15.6a Photo: No photograph currently available



Site Contact

Nearest Address

5200 NE Etna Rd
Woodland, WA 98674

Driving Directions

- To Staging Area and Boat Launch SA-LEWR-15.5 and BL-LEWR-15.5
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
 2. At end of ramp continue straight to head south on Pacific Avenue
 3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
 4. After 0.1mi, turn right onto E CC Street.
 5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
 6. After 5.3mi, roadway becomes NE Cedar Creek Road
 7. After 0.6mi, stay to left and travel on NE Etna Road
 8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.
- NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

Lewis River - Cedar Creek Fork

LEWR-15.6b

Position - Location: 45° 56.166', -122° 37.125' 45° 56' 9.9", -122° 37' 7.5" 45.93609, -122.61875 Woodland

Strategy Objective: Exclusion : Keep oil out of Cedar Creek Fork of Lewis River

Implementation: Transport equipment to site using workboat (jet drive) from BL-LEWR-15.5. Secure end of 100ft boom to upstream side of Lewis River Cedar Creek Fork on river left at/near Point A (45.935749, -122.617925). Using workboat, float remaining end downstream and across fork, remove slack in boom and secure to shore on river left at/near Point B (45.935916, -122.618233). In same manner deploy multiple lengths of sorbent boom across waterway behind hard boom. Replace saturated sorbents as needed. Use anchoring posts, trees, or existing structures to secure boom to river bank.

Staging Area: Remote: Stage at WDFW Water Access Point "Cedar" (SA-LEWR-15.5). Use boat launch BL-LEWR-15.5.

Site Safety: Slips, Trips, Falls; Water Hazard; Submerged/Partially Submerged Rock in Area

Field Notes: Site is located about ~500ft upstream from boat launch BL-LEWR-15.5, downstream of Etna Road Bridge over Cedar Creek Fork.

Watercourse: River - Below a Dam - Lewis River - Cedar Creek Fork

Resources at Risk: Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

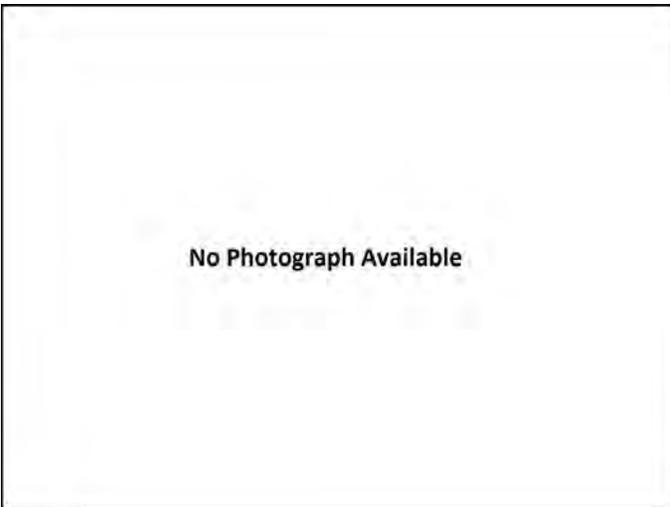
4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

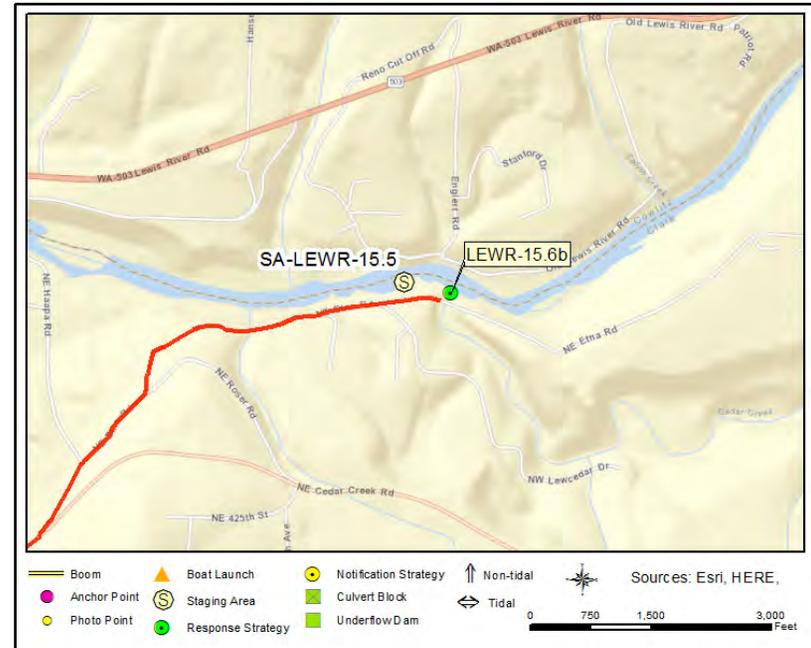
	Boat Operator
2	Laborer
1	Supervisor

Lewis River - Cedar Creek Fork

LEWR-15.6b



LEWR-15.6b Photo: No photograph currently available



Site Contact

Nearest Address

5100 NE Etna Rd
Woodland, WA 98674

Driving Directions

To Staging Area and Boat Launch SA-LEWR-15.5 and BL-LEWR-15.5

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.

NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

Lewis River at Old Lewis River Road LEWR-16.1a

Position - Location: 45° 56.307', -122° 36.597' 45° 56' 18.4", -122° 36' 35.8" 45.93845, -122.60995 Woodland

Strategy Objective: Collection : Collect oil moving downstream on the Lewis River

Implementation: Using workboat, set anchor upstream in mid-river at/near Point A (45.938617, -122.609268). Set additional in-river anchoring systems in relatively straight line between Point A and Point B (45.938395, -122.610399, bank on river right). Tow 300ft boom upstream and secure end to Point A. Float boom downstream and across to river right, securing it to each anchoring system as you go. Finally, secure boom to bank at Point B using anchoring posts, trees, or existing structures. Vac-truck or skimmer/storage collection at Point B.

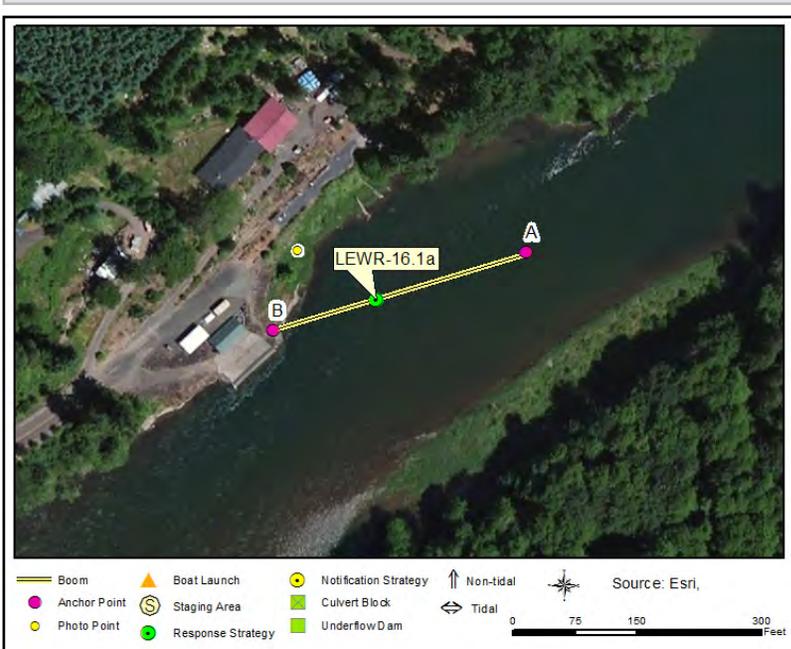
Staging Area: Remote: Stage equipment on-site. Launch work boat from Cedar Creek Boat Launch (BL-LEWR-15.5)

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation

Field Notes: Strategy location is immediately upstream of water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Call 360-225-4390.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Downstream Resources, Fish Hatchery, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
2	Each	Heaving Line(s)
1	Each	Vac Truck or Skimmer and Storage (if collection)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

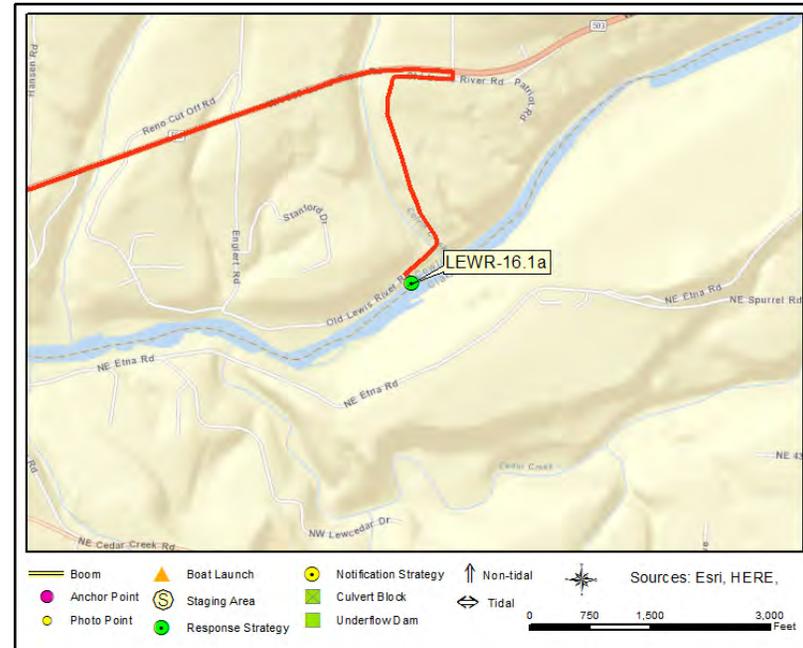
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River at Old Lewis River Road

LEWR-16.1a



LEWR-16.1a Photo: On Lewis River (river right) immediately upstream of hatchery water intakes, looking upstream/NE and across to river left.



Site Contact

WDFW - Merwin Hatchery
 Land/Property Contact : Hatchery Manager
 111 Merwin Hatchery Court
 Ariel, WA 98603-9727
 360-225-4390

Nearest Address

4500 Old Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 7.7mi, turn right onto Old Lewis River Road.
5. After 1.1mi, about 0.2mi beyond the fish hatchery, the strategy location will be on the right. Stage vehicles and equipment near WDFW water intake pump house.

Lewis River Fish Hatchery - Upstream Water Intakes LEWR-16.1b

Position - Location: 45° 56.289', -122° 36.625' 45° 56' 17.4", -122° 36' 37.5" 45.93815, -122.61042 Woodland

Strategy Objective: Exclusion : Keep oil away from fish hatchery water intakes.

Implementation: Secure end of 200ft length of boom to bank on river right at/near Point A (45.938391, -122.610389; about ~35ft upstream of pump house dock). Using workboat, float boom downstream and out from the dock, anchoring boom's mid-point in river at/near Point B (45.938143, -122.610428; ~40ft out from middle of dock). Float remaining boom downstream and back to river right, securing it to shore at/near Point C (45.938135, -122.61083, ~40ft downstream from pump house dock). Deploy sorbent boom within hard boom area as needed to reduce sheen or recover product.

Staging Area: Onsite: Stage equipment on-site. Launch work boat from Cedar Creek Boat Launch (BL-LEWR-15.5)

Site Safety: Slips, Trips, Falls; Water Hazard

Field Notes: Strategy location is at upstream water intakes for the Lewis River Hatchery; coordinate activities with WDFW Hatchery Manager - Call 360-225-4390.

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Water Intakes



Recommended Equipment

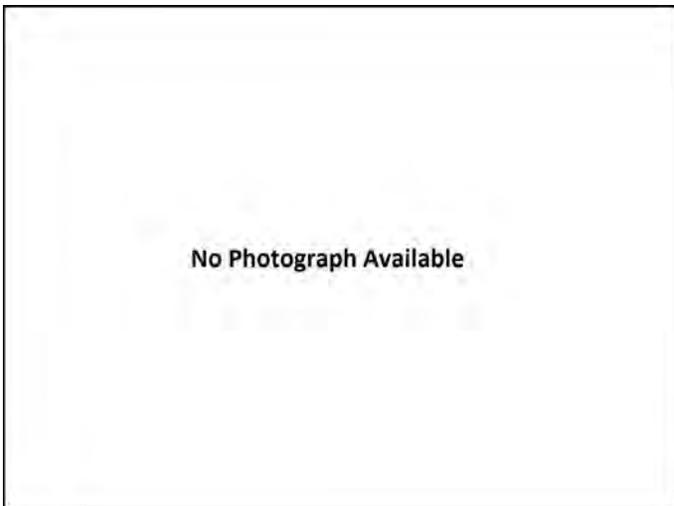
1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
1	Each	Workboat(s) - (jet drive)

Recommended Personnel

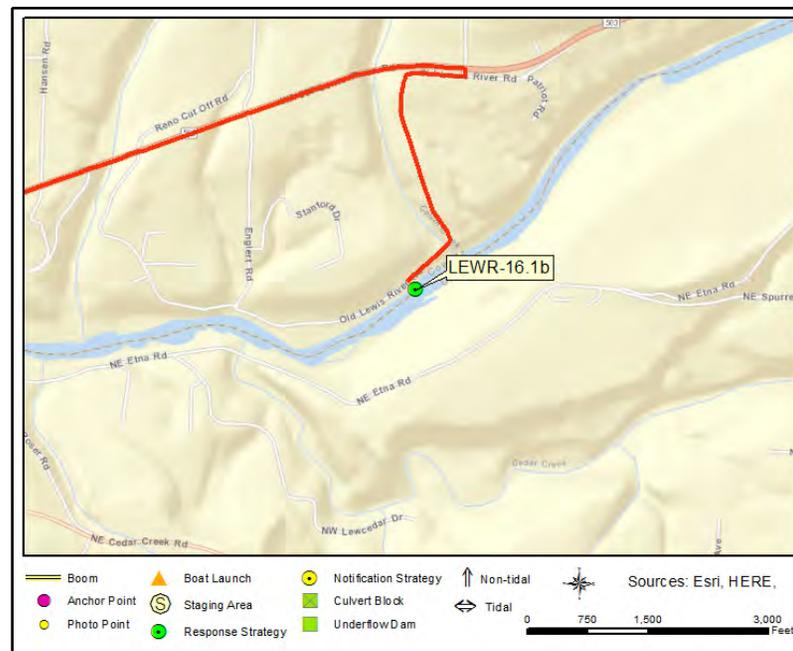
1	Boat Operator
2	Laborer
1	Supervisor

Lewis River Fish Hatchery - Upstream Water Intakes

LEWR-16.1b



LEWR-16.1b Photo: No photograph currently available



Site Contact

WDFW - Merwin Hatchery
 Land/Property Contact : Hatchery Manager
 111 Merwin Hatchery Court
 Ariel, WA 98603-9727
 360-225-4390

Nearest Address

4500 Old Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 7.7mi, turn right onto Old Lewis River Road.
5. After 1.1mi, about 0.2mi beyond the fish hatchery, the strategy location will be on the right. Stage vehicles and equipment near WDFW water intake pump house.

Lake River - Felida Moorage LKRVR-10.8

Position - Location: 45° 42.343', -122° 43.324' 45° 42' 20.6", -122° 43' 19.4" 45.70572, -122.72207 Vancouver

Strategy Objective: Exclusion : Prevent oil from travelling downstream on Lake River to Columbia River

Implementation: From Felida Moorage ramp, launch workboat with 800ft. boom. Deploy boom at a steep collection angle. Anchor at AP-1 (45.704078,-122.721968) and AP-2 (45.706389,-122.721998) using shoreside anchor posts. Do not disturb ground at any locations other than anchor points described. Remain on gravel and hardened surfaces. Anchor every 100-150ft. along boom length or as appropriate for flow conditions. Recover oil using vac truck at ramp. Notify Environmental Unit if deploying strategies in this area.

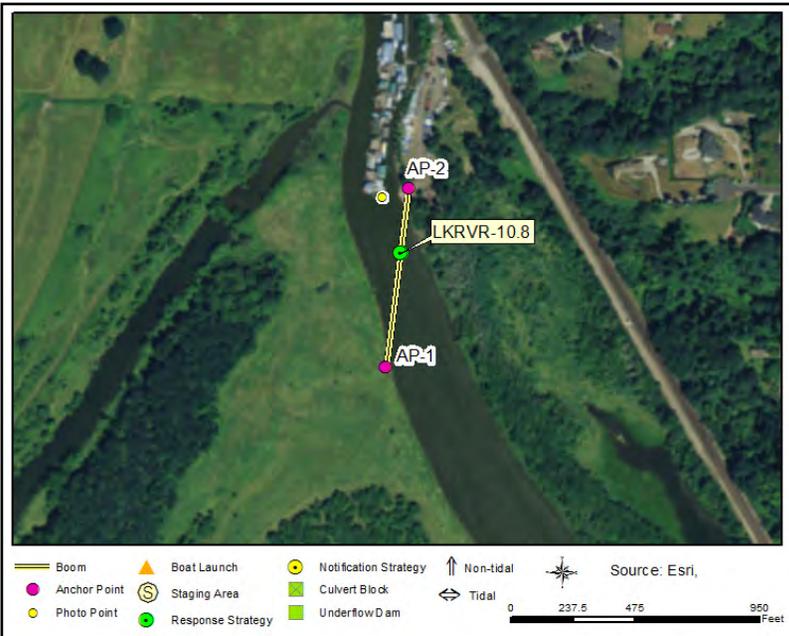
Staging Area: Onsite: Stage onsite in parking area for moorage and boat launch.

Site Safety: Slips, trips, and falls. Narrow road into site and dip at railroad crossing. Use caution driving vac truck to site. Heavy vegetation on river

Field Notes: Privately-owned houseboat moorage and boat ramp at 122nd Street in Vancouver. River is tidally-influenced and flows out of Vancouver Lake.

Watercourse: River - With Tidal Influence - Lake River

Resources at Risk: Downstream Resources, Federally Protected Area/Lands, Houseboats, Migratory Bird Populations, Sensitive Resources Nearby,



Recommended Equipment

7	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

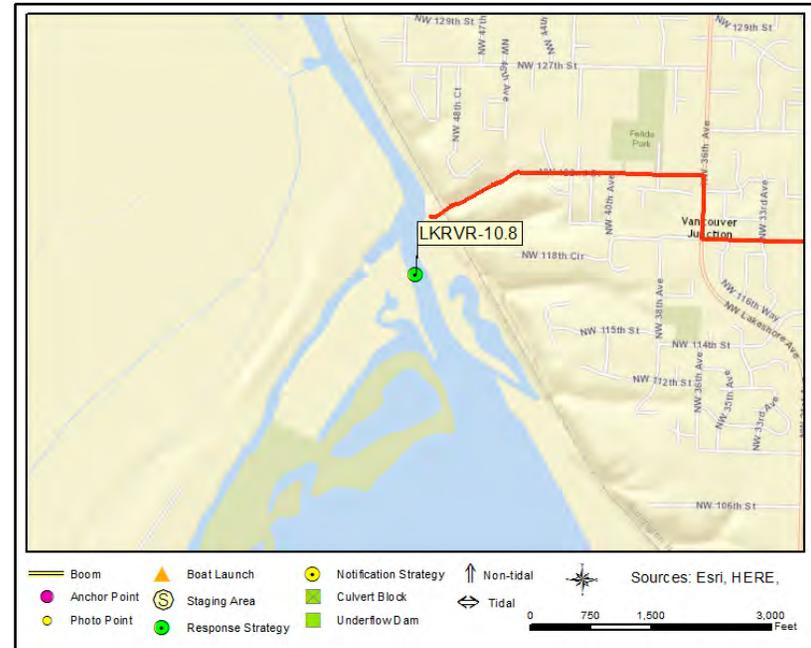
1	Boat Operator
3	Laborer
1	Supervisor

Lake River - Felida Moorage

LKRVR-10.8



LKRVR-10.8 Photo: River center on docks looking E toward ramp



Site Contact

Felida Moorage
 Land/Property Owner : Property Owner
 4911 NW 122nd Street
 Vancouver, WA 98685
 360-573-3394

Nearest Address

4999 NW 122nd St
 Vancouver, WA 98685

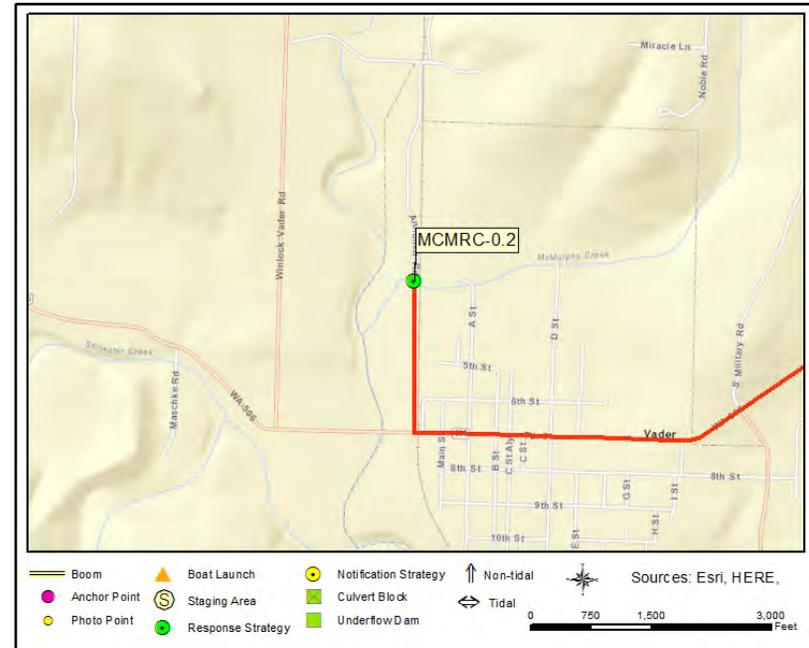
Driving Directions

- From I-5 S, Vancouver, WA
1. At exit 7 bear right onto ramp to I-205 S toward WA-14/I-84/Salem (0.26 miles)
 2. At exit 36 take ramp to Ne 134th St toward Wsu Vancouver (0.57 miles)
 3. Turn left on NE 134th St (0.07 miles)
 4. Turn right on NE 20th Ave (0.13 miles)
 5. Continue on NE Highway 99 (0.77 miles)
 6. Turn right on NE 117th St (1.16 miles)
 7. Continue on NW 119th St (1.72 miles)
 8. Turn right on NW 36th Ave (0.15 miles)
 9. Turn left on NW 122nd St (0.63 miles)
 10. Finish at 4999 NW 122nd St, 98685, on the left

McMurphy Creek at Annonen Road **MCMRC-0.2**



MCMRC-0.2 Photo: At strategy location on Annonen Road looking SSE towards culvert location (circled in yellow). Active railway in background, about 60ft upstream from culvert.



Site Contact

Nearest Address

505 Annonen Rd
Winlock, WA 98596

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.8mi, immediately after railroad tracks, turn right onto Annonen Road.
4. After 0.4mi, the strategy location will be on your right between (OM-3R) roadway object markers on shoulder of road at creek (striped black and yellow markers). Shoulder is very limited at this location and truck will partially block roadway. Must follow WSDOT work zone traffic control guidelines for temporary lane closure.

Mill Creek at South Cloverdale Road MILLC-0.3

Position - Location: 45° 57.633', -122° 48.088' 45° 57' 38.0", -122° 48' 5.3" 45.96056, -122.80147 Kalama

Strategy Objective: Collection : Collect oil moving downstream on Mill Creek

Implementation: On upstream/east side of roadway, deploy hard boom across creek in front of culvert. Deploy multiple lengths of sorbent boom upstream and downstream from hard boom. Use anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection.

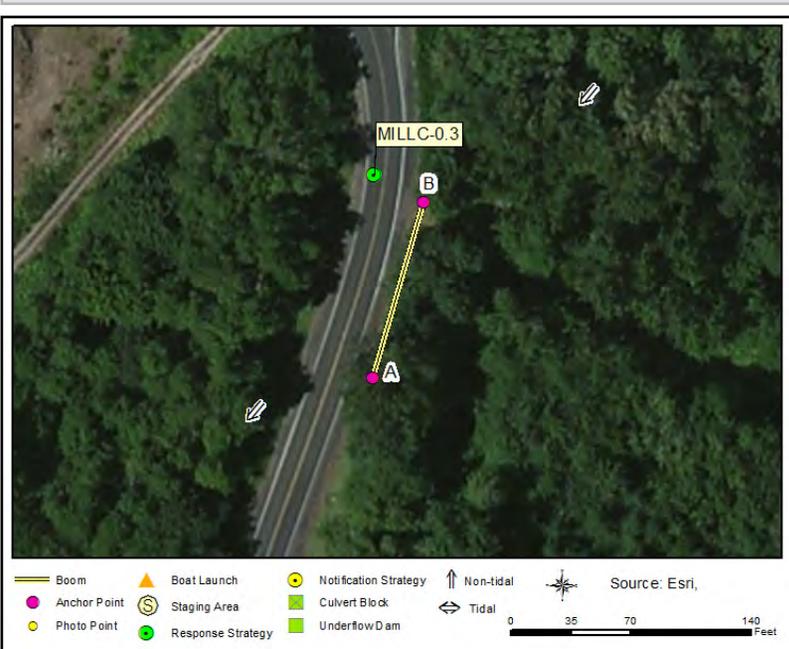
Staging Area: Remote: Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation; Bank Condition Unknown

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6.

Watercourse: Creek - Mill Creek

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

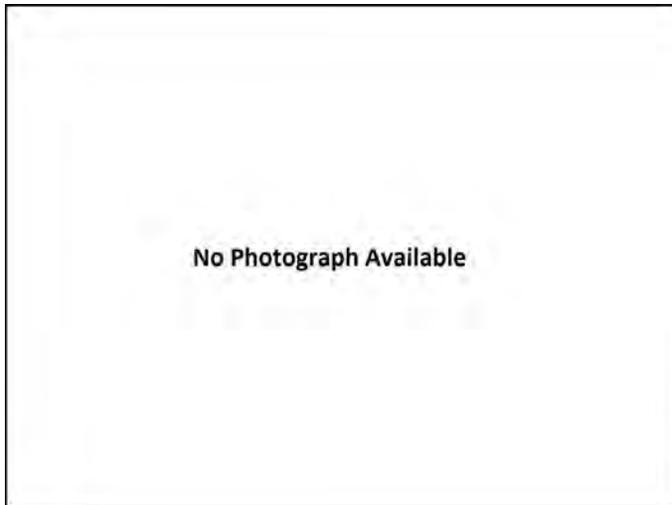
4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
100	Feet	Line - 3/8" poly line

Recommended Personnel

2	Laborer
	Supervisor

Mill Creek at South Cloverdale Road

MILLC-0.3



MILLC-0.3 Photo: No photograph currently available



Site Contact

Nearest Address

2063 S Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, at the intersection of Robb Road with Todd Road and Old Pacific Highway, stage equipment trailer at the gravel lot on the left/north side of roadway (Staging Area SA-SCHSC-0.6). Only use work truck to deliver equipment/personnel to site because space along shoulder is very limited at strategy location.
4. From SA-SCHSC-0.6, head SE on Todd Road.
5. After 0.6mi, turn right onto S Cloverdale Road
6. After 1.5mi, stay to right to remain on S Cloverdale Road
7. After ~270ft, strategy location will be on left side of roadway near old/overgrown dirt road. Stage equipment along roadway shoulder or on old dirt road.

Mill Creek at Martins Bluff Road MILLC-1.1

Position - Location: 45° 57.857', -122° 47.210' 45° 57' 51.4", -122° 47' 12.6" 45.96428, -122.78683 Kalama

Strategy Objective: Sorbent : Collect oil moving downstream on Mill Creek using sorbents

Implementation: On downstream/SE side of Martins Bluff Road, deploy multiple lengths of sorbent boom across Mill Creek in front of culvert. Use anchor posts or trees to secure ends of sorbent boom to creek banks. Replace saturated sorbents as needed.

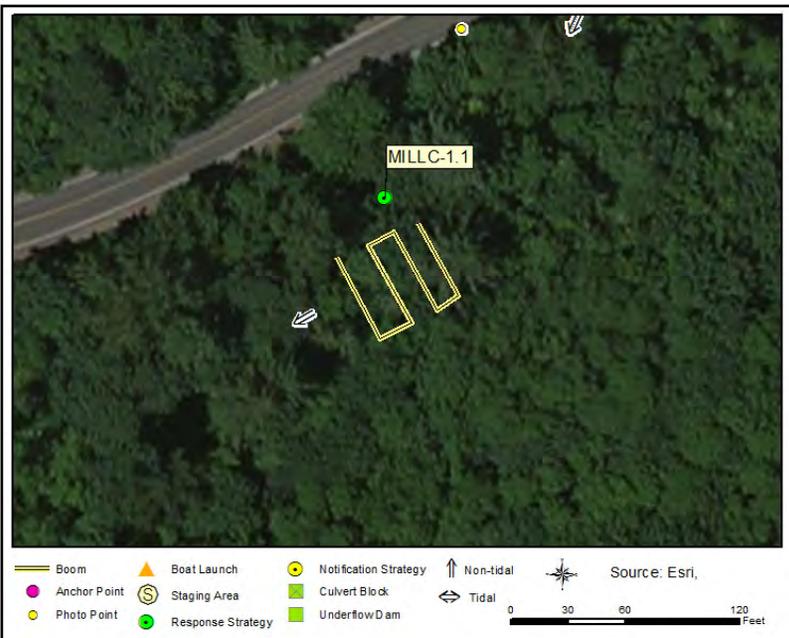
Staging Area: Onsite: Stage trailer at SA-SCHSC-0.6 (Old Pacific Highway near I-5 Exit 27). Work truck only at Strategy Location.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Heavy Vegetation; Steep Grade to Creek from Roadway

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site; use SA-SCHSC-0.6.

Watercourse: Creek - Mill Creek

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - Sorbent
100	Feet	Line - 3/8" poly line
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

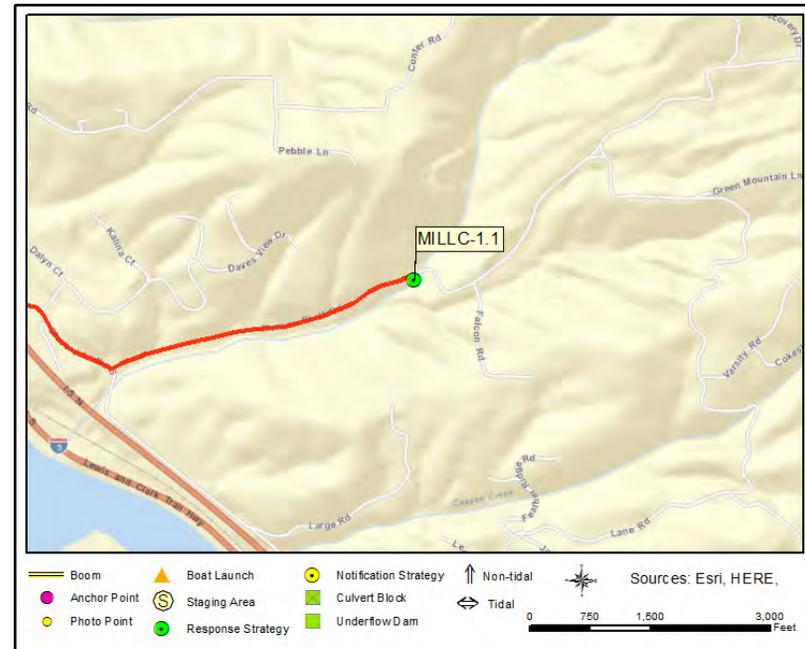
2	Laborer
1	Supervisor

Mill Creek at Martins Bluff Road

MILLC-1.1



MILLC-1.1 Photo: From shoulder of Martins Bluff Road, looking SSW towards strategy location on Mill Creek and downstream side of roadway culvert.



Site Contact

Nearest Address

610 Martins Bluff Rd
Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, at the intersection of Robb Road with Todd Road and Old Pacific Highway, stage equipment trailer at the gravel lot on the left/north side of roadway (Staging Area SA-SCHSC-0.6). Only use work truck to deliver equipment/personnel to site because space along shoulder is very limited at strategy location.
4. From SA-SCHSC-0.6, head SE on Todd Road.
5. After 0.6mi, turn right onto S Cloverdale Road
6. After 1.5mi, stay to left to continue on Martins Bluff Road
7. After 0.8mi, strategy location will be on the right at/near bottom of grade beyond roadway shoulder. Stage truck/equipment on shoulder.

Olequa Creek off Old Olequa Crossing Road OLQAC-0.5

Position - Location: 46° 22.377', -122° 56.563' 46° 22' 22.6", -122° 56' 33.8" 46.37295, -122.94271 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: Secure end of 200ft length of hard boom to bank on creek left at/near Point B (46.372862, -122.942278). Using hand-launch workboat, extend boom upstream and across to creek right, securing it to bank at/near Point A (46.373014, -122.943034; about 200ft upstream from fish barrier). Use line from center point of boom to bank on creek left upstream of Point B to keep boom secure in water. Extend multiple lengths of sorbent boom across creek on upstream side of fish barrier, downstream of hard boom. Use vac-truck or skimmer with storage for collection at Point B. Replace saturated sorbents as need

Staging Area: Onsite: Stage at end of unnamed roadway off Ol Olequa Crossing Road near WDFW fish barrier

Site Safety: Slips, Trips, Falls; Water Hazard; Steep Banks with Vegetation; Mud/Muddy; Low Hanging Steel Cable with Water Line.

Field Notes: Fish barrier is part of WDFW-Cowlitz Evaluation Project; inform WDFW before strategy implementation; call 360-864-6133, 360-623-0622, 360-791-4690, or 206-245-9971.

Watercourse: Creek - Olequa Creek

Resources at Risk:



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
300	Feet	Boom - Sorbent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line
1	Each	Workboat(s) - (hand-launch)

Recommended Personnel

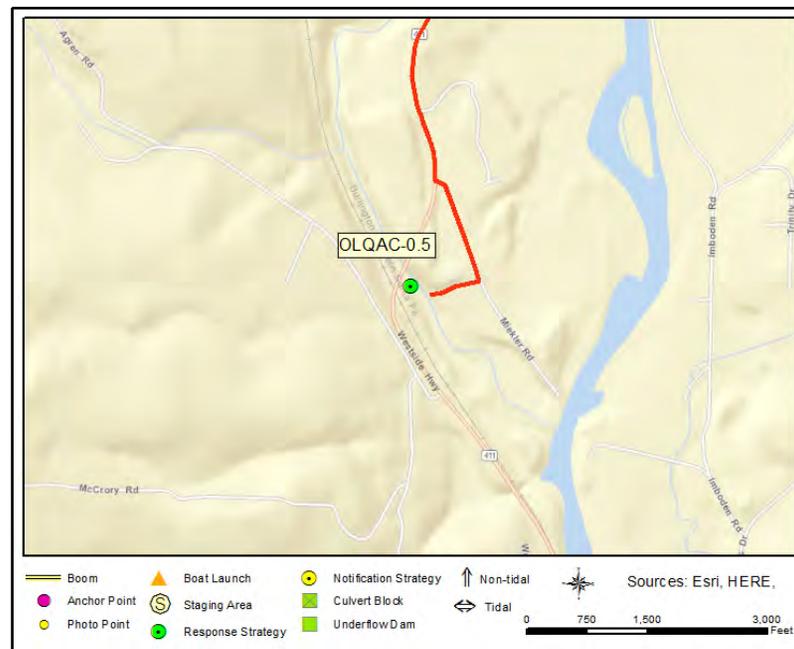
1	Boat Operator
2	Laborer
1	Supervisor

Olequa Creek off Old Olequa Crossing Road

OLQAC-0.5



OLQAC-0.5 Photo: At strategy location on Olequa Creek (creek left), immediately upstream of WDFW fish barrier, looking upstream and across to creek right. Low hanging steel cable with water line visible.



Site Contact

Nearest Address

8306 Westside Hwy
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.0mi, turn left onto Westside Highway
4. After 1.9mi, turn left onto Old Olequa Crossing Road
5. After 0.3mi, turn right onto unnamed road.
6. After 0.1mi (end of road), follow dirt road to thr right down to the strategy location on Olequa Creek (creek left). Stage equipment on dirt roadway or at end of unnamed road. The low hanging steel cable across the creek holds a water line for the WDFW Fish Barrier – use caution.

Olequa Creek at Enchanted Valley Country Club OLQAC-2.6

Position - Location: 46° 23.573', -122° 57.078' 46° 23' 34.4", -122° 57' 4.7" 46.39289, -122.95130 Vader

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: Using workboat, transport 200ft boom upstream and secure on creek right near Point A (46.393011, -122.951665). At boom mid-point, secure line and extend it across to creek left about 100ft upstream from Point C. Then extend boom downstream and across to Point C (46.392762, -122.951101) while pulling tension on line (connected to Point B) allowing correct boom shape to be formed. From Point C, extending remaining boom upstream allowing collection pocket to be formed. Secure boom to shore using anchoring posts or trees. Vac-truck or skimmer/portable storage collection at Point C.

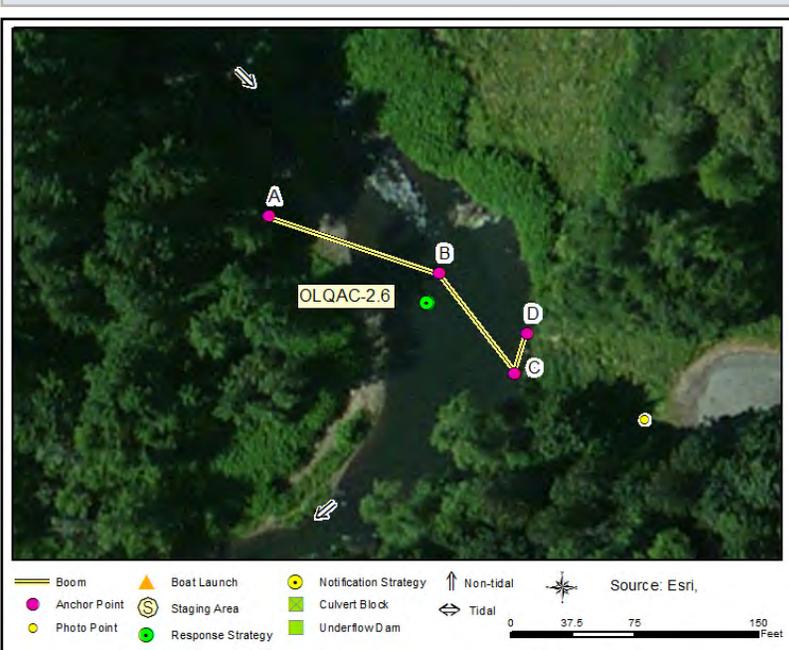
Staging Area: Onsite: Stage equipment in cul-de-sac at end of Olequa Place, adjacent to the creek.

Site Safety: Slips, Trips, Falls; Water Hazard/Snags Near Shore; Vegetation; Mud/Muddy Banks

Field Notes: Notify property owner in advance of strategy implementation; call/leave message at 509-995-5439, 509-990-0925, or email ralphchilders@yahoo.com.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
1	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage
1	Each	Winch - Power Winch
1	Each	Workboat(s) - (hand-launch)

Recommended Personnel

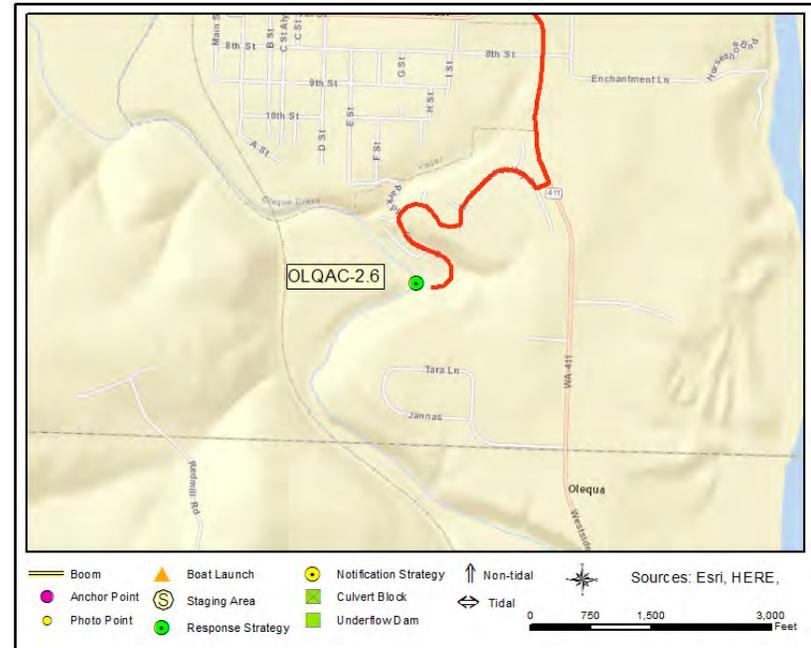
1	Boat Operator
2	Laborer
1	Supervisor

Olequa Creek at Enchanted Valley Country Club

OLQAC-2.6



OLQAC-2.6 Photo: At strategy location on creek left, looking (NW) upstream and across to creek right.



Site Contact

Property Owner (OLQAC-2.6)
 Land/Property Owner :
 1324 North Liberty Lake #237
 Liberty Lake, WA 99019
 509-995-5439

Nearest Address

177 Olequa Dr
 Vader, WA 98593

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.0mi, turn left onto Westside Highway
4. After 0.5mi, turn right onto Enchanted Valley Drive
5. After 190ft, turn right to stay on Enchanted Valley Drive (becoming Olequa Drive after 0.3mi)
6. After 0.4mi, at bottom of hill after curves stay straight to remain on Olequa Drive (becomes Olequa Place). Stage equipment in cul-de-sac at end of Olequa Place near creek.

Olequa Creek at 7th Street (Highway 506) OLQAC-3.7

Position - Location: 46° 24.115', -122° 57.868' 46° 24' 6.9", -122° 57' 52.1" 46.40192, -122.96446 Vader

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: Access creek right under bridge. Using line and bridge deck (along upstream side of bridge) transfer one end of 100ft hard boom to upstream creek left; secure boom end to bridge structure or anchoring posts. On downstream side of bridge on creek right, pull slack out of hard boom and secure to bank using anchoring posts. Deploy multiple lengths of sorbent boom across creek in same manner. If product collecting beyond capacity sorbents can handle, use vac-truck from roadway shoulder or skimmer/portable storage for collection but follow WSDOT work zone traffic control guidelines.

Staging Area: Onsite: Stage on shoulder of 7th Street (Highway 506) near bridge over creek

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Traffic and Crossing Hazard; Heavy Vegetation; Steep Grade on Creek Left; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Waders or hip boots recommended. Access creek right from trail behind guardrail near SW corner of bridge.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

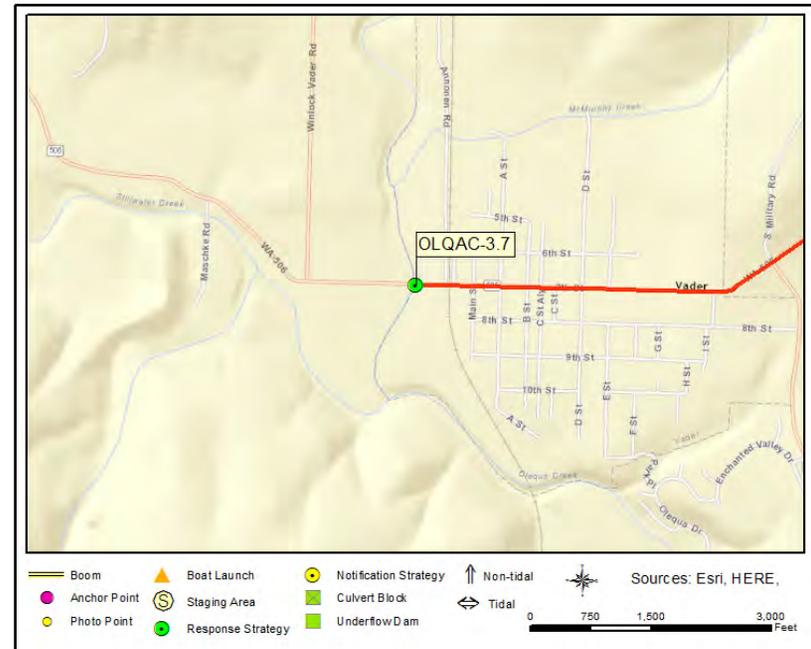
2	Laborer
1	Supervisor

Olequa Creek at 7th Street (Highway 506)

OLQAC-3.7



OLQAC-3.7 Photo: At strategy location on Olequa Creek (creek right) under 7th Street Bridge in Vader, looking upstream and across to creek left.



Site Contact

Nearest Address

110 7th St
 Vader, WA 98593

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.9mi, you will have reached the strategy location at the 7th Street / Highway 506 Bridge over Olequa Creek; stage on shoulder of roadway. Best access to site under bridge is from downstream creek right (SW corner of bridge); follow trail between guard rail and wooden fence down to the creek.

Olequa Creek at Annonen Road OLQAC-4.8

Position - Location: 46° 24.916', -122° 58.024' 46° 24' 55.0", -122° 58' 1.4" 46.41527, -122.96706 Winlock

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: On upstream (NE) side of Annonen Road Bridge, deploy hard boom across creek from bank to bank. If possible, angle boom from upstream creek right to downstream creek left at base of bridge (access dependent). Deploy multiple lengths of sorbent boom upstream of hard boom. Use anchoring posts, trees, or bridge to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, make new trail to base of bridge on creek right and use vac-truck or skimmer/storage for collection (extended hose and booster pump needed).

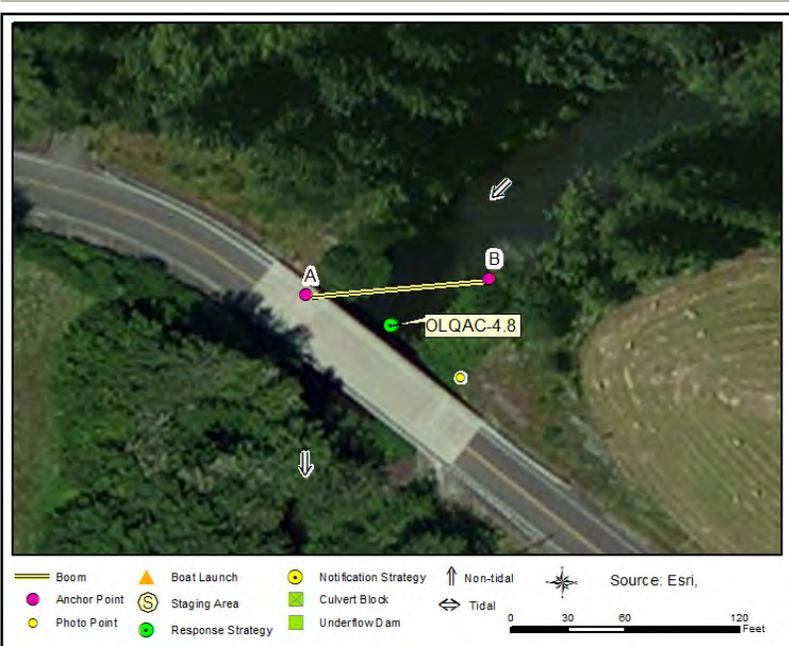
Staging Area: Onsite: Stage behind guardrail before or after bridge on NE/upstream side of roadway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway/Traffic Hazard; Steep Banks; Heavy Vegetation; Mud/Muddy

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Slope down to creek right under bridge is steep; use 1/2" line for safe descent if needed.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line
100	Feet	Line - 3/8" poly line
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

2	Laborer
1	Supervisor

Olequa Creek at Annonen Road

OLQAC-4.8



OLQAC-4.8 Photo: At strategy location on upstream side of Annonen Road bridge over Olequa Creek (creek left), looking NW and across to creek right. Upper left corner of photo shows bridge support.



Site Contact

Nearest Address

150 Annonen Rd
Winlock, WA 98596

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (Vader/Ryderwood)
2. Turn left at the end of exit ramp to travel west on Highway WA506.
3. After 3.8mi, immediately after railroad tracks, turn right onto Annonen Road.
4. After 1.1mi, the strategy location will be on the right at the bridge over Olequa Creek. Stage behind guardrail on either side of bridge. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Olequa Creek at Ferrier Road OLQAC-7.9

Position - Location: 46° 26.736', -122° 57.739' 46° 26' 44.2", -122° 57' 44.3" 46.44560, -122.96232 Winlock

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: On upstream/NE side of roadway, deploy hard boom across creek upstream of bridge at an angle upstream towards creek right based on stream flow and access. Deploy multiple lengths of sorbent boom on upstream and downstream sides of hard boom. Use line and anchoring posts or trees to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer/portable storage for collection, but must follow WSDOT work zone traffic control guidelines for lane closure since shoulder is limited.

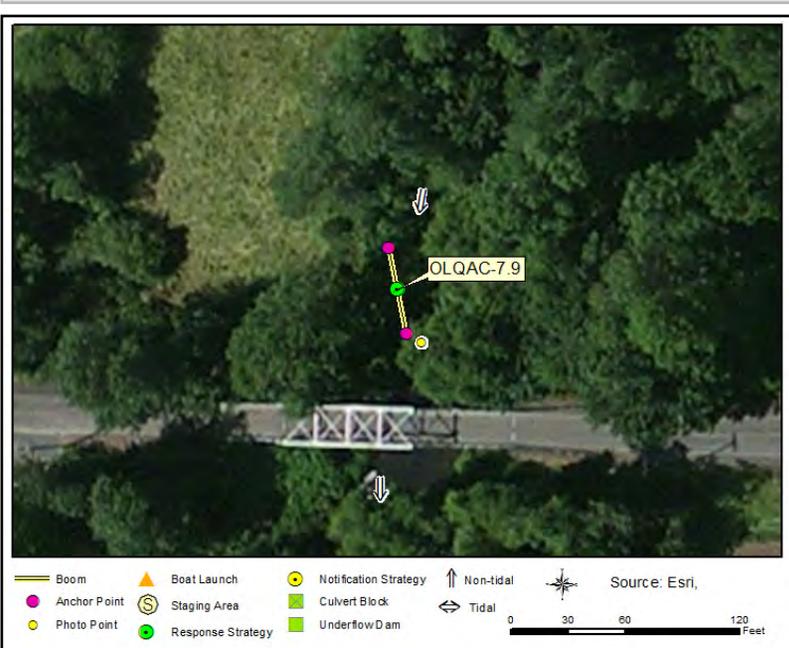
Staging Area: Onsite: Stage on shoulder of roadway before NE corner of bridge - NO TRAILERS

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Shoulder); Heavy Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder space limited - DO NOT BRING AN EQUIPMENT TRAILER to this site. Waders or hip boots recommended.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

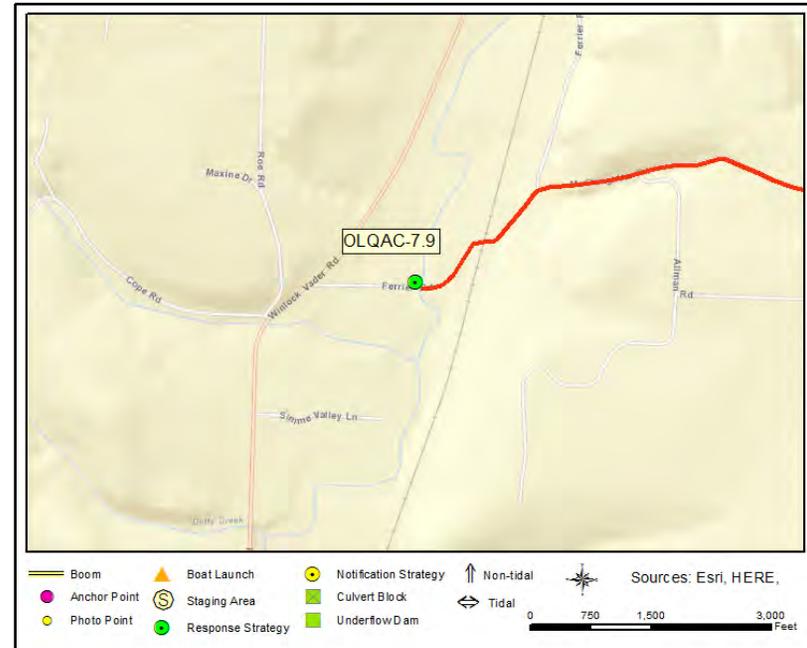
2	Laborer
1	Supervisor

Olequa Creek at Ferrier Road

OLQAC-7.9



OLQAC-7.9 Photo: At strategy location on Olequa Creek (creek left) just upstream of bridge on Ferrier Road, looking downstream/SW and across to creek right.



Site Contact

No Information
Not Determined :

Nearest Address

1785 Ferrier Rd
Winlock, WA 98596

Driving Directions

1. Head south on Interstate-5 and Take Exit 63 (WA-505 towards Winlock/Toledo)
2. Turn right at the end of exit ramp to travel west on highway WA505
3. After 0.3mi, turn right onto highway WA-505 (west)
4. After 0.6mi, turn left S Military Road.
5. After 2.9mi, turn right onto McGlaughlin Road
6. After 1.1mi, turn left onto Ferrier Road
7. After ~0.4mi, you have reach the strategy location. Park truck on shoulder of roadway before bridge. Trail leads from shoulder down to creek.

Olequa Creek at near Winlock Wastewater Treatment OLQAC-10.9

Position - Location: 46° 28.910', -122° 56.767' 46° 28' 54.6", -122° 56' 46.0" 46.48183, -122.94612 Winlock

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: Deploy hard boom across creek from base of bridge on creek right upstream and across to creek left. Place multiple lengths of sorbent boom on upstream and downstream sides of hard boom. Use anchoring posts, trees, or existing structures to secure boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck with extended hose or skimmer/portable storage for collection; booster pump required. Use 1/2" line to safely move people/equipment from bridge roadway down steep grade to base of bridge.

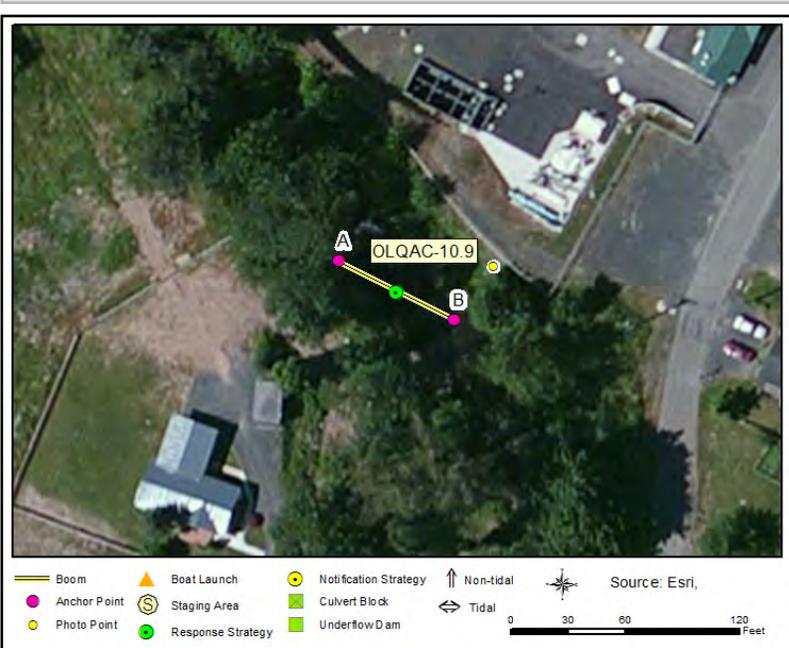
Staging Area: Onsite: Stage in parking area for Winlock Wastewater Treatment Plant adjacent to creek

Site Safety: Slips, Trips, Falls; Water Hazard; Steep/Unstable Banks; Vegetation/Tree Blocking Trail; Roadway Nearby

Field Notes: Follow trail along south fence line for Winlock Waste Water Treatment Plant to trail leading down to creek left. Waders or hip boots recommended.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

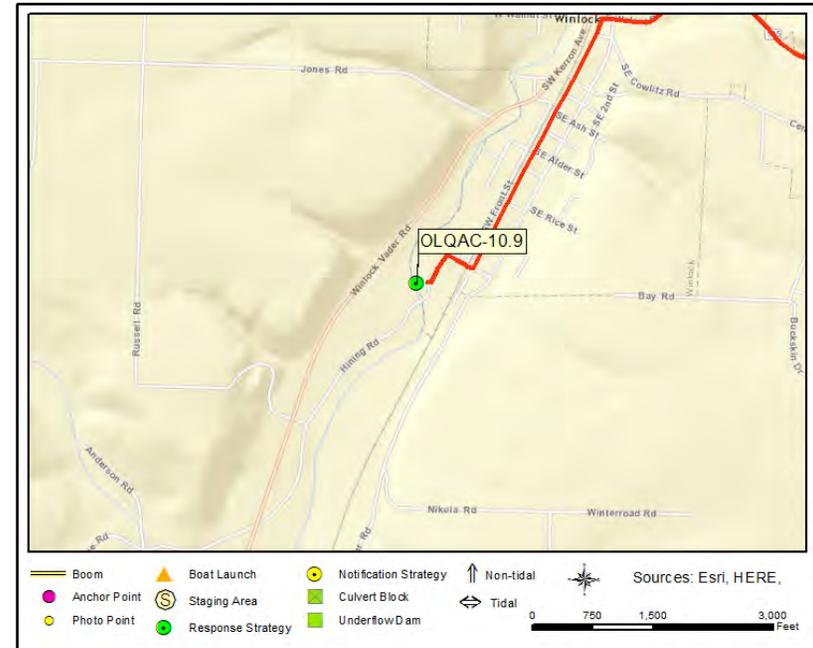
2	Laborer
1	Supervisor

Olequa Creek at near Winlock Wastewater Treatment

OLQAC-10.9



OLQAC-10.9 Photo: At strategy location on Olequa Creek (creek left) near south fenceline of Winlock Wastewater Treatment Plant looking upstream (NW) to creek right.



Site Contact

Nearest Address

1214 SW Mayer St
Winlock, WA 98596

Driving Directions

1. Head south on Interstate-5 and Take Exit 63 (WA-505 towards Winlock/Toledo)
2. Turn right at the end of exit ramp to travel west on highway WA505
3. After 2.9mi, turn left onto Kerron Avenue
4. After 0.6mi, turn left onto Hining Avenue (becoming W Front Street)
5. After 0.8mi, turn right onto SW Campbell Street
6. After ~300ft, turn left onto SW Mayer Street
7. After ~0.1mi, the Winlock Wastewater Treatment Plant will be on the right before the bridge over Olequa Creek. Stage towards the south end of the treatment plant's parking lot near the creek. Trail along south fenceline leads down to creek left.

Olequa Creek at NW Kerron Street OLQAC-12.4

Position - Location: 46° 30.021', -122° 56.235' 46° 30' 1.3", -122° 56' 14.1" 46.50036, -122.93725 Winlock

Strategy Objective: Collection : Collect oil moving downstream on Olequa Creek

Implementation: Deploy hard boom across creek from base of bridge on creek right upstream and across to creek left. Place multiple lengths of sorbent boom on upstream and downstream sides of hard boom. Use anchoring posts, trees, or existing structures to secure boom and sorbents to banks. Replace saturated sorbents as needed. If product collecting beyond capacity sorbents can handle, use vac-truck with extended hose or skimmer/portable storage for collection; booster pump required. Use 1/2" line to safely move people/equipment from bridge roadway down steep grade to base of bridge.

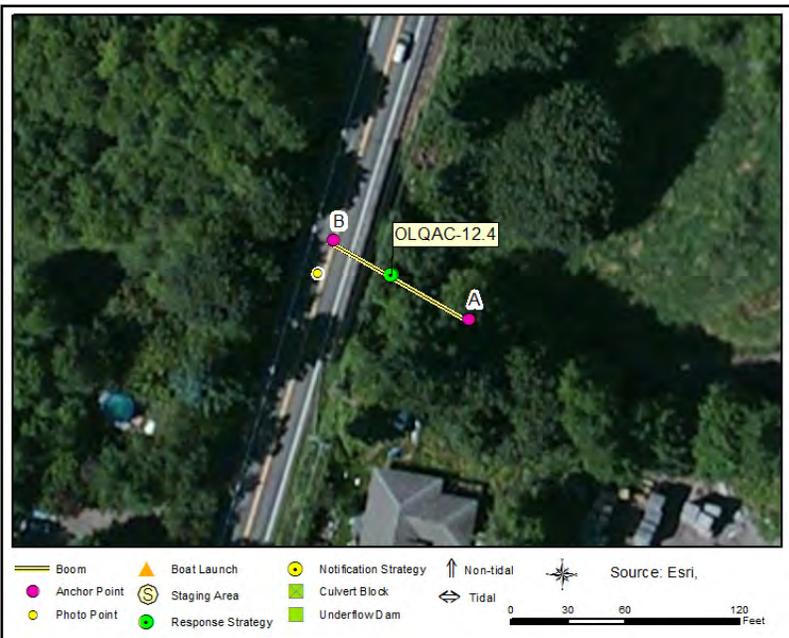
Staging Area: Onsite: Stage on shoulder of highway north of bridge over creek on east/northbound side of roadway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Visibility); Heavy Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Waders or hip boots recommended.

Watercourse: Creek - Olequa Creek

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

6	Each	Anchoring System(s)- Shoreside
100		Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
100	Feet	Line - 1/2" poly line
200	Feet	Line - 3/8" poly line

Recommended Personnel

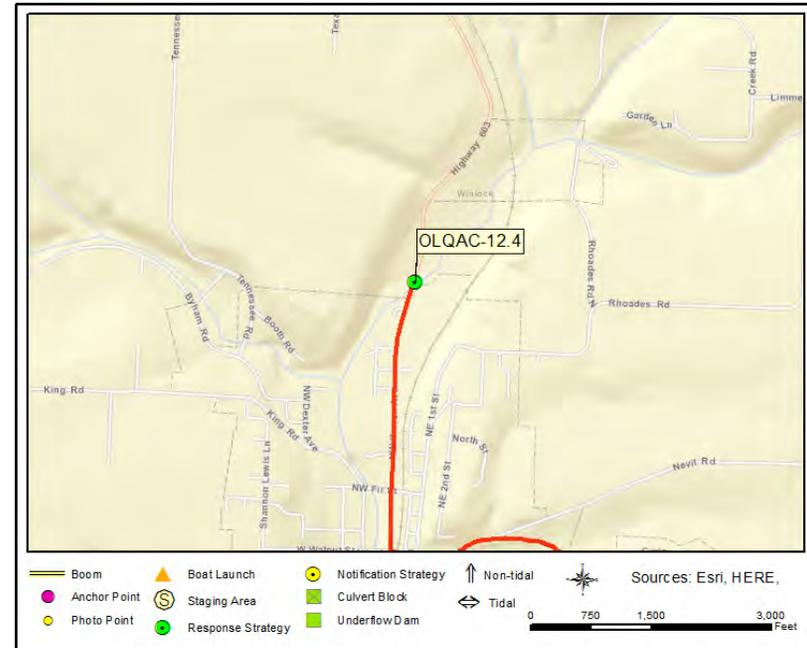
2	Laborer
1	Supervisor

Olequa Creek at NW Kerron Street

OLQAC-12.4



OLQAC-12.4 Photo: At strategy location on Olequa Creek (creek right) under the Highway WA-603 bridge in Winlock, looking upstream (ESE) towards creek left.



Site Contact

Nearest Address

1411 NW Kerron St
Winlock, WA 98596

Driving Directions

1. Head south on Interstate-5 and Take Exit 63 (WA-505 towards Winlock/Toledo)
2. Turn right at the end of exit ramp to travel west on highway WA505
3. After 2.9mi, turn right onto Kerron Avenue (Highway WA-603 North)
4. After 0.6mi, you will have crossed the bridge over Olequa Creek. Use shoulder on the right/east side of roadway after bridge beyond guardrail for staging. Follow guard rail to bridge; strategy location is down steep incline at the base of the bridge on creek right.

Ostrander Creek culvert under W Stock Road OSTRC-0.15

Position - Location: 46° 11.700', -122° 53.812' 46° 11' 42.0", -122° 53' 48.7" 46.19499, -122.89687 Kelso

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam approximately 100ft upstream from culvert where depth and current is less. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection

Staging Area: Onsite: Stage equipment on side of road

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway

Watercourse: Creek - Ostrander Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

200	Feet	Boom - Sorbent
1	Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1	Assort	Fill material (sand, earth, gravel, sandbags)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

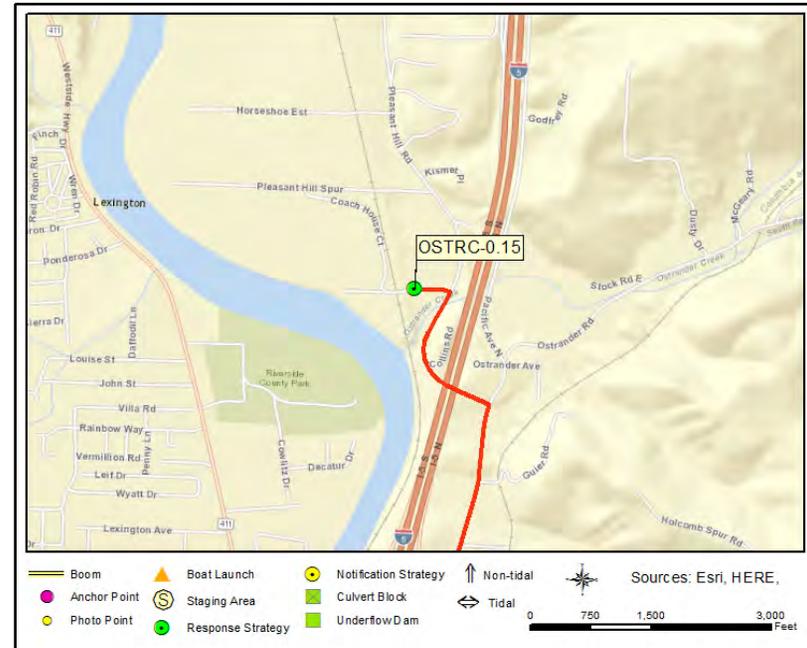
2	Laborer
1	Supervisor

Ostrander Creek culvert under W Stock Road

OSTRC-0.15



OSTRC-0.15 Photo: Photo taken from top of culvert looking South



Site Contact

No Information
Not Determined :

Nearest Address

46 W Stock Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn right on Sparks Dr (0.06 miles)
4. Turn left on Pacific Ave N (0.53 miles)
5. Turn left on Pleasant Hill Rd (0.37 miles)
6. Turn left on Stock Rd W (0.15 miles)
7. Site is on Stock Rd, before the railroad trestle

Ostrander Creek OSTRC-0.2

Position - Location: 46° 11.685', -122° 53.727' 46° 11' 41.1", -122° 53' 43.6" 46.19474, -122.89546 Kelso

Strategy Objective: Collection : Collect oil moving downstream on Ostrander Creek

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A. Using line, extend boom west about ~20ft to creek right and secure to bank near Point B. Form Point B, extend remaining boom downstream along creek left, securing it to NE corner of culverts at/near Point C. Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

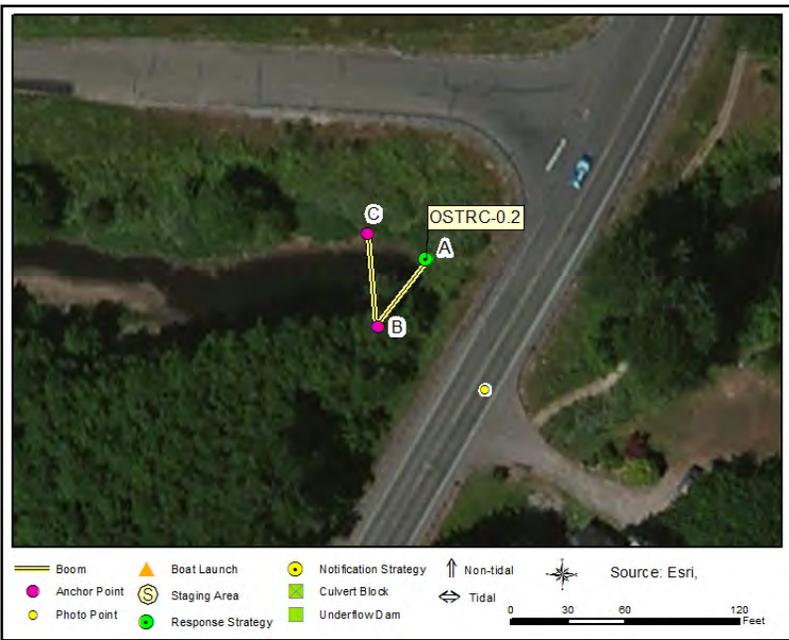
Staging Area: Onsite: Stage equipment on side of road

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Culvert has two channels, both approximately 8 ft wide

Watercourse: Creek - Ostrander Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

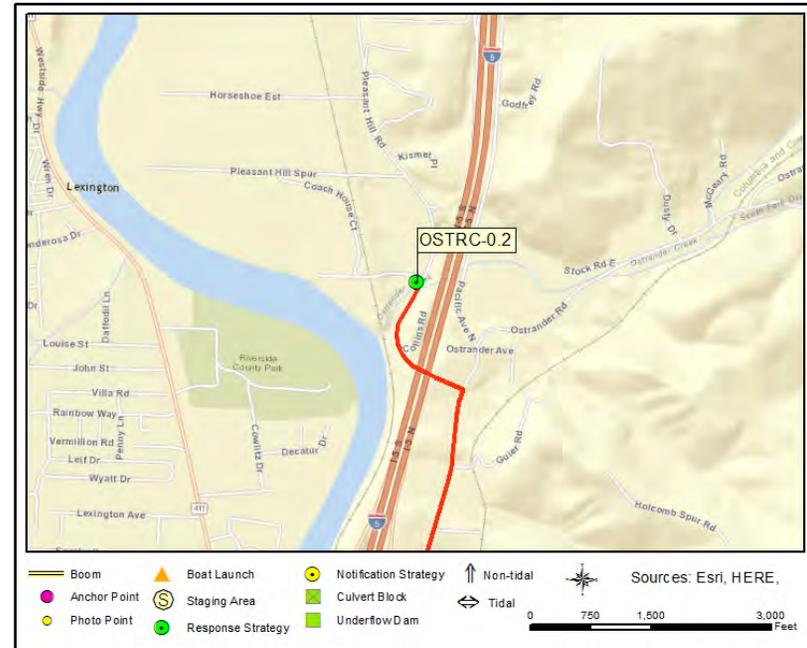
2	Laborer
1	Supervisor

Ostrander Creek

OSTRC-0.2



OSTRC-0.2 Photo: Photo taken downstream of culvert looking South



Site Contact

No Information
Not Determined :

Nearest Address

3440 Pleasant Hill Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn right on Sparks Dr (0.06 miles)
4. Turn left on Pacific Ave N (0.53 miles)
5. Turn left on Pleasant Hill Rd (0.31 miles)
6. Site is at the corner of Pleasant Hill Road and W Stock Road, on the left

Ostrander Creek at Pacific Highway N OSTRC-0.35

Position - Location: 46° 11.683', -122° 53.586' 46° 11' 41.0", -122° 53' 35.2" 46.19471, -122.89311 Kelso

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A. Using line, extend boom west about ~20ft to creek right and secure to bank near Point B. Form Point B, extend remaining boom downstream along creek left, securing it to NE corner of culverts at/near Point C. Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

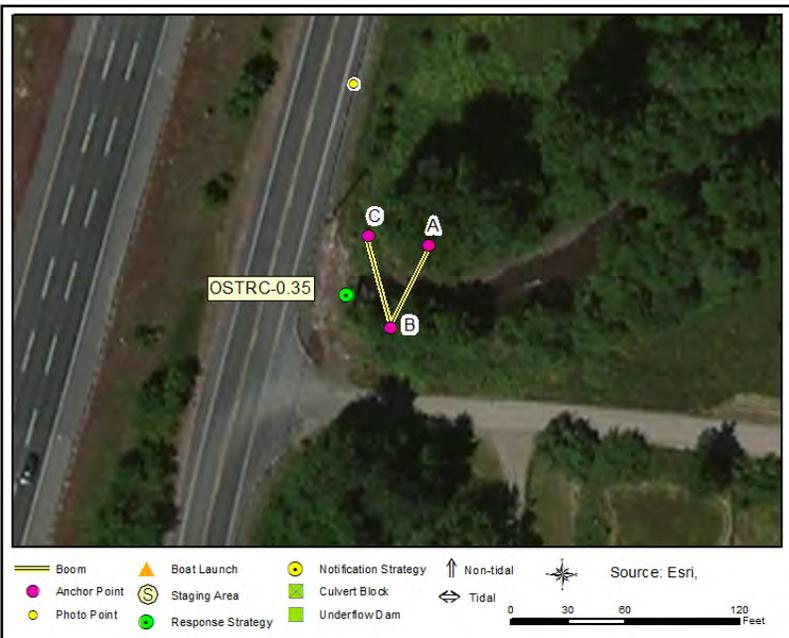
Staging Area: Onsite: Stage equipment on side of road.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Heavy vegetation and steep bank

Watercourse: Creek - Ostrander Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

3	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

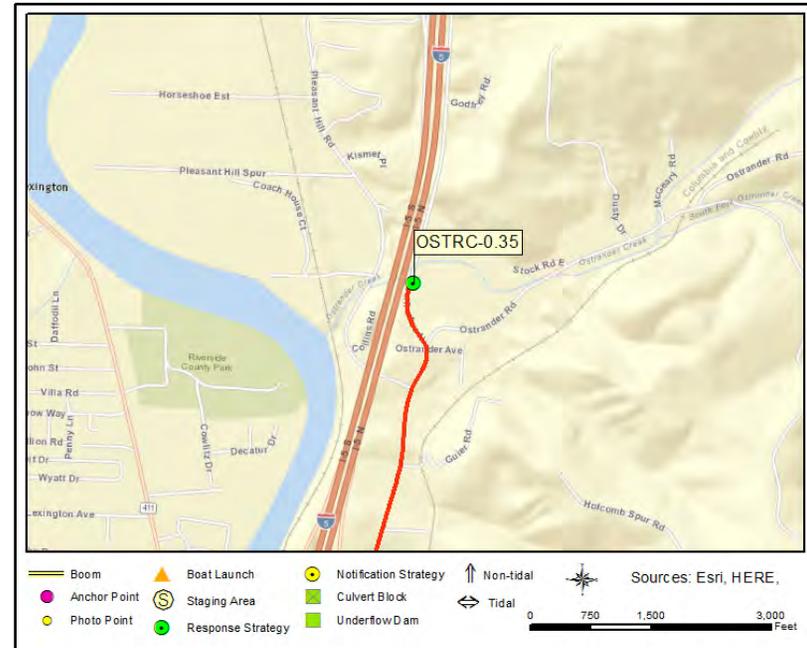
1	Laborer
1	Supervisor

Ostrander Creek at Pacific Highway N

OSTRC-0.35



OSTRC-0.35 Photo: Photo taken from top of culvert looking East



Site Contact

No Information
Not Determined :

Nearest Address

2752 N Pacific Ave
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn right on Sparks Dr (0.06 miles)
4. Turn left on Pacific Ave N (0.67 miles)
5. Finish at 2752 N Pacific Ave, 98626, on the right

Salmon Creek at NW 36th Avenue (Hwy-501) SALMC-2.2

Position - Location: 45° 43.357', -122° 42.407' 45° 43' 21.4", -122° 42' 24.4" 45.72262, -122.70678 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Salmon Creek

Implementation: Secure end of 200ft length hard boom to bank on creek left under SE corner of NW 36th Ave Bridge near Point B (~45.722678, -122.707183). Form trail using plywood sheets to access creek right or use work boat. From creek right, pull boom upstream and secure to bank near Point A (~45.722602, -122.706472). Use anchor and/or lines from boom to bank as needed to maintain shape of boom in creek. Use sorbent boom downstream of hard boom for sheen/secondary collection. Deploy sorbent boom across side channel openings on creek right and left. Vac-truck or skimmer (with storage) collection at Point B.

Staging Area: Onsite: Stage on wide shoulder of roadway near SE corner of NW 36th Avenue Bridge.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Steep Banks with Vegetation; Mud/Muddy

Field Notes: In-line booster pump needed if using Vac-Truck from roadway shoulder. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Salmon Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

8 Each	Anchoring System(s)- Shoreside
200 Feet	Boom - B3 (River Boom) or equivalent
300 Feet	Boom - Sorbent
1 Each	Bridle(s) - Towing (appropriately sized for boom)
300 Feet	Line - 3/8" poly line
16 Each	Plywood sheets (4ft x 2ft)
1 Each	Vac Truck or Skimmer and Storage
1 Each	Workboat(s) - (hand-launch)

Recommended Personnel

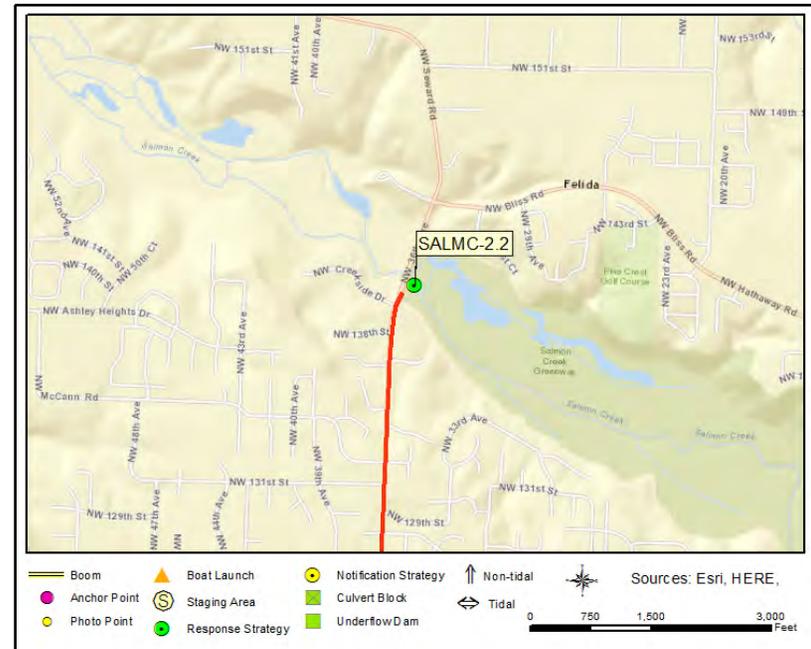
1	Boat Operator
2	Laborer
1	Supervisor

Salmon Creek at NW 36th Avenue (Hwy-501)

SALMC-2.2



SALMC-2.2 Photo: On creek left looking upstream from the SE end of the NW 36th Ave Bridge. Ideal hard boom deployment depicted in yellow; sorbent boom in white.



Site Contact

WSDOT - Environmental
 Primary Contact :
 360-705-7483

CRESA
 Secondary Contact : Clark Regional Emergency Services Agency
 360-696-4461

Nearest Address

13615 NW 36th Ave
 Vancouver, WA 98685

Driving Directions

1. Head south on Interstate-5 and Take Exit 5 (NE 99th Street)
2. Turn right at the end of exit ramp to travel west on NE99th Street
3. After 2.0mi, turn right onto NW Lakeshore Ave (becoming NW 36th Ave after 1.1mi)
4. After 2.1 miles, you have reached the strategy location. Stage on wide shoulder before bridge. Inform WSDOT and CRESA, and follow WSDOT work zone traffic control guidelines.

Salmon Creek - Klineline Pond (Salmon Creek Park) SALMC-5.6

Position - Location: 45° 42.411', -122° 39.479' 45° 42' 24.6", -122° 39' 28.7" 45.70684, -122.65798 Vancouver

Strategy Objective: Collection : Collect oil moving downstream on Salmon Creek

Implementation: Secure end of 100ft length of hard boom to bank on creek right near Point C (45.706857, -122.657929; north and upstream side of walking bridge). Extend boom across to creek left and secure to bank near base of bridge at Point B. Use line to extend remaining boom upstream and back across to creek right, remove slack, and secure to bank near Point A (45.706798, -122.657716, ~60ft upstream from Point C). Use multiple layers of sorbent boom across creek within hard boom area and on downstream side of bridge. Use vac-truck or skimmer/storage for collection at Point B, as needed.

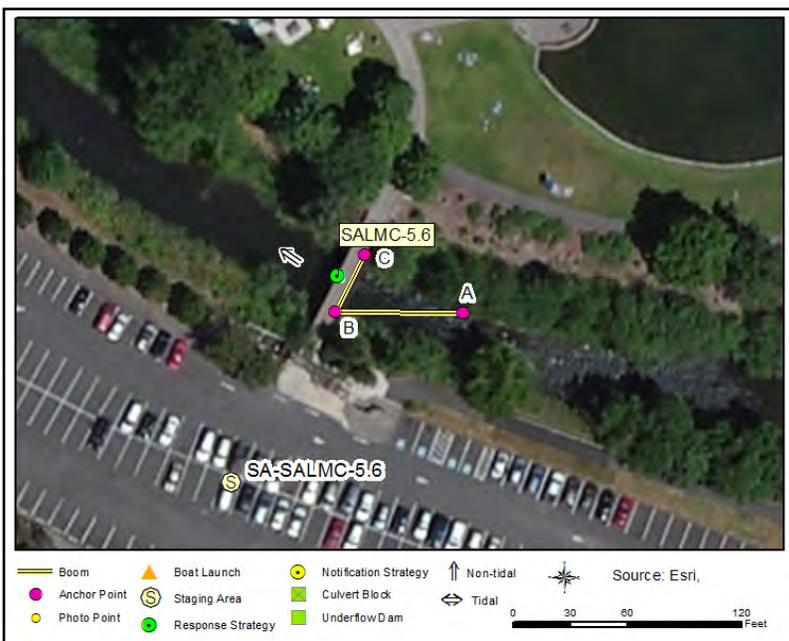
Staging Area: Onsite: Stage in parking lot of Salmon Creek Park near the pedestrian bridge over creek (SA-SALMC-5.6).

Site Safety: Slips, Trips, Falls; Water Hazard; Parking Lot Hazards; Steep Banks; Heavy Vegetation; Mud/Muddy

Field Notes: Contact Clark County Parks and Recreation for access support, and notify them before implementation; call 360-737-6118 or 360-397-2285; If spill/sheen impacts observed on Klineline Pond notify WDFW at 360-902-2700.

Watercourse: Creek - Salmon Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon, Steelhead



Recommended Equipment

7	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

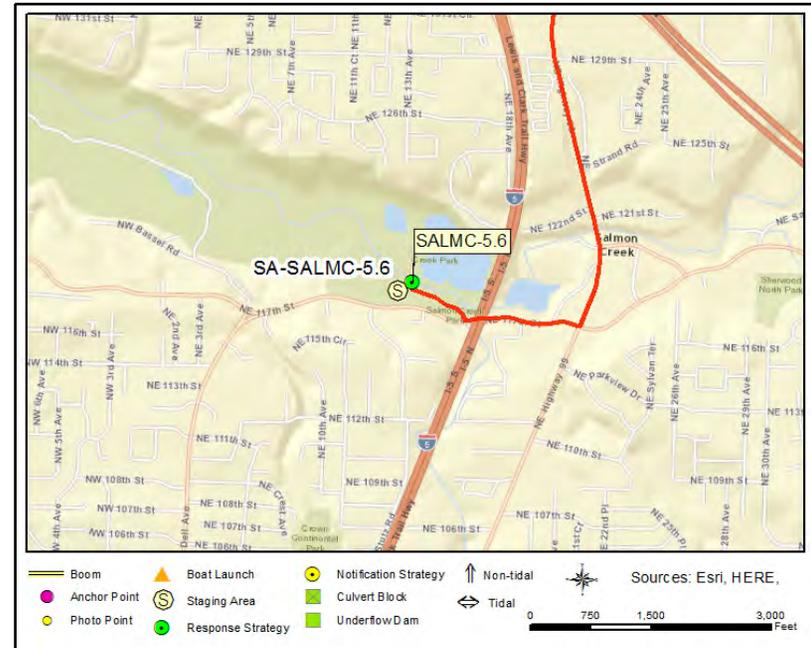
2	Laborer
1	Supervisor

Salmon Creek - Kline Pond (Salmon Creek Park)

SALMC-5.6



SALMC-5.6 Photo: View from walking bridge over creek on Salmon Creek Trail near Kline Pond looking downstream.



Site Contact

Clark County Parks and Trails
 Municipality (County/City) :
 4700 NE 78th Street
 Vancouver, WA 98665
 360-397-2285

Nearest Address

1717 NE 117th St
 Vancouver, WA 98686

Driving Directions

1. Head south on Interstate-5 and at Exit 7 keep right to stay on Interstate-205 (Salem)
2. On Interstate-205 take Exit 36 (NE 134th Street)
3. At end of ramp, turn left onto NE 134th Street
4. After 0.1mi, turn right onto NE Hwy 99/Pacific Hwy
5. After 0.9mi, turn right onto NE 117th Street
6. After 0.3mi, immediately after passing under Interstate-5, turn right into parking area for Salmon Creek Park. Stage equipment in parking lot near pedestrian bridge over the creek. If needed, contact Clark County Parks for access support; call 360-737-6118 or 360-397-2285.

Sauer Creek at Cloverdale Rd SAURC-0.75

Position - Location: 45° 59.341', -122° 49.074' 45° 59' 20.5", -122° 49' 4.4" 45.98902, -122.81790 Kalama

Strategy Objective: Culvert Block : Collect oil moving downstream on Sauer Creek

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, install culvert block at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

Staging Area: Onsite: Stage equipment on side of road

Site Safety: slips, trips and falls, somewhat steep bank, roadway hazard

Field Notes: Modify strategy as needed, based on stream flow conditions. Downstream side of the culvert is most easily accessible, SW side of road.

Watercourse: Creek - Sauer Creek

Resources at Risk: Freshwater Wildlife



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
1	Roll	Plastic Sheeting
4	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

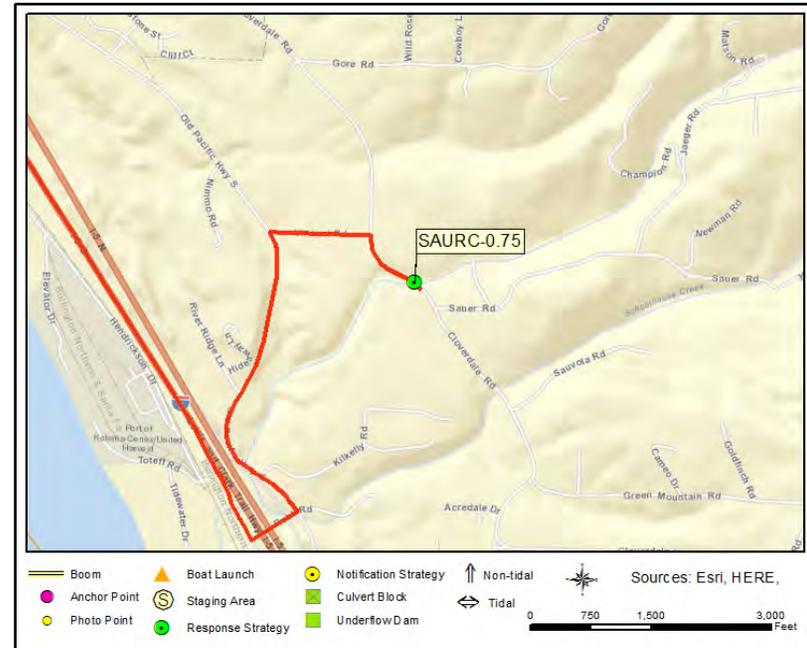
1	Laborer
1	Supervisor

Sauer Creek at Cloverdale Rd

SAURC-0.75



SAURC-0.75 Photo: Taken from top of culvert looking NE



Site Contact

No Information
Not Determined :

Nearest Address

1051 Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. From I-5, Take exit 27 toward Todd Rd/ Port of Kalama
2. Turn right onto Robb Rd
3. Turn left onto Old Pacific Hwy S
4. Turn right onto Vincent Rd
5. Turn right onto Cloverdale Rd. Destination will be on the left
6. Finish at 1051 Cloverdale Rd, 98625

Sauer Creek at Paradise Acres Road SAURC-0.9

Position - Location: 45° 59.385', -122° 48.906' 45° 59' 23.1", -122° 48' 54.4" 45.98975, -122.81510 Kalama

Strategy Objective: Collection : Collect oil moving downstream on Sauer Creek

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam approximately 100ft upstream from culvert where depth and current is less. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection

Staging Area: Remote: Ask permission to stage equipment from property owners

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Follow WSDOT Traffic Safety Guidelines

Watercourse: Creek - Sauer Creek

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
2	Each	Pipe(s), PVC (8 inch x 8ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

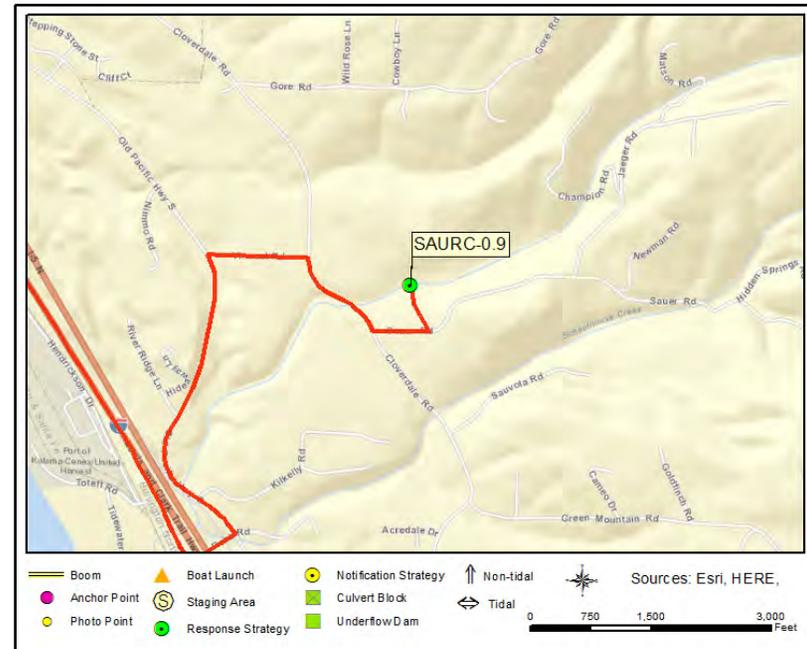
1	Laborer
1	Supervisor

Sauer Creek at Paradise Acres Road

SAURC-0.9



SAURC-0.9 Photo: Photo taken from downstream side of culvert looking NW



Site Contact

No Information
Not Determined :

Nearest Address

326 Paradise Acres Rd
Kalama, WA 98625

Driving Directions

1. From Kalama, take I-5 N
2. Take exit 27 to Todd Road/Port Of Kalama (0.29 miles)
3. Turn left on Robb Rd (0.13 miles)
4. Make sharp left on Old Pacific Hwy S (0.76 miles)
5. Make sharp right on Vincent Rd (0.24 miles)
6. Turn right on Cloverdale Rd (0.24 miles)
7. Turn left on Sauer Rd (Saver Rd) (0.13 miles)
8. Make sharp left on Paradise Acres Rd (0.13 miles)
9. Finish at 326 Paradise Acres Rd, 98625, on the right

Schoolhouse Creek at Robb Rd SCHSC-0.3

Position - Location: 45° 58.861', -122° 49.285' 45° 58' 51.7", -122° 49' 17.1" 45.98102, -122.82142 Kalama

Strategy Objective: Sorbent/Snare, Underflow Dam : Collect Oil using an underflow dam

Implementation: Put a culvert block or underflow dam on either upstream or downstream side of culvert. If on the downstream side, dam at the pond where it returns to a creek, and use the pond for holding and collection area.

Staging Area: Onsite: Roadway near strategy location

Site Safety: slips, trips and falls, slippery bank, overgrown vegetation

Field Notes: Dirt road, surrounded by private property, parking on the side of the road only

Watercourse: Creek - Schoolhouse Creek

Resources at Risk:



Recommended Equipment

1	Assort	Fill material (sand, earth, gravel, sandbags)
2	Each	Pipe(s), PVC (8 inch x 8ft)
100	Each	Sandbag(s)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

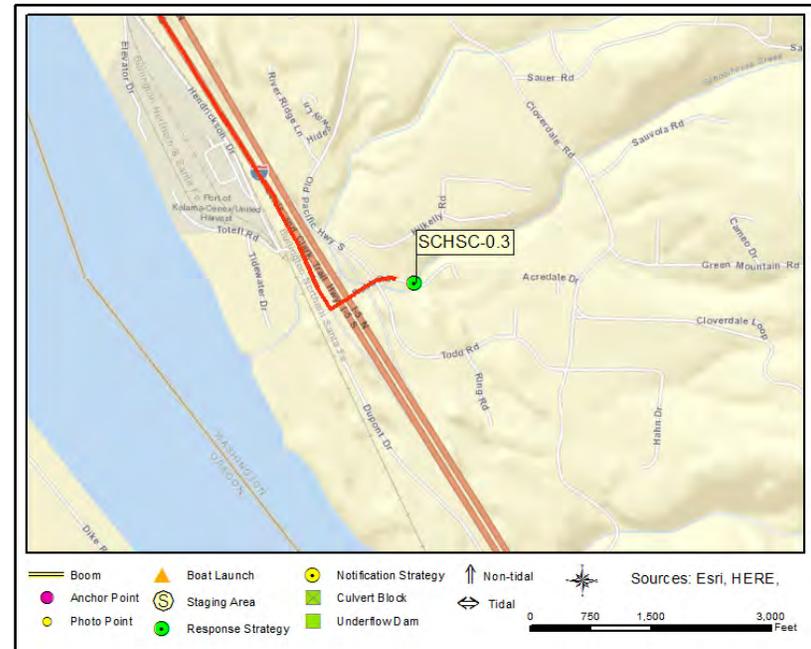
4	Laborer
1	Supervisor

Schoolhouse Creek at Robb Rd

SCHSC-0.3



SCHSC-0.3 Photo: Pool downstream of culvert to be used as collection



Site Contact

Nearest Address

225 Robb Rd
Kalama, WA 98625

Driving Directions

1. Start at I 5 Kelso
2. Go southeast on I-5 (4.74 miles)
3. At exit 27 bear right onto ramp toward Todd Road/Port Of Kalama (0.29 miles)
4. Turn left on Robb Rd (0.18 miles)
5. Finish at 225 Robb Rd, 98625, on the right

Schoolhouse Creek near Cloverdale Road SCHSC-1.3

Position - Location: 45° 59.123', -122° 48.811' 45° 59' 7.4", -122° 48' 48.7" 45.98539, -122.81352 Kalama

Strategy Objective: Collection, Underflow Dam : Collect oil moving downstream on Canyon Creek

Implementation: Use boom and sorbent on the North East sides of bridge for initial containment. If time allows, install culvert block at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

Staging Area: Remote: Stage on shoulder of roadway near creek; Follow WSDOT Traffic Safety Guidelines.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Access culvert from grass field (private property). Coordinate access with property owner before implementation if possible.

Watercourse: Creek - Canyon Creek (aka Schoolhouse Creek)

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
10	Each	Pipe(s), PVC (4inch x 8ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

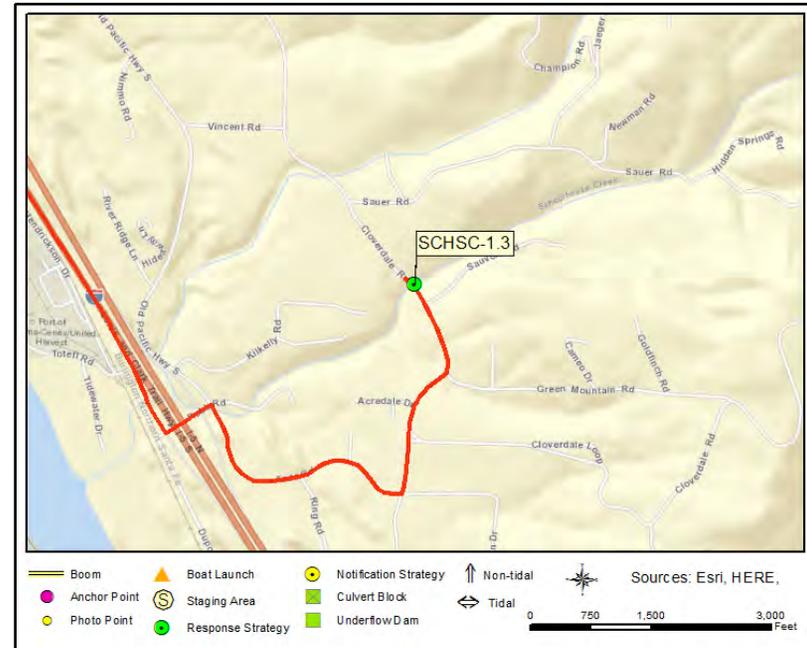
2	Laborer
1	Supervisor

Schoolhouse Creek near Cloverdale Road

SCHSC-1.3



SCHSC-1.3 Photo: Picture taken on downstream side of culvert looking NE



Site Contact

No Information

Not Determined :

Nearest Address

1080 Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. From Kelso, head southeast on I-5
2. At exit 27 bear right onto ramp toward Todd Road/Port Of Kalama (0.29 miles)
3. Turn left on Robb Rd (0.13 miles)
4. Turn right on Todd Rd (0.6 miles)
5. Turn left on Cloverdale Rd S (0.58 miles)
6. Finish at 1080 Cloverdale Rd, 98625, on the right

Salmon Creek at Pleasant Hill Rd SLMNC-0.35

Position - Location: 46° 15.267', -122° 53.162' 46° 15' 16.0", -122° 53' 9.7" 46.25445, -122.88603 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Salmon Creek

Implementation: Secure end of 100ft length of boom to bank on creek right near Point A. Using line, extend boom south about ~20ft to creek right and secure to bank near Point B. From Point B, extend remaining boom across to creek right, securing it to NE corner of culverts at/near Point C. Use multiple layers of sorbent boom or sweep across creek within boomed area in front of culverts. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer for collection.

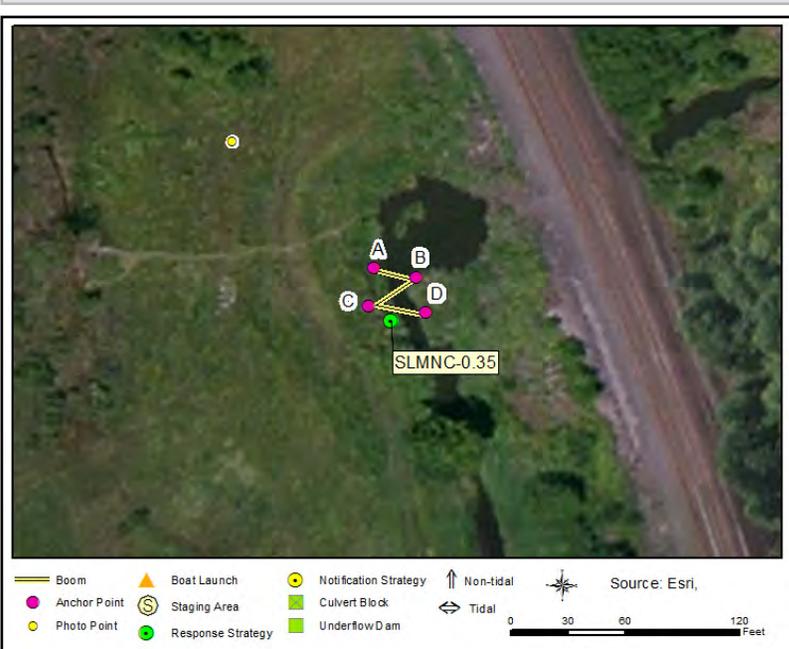
Staging Area: Onsite: Stage equipment on grassy field

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Down a paved road to private property, then through a gate and onto a grass field that leads to the creek. Grass field gets very muddy. 4x4 with good tires recommended.

Watercourse: Creek - Salmon Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

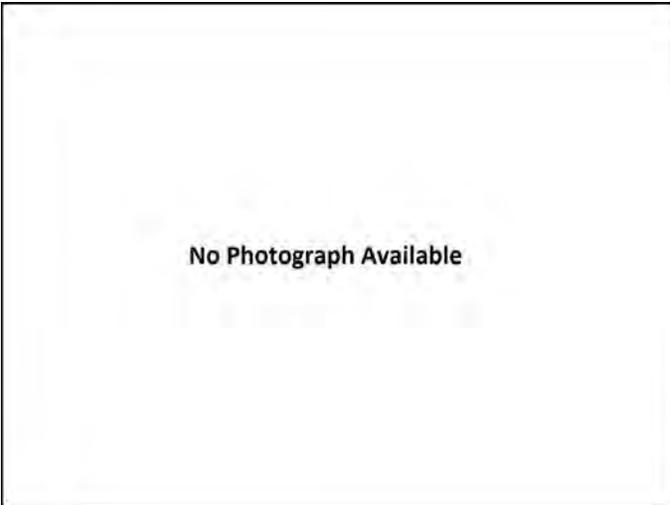
4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
200	Feet	Boom - Sorbent
1	Each	Vac Truck or Skimmer and Storage (if collection)

Recommended Personnel

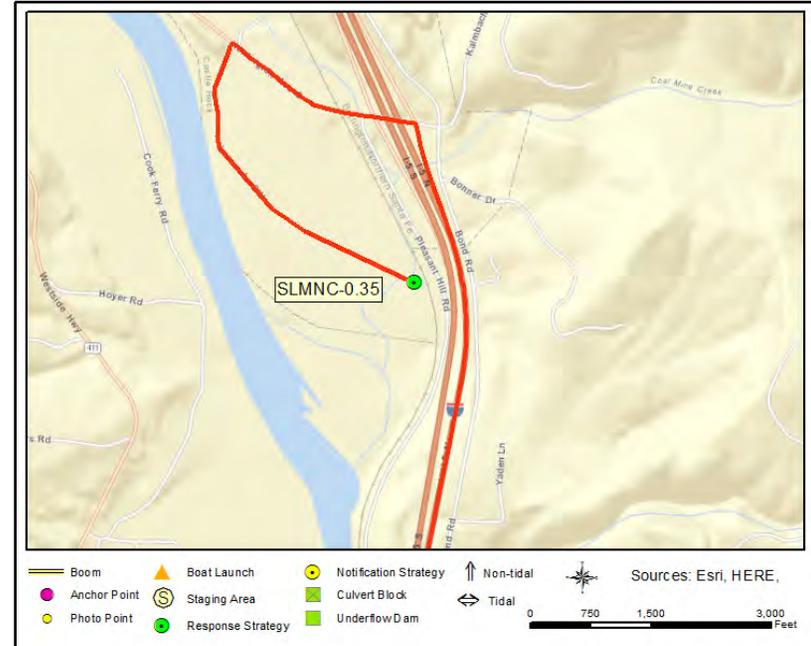
2	Laborer
1	Supervisor

Salmon Creek at Pleasant Hill Rd

SLMNC-0.35



SLMNC-0.35 Photo: No photograph currently available



Site Contact

Private Owner : Property Owner
 2101 Larson Ln SW
 Castle Rock, WA 98611
 360-608-7808

Nearest Address

2542 Larson Ln SW
 Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to I-5-Business Loop/ Castle Rock (0.26 miles)
3. Turn left on I-5-BL/Huntington Ave S (0.49 miles)
4. Turn left on Larsen Ln SW (0.45 miles)
5. 2542 Larson Ln SW will be on the left
6. Continue through gate and onto grass field which leads down to creek.

Salmon Creek near Huntington Ave S SLMNC-0.7

Position - Location: 46° 15.576', -122° 53.307' 46° 15' 34.6", -122° 53' 18.4" 46.25960, -122.88844 Castle Rock

Strategy Objective: Sorbent : Collect oil moving downstream on Salmon Creek

Implementation: Deploy multiple lengths of sorbent boom on creek. Use line to secure ends of sorbent boom to anchoring posts, trees, or existing structures nearby. Replace saturated sorbents as needed.

Staging Area: Onsite: Stage equipment on grass field north of culvert.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Bank leading down to the culvert is very steep and covered in overgrown vegetation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Salmon Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - Sorbent
1	Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)

Recommended Personnel

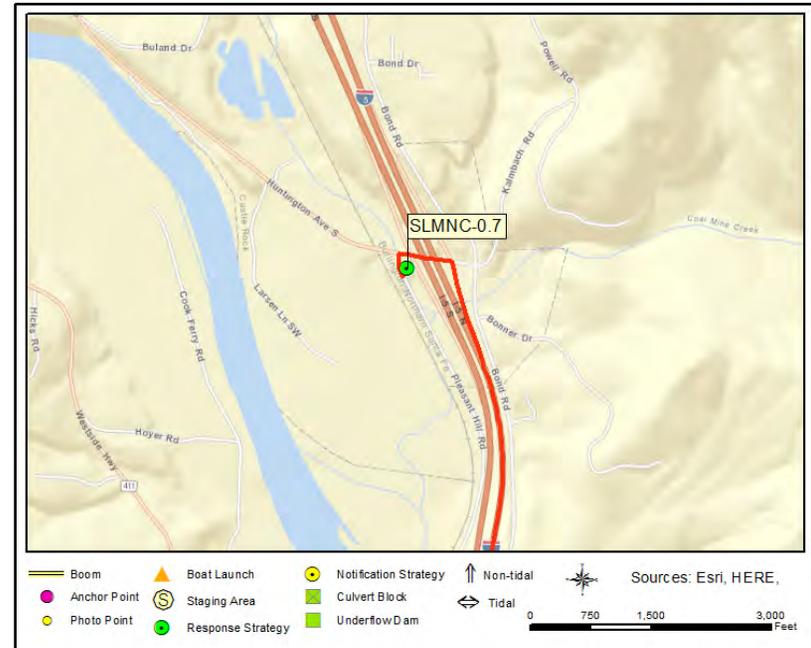
2	Laborer
1	Supervisor

Salmon Creek near Huntington Ave S

SLMNC-0.7



SLMNC-0.7 Photo: Photo taken looking South



Site Contact

No Information
Not Determined :

Nearest Address

1955 Huntington Ave S
Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to I-5-Business Loop/ Castle Rock (0.26 miles)
3. Turn left on I-5-Business/Huntington Ave S (0.1 miles)
4. Turn left onto Pleasant Hill Rd
5. Site is on left.

Salmon Creek along Dougherty Dr SLMNC-2.3

Position - Location: 46° 16.683', -122° 53.853' 46° 16' 41.0", -122° 53' 51.2" 46.27806, -122.89755 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on Salmon Creek

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam approximately 100ft upstream from culvert where depth and current is less. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting o

Staging Area: Remote: Stage equipment on shoulder of Dougherty Dr

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Bank leading down to the culvert is very steep and covered in overgrown vegetation. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Salmon Creek

Resources at Risk: Freshwater Wildlife, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Assort	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1	Assort	Fill material (sand, earth, gravel, sandbags)
2	Each	Pipe(s), PVC (8 inch x 8ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

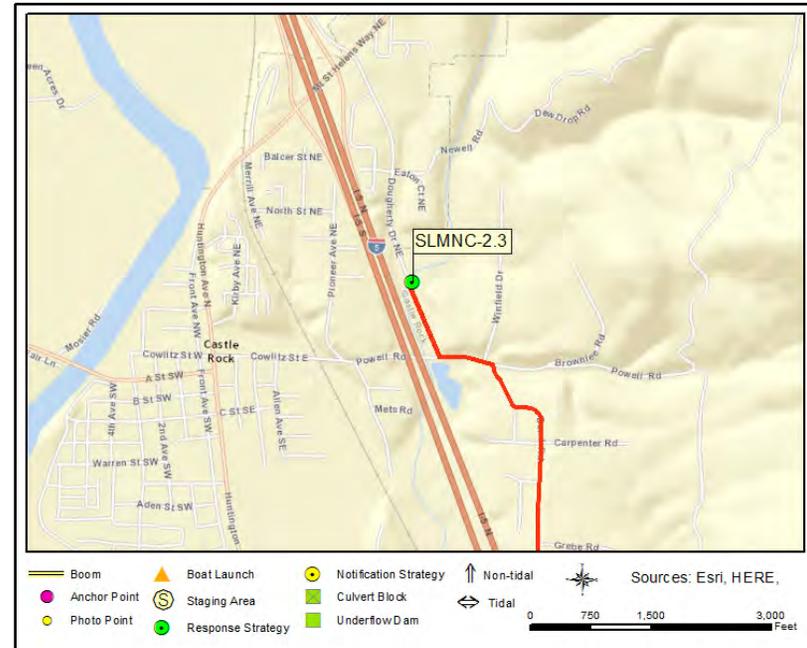
2	Laborer
1	Supervisor

Salmon Creek along Dougherty Dr

SLMNC-2.3



SLMNC-2.3 Photo: Photo taken from road looking South



Site Contact

No Information
Not Determined :

Nearest Address

129 Winfield Dr
Castle Rock, WA 98611

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 48 to Business Loop/ Castle Rock (0.26 miles)
3. Make sharp right on Huntington Ave S (0.06 miles)
4. Turn left on Bond Rd (1.23 miles)
5. Turn left on Powell Rd (0.1 miles)
6. Turn right on Dougherty Dr (0.2 miles)
7. Site is on right, where Creek crosses under roadway.

Toutle River off Old Pacific Hwy N TTLR-1.0

Position - Location: 46° 19.029', -122° 54.400' 46° 19' 1.7", -122° 54' 24.0" 46.31715, -122.90667 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on the Toutle River

Implementation: Secure end of 500ft length hard boom to bank on creek left near Point B (46.317831, -122.907019). Then secure 500ft line to remaining boom end and use hand-launch work boat to transport line upstream ~450ft to river right. Use winch to pull boom upstream and across to river right, securing boom end to bank at or near Point A (46.316575, -122.906314). Use in river anchoring systems or lines from boom to bank as needed to maintain shape of boom in river. Use anchor posts, trees, or existing structures to keep boom secured to banks. Skimmer (with storage) collection at Point B.

Staging Area: Onsite: Stage in upper dirt/gravel lot at strategy location

Site Safety: Slips, Trips, Falls; Water Hazard; Steep Banks; Rocky/Uneven Path to lower riverfront area.

Field Notes: If needed, launch jet-boat from BL-CWLZR-17.6 (located about ~3.4m downstream) to support the implementation of this strategy - but boat operator must know the river well in order to avoid sandbars and other obstructions.

Watercourse: River - Toutle River

Resources at Risk: Downstream Resources, Salmon (Coho, Chinook and Chum), Steelhead



Recommended Equipment

4	Each	Anchoring System(s) - (anchor, lines, floats)
4	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Bridle(s) - Towing (appropriately sized for boom)
500	Feet	Line - 1/2" poly line
500	Feet	Line - 3/8" poly line
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Winch - Power Winch
1	Each	Workboat(s) - (hand-launch)

Recommended Personnel

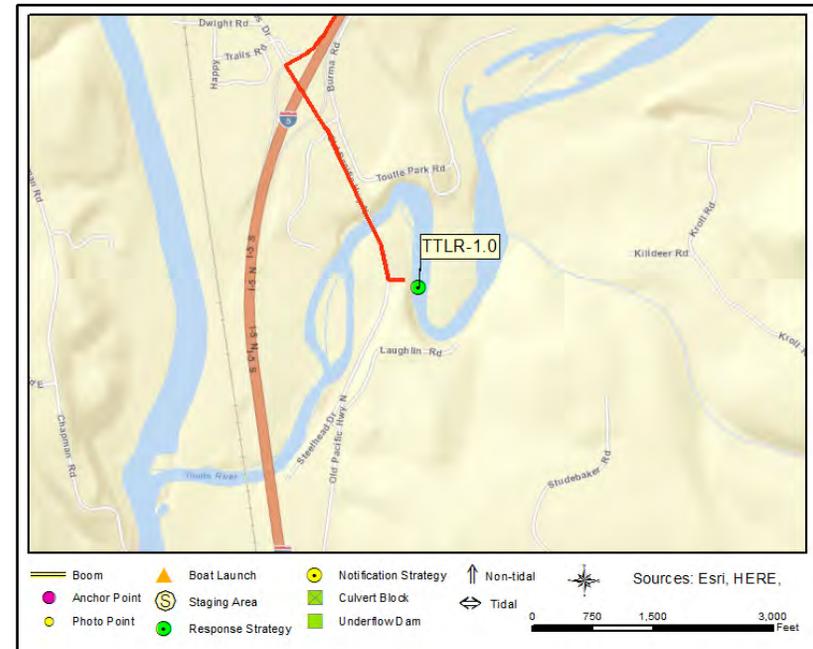
1	Boat Operator
3	Laborer
1	Supervisor

Toutle River off Old Pacific Hwy N

TTLR-1.0



TTLR-1.0 Photo: At strategy location on the Toutle River (river left - Point B), looking upstream and across to river right.



Site Contact

Nearest Address

7256 Old Pacific Hwy N
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 52 (Toutle Park Road)
2. Turn left at the end of exit ramp to travel SE on Old Pacific Highway
3. After ~0.6mi, turn left into gravel lot (south end)
4. After ~250ft, decayed dirt road to lower river front area will be on your left. The road is not drivable, so you must hand carry equipment down to river left from this location.

Toutle River - Unnamed Tributary at Kroll Road TTLRTA-1.1

Position - Location: 46° 18.690', -122° 53.154' 46° 18' 41.4", -122° 53' 9.2" 46.31150, -122.88589 Castle Rock

Strategy Objective: Collection : Collect oil moving downstream on unnamed tributary to the Toutle River

Implementation: On upstream (east) side of roadway, deploy hard boom across creek in front of the culvert and back it with multiple lengths of sorbent boom so product moving downstream can be collected. Use anchoring posts, trees, or existing structures to secure hard boom and sorbents to creek banks. Replace saturated sorbents as needed. Limited shoulder area - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

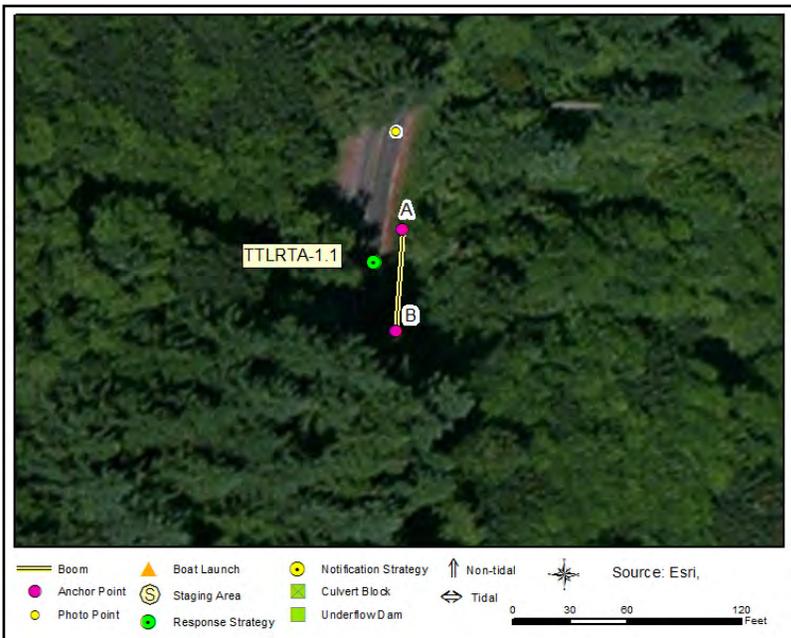
Staging Area: Onsite: Stage work truck on shoulder of roadway; Space limited - **NO TRAILERS**

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Shoulder); Heavy Vegetation

Field Notes: Follow WSDOT work zone traffic control guidelines when working on or near roadway. Shoulder parking is very limited at this location - **DO NOT BRING AN EQUIPMENT TRAILER** to this site.

Watercourse: Creek - Unnamed Creek (tributary to the Toutle River)

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Bridle(s) - Hand (appropriately sized for boom)
1	Each	Machete(s) - (or other vegetation cutting tool)

Recommended Personnel

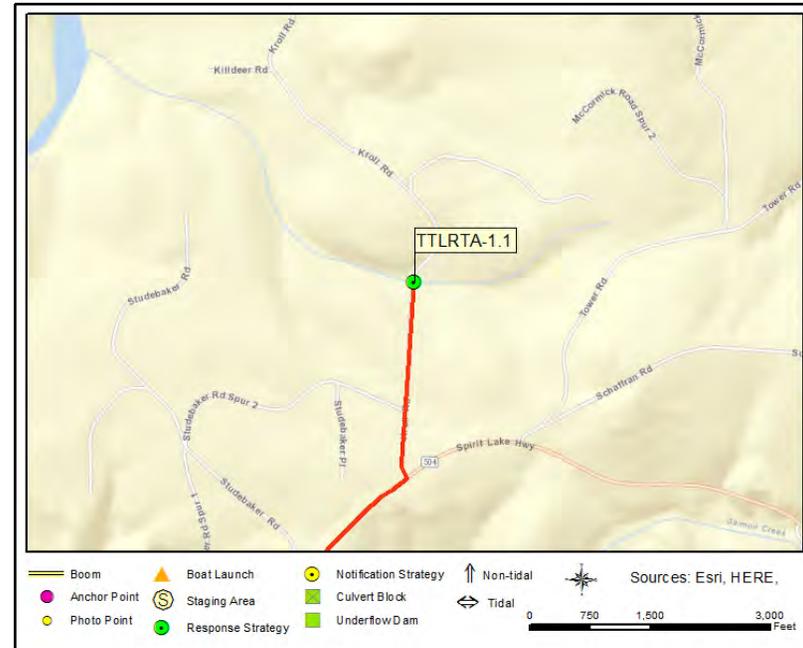
	Laborer
1	Supervisor

Toutle River - Unnamed Tributary at Kroll Road

TTLRTA-1.1



TTLRTA-1.1 Photo: Aerial image of strategy location with creek, strategy, and roadway depicted. Hard boom in red; sorbent boom in white; site area in yellow circle.



Site Contact

Nearest Address

199 Kroll Rd
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 49 (Castle Rock/Toutle)
2. Turn left at the end of exit ramp to travel NE on WA504 E/Mt St Helens Way NE
3. After ~1.8mi, turn left onto Kroll Road
4. After ~0.5mi, the strategy location will be on your right at the bottom of the hill. Stage on shoulder of road towards top of descending hill to strategy location. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Unnamed Creek at Old Pacific Highway S USCCA-0.5

Position - Location: 45° 59.583', -122° 49.670' 45° 59' 35.0", -122° 49' 40.2" 45.99306, -122.82783 Kalama

Strategy Objective: Collection, Underflow Dam : Collect oil moving downstream

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, use sandbags with PVC to create an underflow dam at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

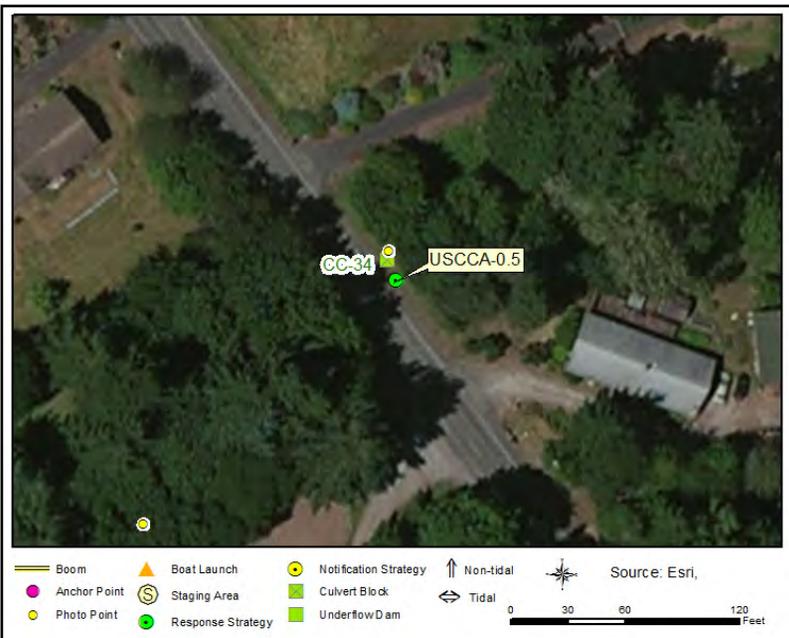
Staging Area: Onsite: Very limited area on the side of the road, enough for 2 or 3 small trucks.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Culvert under paved road. Limited parking. The creek is approximately 10 ft in width but will vary seasonally. Stream is mostly dry in the summer. Shoreline composition is mostly grass with some mud, river rock. *** Downstream side of the culvert is most easily

Watercourse: Creek - Unnamed Creek

Resources at Risk: Freshwater Wildlife



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
1	Roll	Plastic Sheeting
4	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

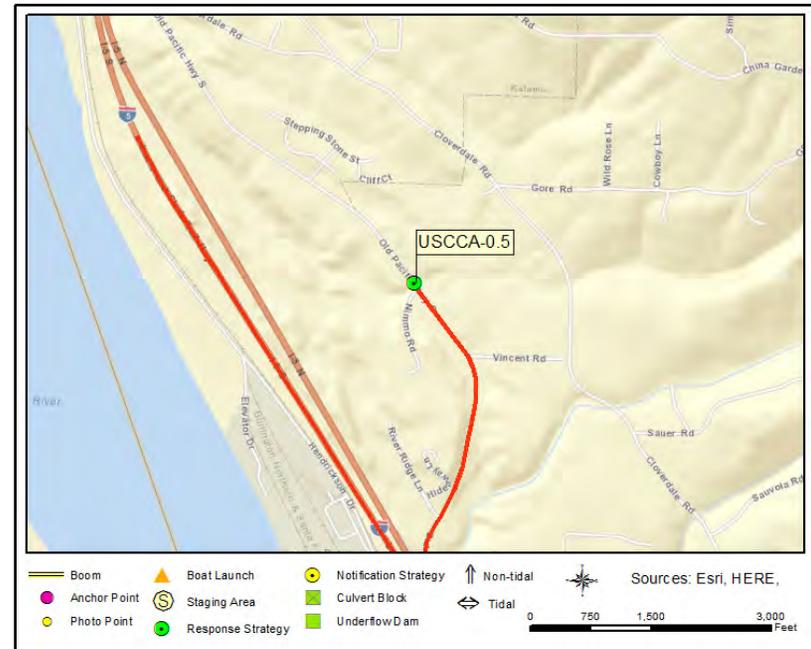
1	Laborer
1	Supervisor

Unnamed Creek at Old Pacific Highway S

USCCA-0.5



USCCA-0.5 Photo: At strategy location on creek right looking to the SW



Site Contact

No Information
Not Determined :

Nearest Address

6954 Old Pacific Hwy S
Kalama, WA 98625

Driving Directions

1. From Kelso, take I-5 S
2. Take exit 27 to Todd Road/Port Of Kalama (0.29 miles)
3. Turn left on Robb Rd (0.13 miles)
4. Turn left on Old Pacific Hwy S (1.01 miles)
5. Site is on the right, just past Nimmo Rd.

Unnamed Creek at Cloverdale Road **USCCA-0.8**

Position - Location: 45° 59.595', -122° 49.204' 45° 59' 35.7", -122° 49' 12.3" 45.99325, -122.82007 Kalama

Strategy Objective: Culvert Block, Sorbent : Collect oil moving downstream

Implementation: Use boom and sorbent on both sides of bridge for initial containment. If time allows, install culvert block at this location. If not, deploy one length of river boom (hard boom) on downstream side of culvert, leaving space between the culvert and hard boom. Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use vac-truck or skimmer & storage for collection (if site is collecting oil).

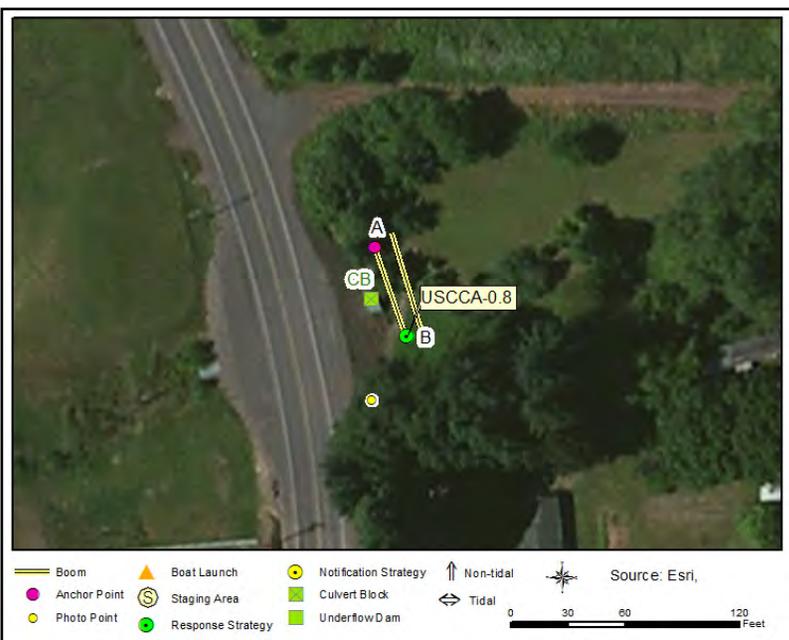
Staging Area: Onsite: Stage equipment on side of the road. Large grass fields in the area are privately owned.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation

Field Notes: Culvert under paved road. Limited parking. Shoreline composition is mostly grass with vegetation. Robert (Ken) Palmer (360-673-2200) is property owner on west side of culvert and was very cooperative. Culvert has easy access off the side of the road but has a wire fence

Watercourse: Creek - Unnamed Creek

Resources at Risk: Freshwater Wildlife



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
1	Roll	Plastic Sheeting
4	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

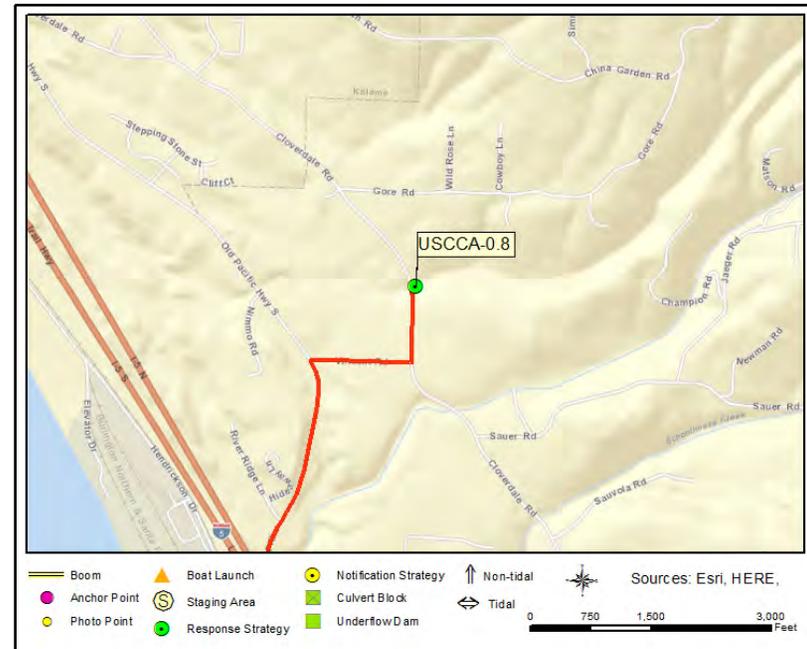
2	Laborer
1	Supervisor

Unnamed Creek at Cloverdale Road

USCCA-0.8



USCCA-0.8 Photo: Photo taken looking NE



Site Contact

No Information
Not Determined :

Nearest Address

803 Cloverdale Rd
Kalama, WA 98625

Driving Directions

1. From Kalama, head northwest on I-5
2. At exit 27 bear right onto ramp toward Todd Road/Port Of Kalama (0.32 miles)
3. Turn right on Robb Rd (0.03 miles)
4. Make sharp left on Old Pacific Hwy S (0.76 miles)
5. Make sharp right on Vincent Rd (0.24 miles)
6. Turn left on Cloverdale Rd (0.23 miles)
7. Finish at 803 Cloverdale Rd, 98625, on the left

Unnamed Stream at Burcham Street USCCB-0.8

Position - Location: 46° 9.004', -122° 53.892' 46° 9' .2", -122° 53' 53.5" 46.15007, -122.89821 Kelso

Strategy Objective: Culvert Block : Collect oil moving downstream

Implementation: If time allows, intall culvert block at this location on north/upstream side of roadway. If not, deploy one length of river boom (hard boom) on upstream side of culvert (blocking the culvert). Then place multiple lines of sorbent boom immediately upstream of the hard boom. Secure boom (including sorbent boom) to banks using anchoring posts, trees, or existing structures. Use lines to keep boom secure in water (as needed).

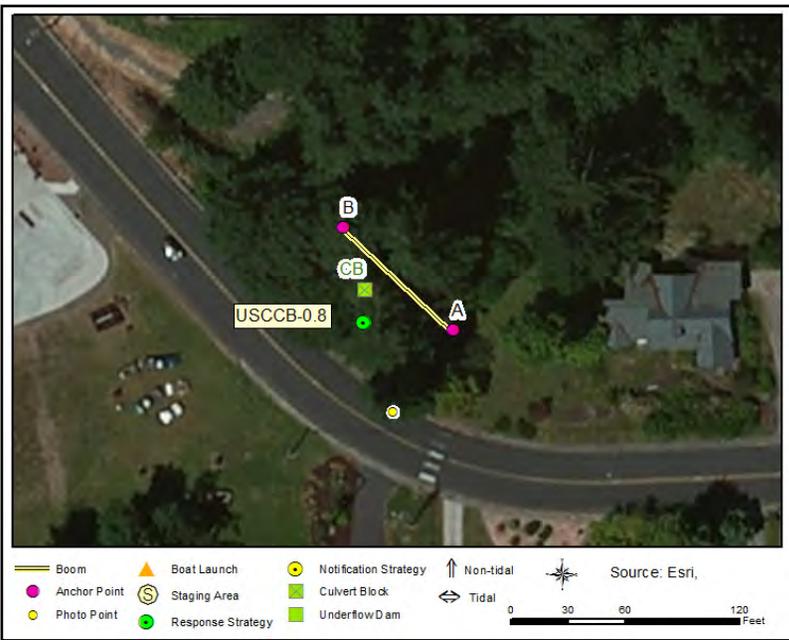
Staging Area: Onsite: Stage equipment on hill above the site. Follow WSDOT Traffic Safety Guidelines.

Site Safety: Slips, Trips, Falls; Water Hazard; Vegetation.

Field Notes: Creek has intermittent flow. Modify strategy as needed, based on stream flow conditions. Install Underflow Dam if time allows.

Watercourse: Intermittent Stream - Unnamed Stream

Resources at Risk: Freshwater Wildlife



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Boom - Sorbent
1	Assort	Fill material (sand, earth, gravel, sandbags)
1	Roll	Plastic Sheeting
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

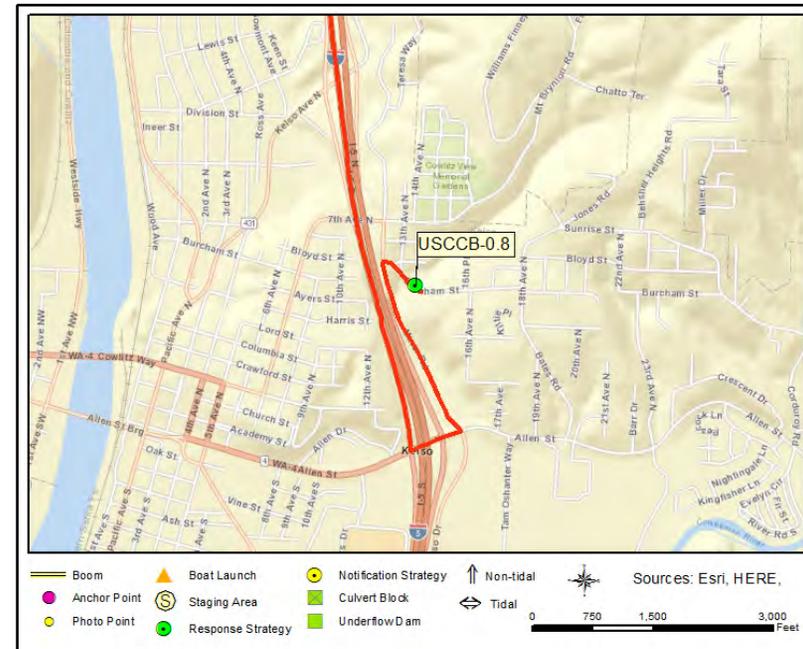
2	Laborer
1	Supervisor

Unnamed Stream at Burcham Street

USCCB-0.8



USCCB-0.8 Photo: Photo taken upstream of culvert looking North



Site Contact

No Information
Not Determined :

Nearest Address

1401 Burcham St
Kelso, WA 98626

Driving Directions

1. Head south on I-5
2. From I-5, take exit 39 towards WA-4 (0.32 miles)
3. Turn left on WA-4 (Allen St) (0.08 miles)
4. Continue on Allen St (0.05 miles)
5. Make sharp left on Minor Rd (0.45 miles)
6. Turn right on Burcham St (0.12 miles)
7. Finish at 1401 Burcham St, 98626, on the left

Unnamed Creek at Washburn Rd USCCC-0.0

Position - Location: 46° 12.452', -122° 53.854' 46° 12' 27.1", -122° 53' 51.2" 46.20753, -122.89756 Kelso

Strategy Objective: Collection : Collect oil moving downstream

Implementation: From roadway, secure end of 100ft length of river boom to bank near Point A. Secure remaining end to shore on northern part of culvert at Point B. Use multiple layers of sorbent boom and/or sweep across creek within boomed area (between boom and culverts). River boom should be positioned in a manner that prevents sorbents from moving downstream if breakaway occurs. If product collecting beyond capacity sorbents can handle, use vac-truck or skimmer with storage for collection.

Staging Area: Remote: No staging onsite.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard; Vegetation.

Field Notes: Inform/coordinate response activities with nearby property owners as needed. Follow WSDOT work zone traffic control guidelines when working on or near roadway.

Watercourse: Creek - Unnamed Creek

Resources at Risk: Freshwater Wildlife, Salmon - Coho, Steelhead



Recommended Equipment

100 Feet	Boom - B3 (River Boom) or equivalent
200 Feet	Boom - Sorbent
1 Each	Vac Truck or Skimmer and Storage

Recommended Personnel

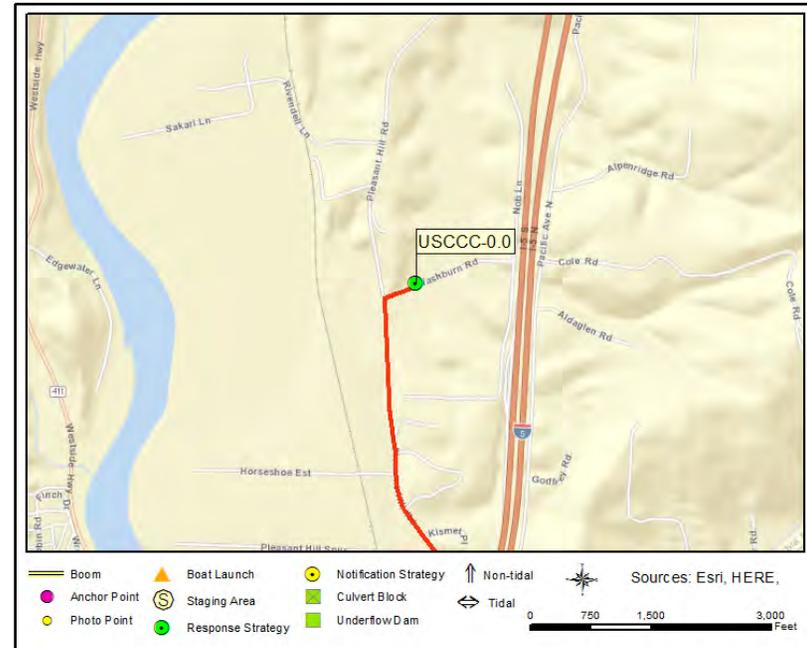
2	Laborer
1	Supervisor

Unnamed Creek at Washburn Rd

USCCC-0.0



USCCC-0.0 Photo: Photo taken looking NE



Site Contact

No Information
Not Determined :

Nearest Address

130 Washburn Rd
Kelso, WA 98626

Driving Directions

1. From Kelso, take I-5 N
2. Take exit 42 to Sparks Drive toward Pleasant Hill Rd (0.26 miles)
3. Turn right on Sparks Dr (0.06 miles)
4. Turn left on Pacific Ave N (0.53 miles)
5. Turn left on Pleasant Hill Rd (1.26 miles)
6. Turn right on Washburn Rd (0.26 miles)
7. Site is on the left, park on the shoulder.

Whipple Creek near NW 179th Street (Wood Bridge) WPPLC-2.3

Position - Location: 45° 45.030', -122° 43.007' 45° 45' 1.8", -122° 43' .4" 45.75049, -122.71678 Ridgefield

Strategy Objective: Sorbent : Collect oil moving downstream on Whipple Creek using sorbents

Implementation: Use wooden bridge over creek to deploy multiple lengths of sorbent boom on upstream and downstream sides of bridge. Use line to secure ends of sorbent boom to bridge, anchoring posts, or existing structures nearby. Replace saturated sorbents as needed. USE LIGHT-DUTY TRUCK ONLY with no trailer. The wooden bridge has weight restrictions and is not likely to support the weight of a vac-truck or equipment trailer at this location.

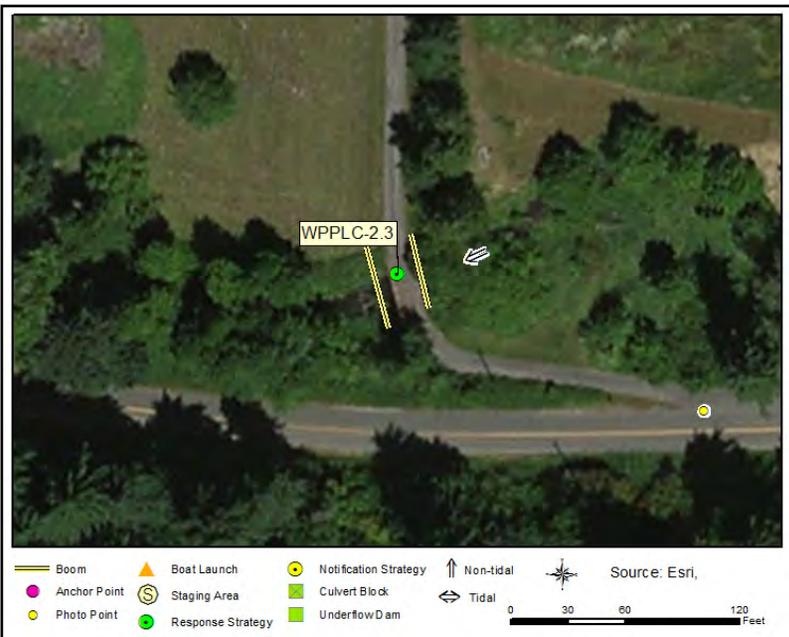
Staging Area: Onsite: Stage off NW 179th Street before wooden bridge on unnamed roadway.

Site Safety: Slips, Trips, Falls; Water Hazard; Roadway Hazard (Limited Visibility); Vegetation; Bridge Restrictions

Field Notes: May be able to temporarily park equipment trailer at Clark County Sheriff's Office (West Precinct), 505 NW 179th Street, ~2mi east of strategy site (before I-5) on south side of roadway; call 360-397-2211.

Watercourse: Creek - Whipple Creek

Resources at Risk: Freshwater Wetlands, Freshwater Wildlife, Habitat and Waterfowl, Salmon - Coho, Steelhead



Recommended Equipment

4	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - Sorbent
1	Each	Heaving Line(s)
100	Feet	Line - 3/8" poly line

Recommended Personnel

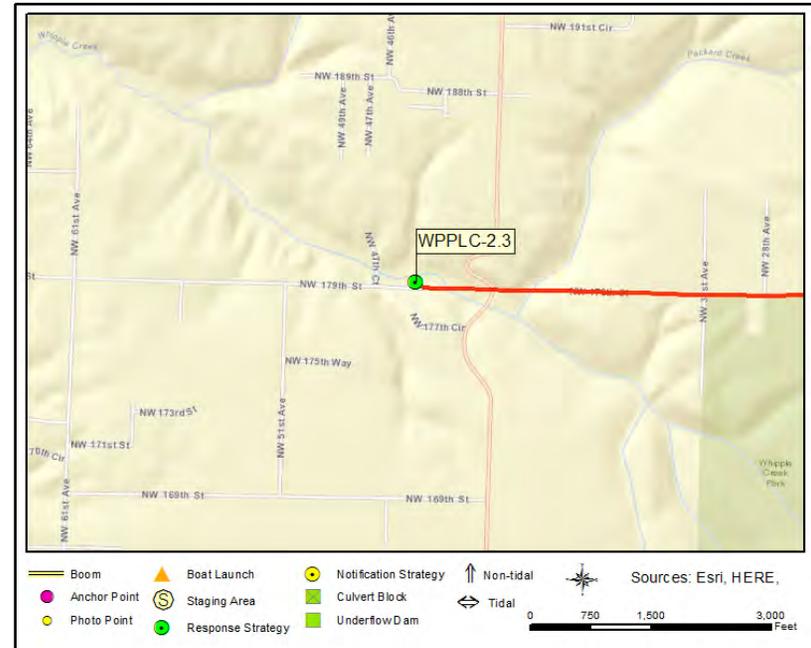
	Laborer
1	Supervisor

Whipple Creek near NW 179th Street (Wood Bridge)

WPPLC-2.3



WPPLC-2.3 Photo: View of strategy location from NW 179th Street (westbound). Wood bridge/strategy site circled in red.



Site Contact

No Information
Not Determined :

Nearest Address

4112 NW 179th St
Ridgefield, WA 98642

Driving Directions

1. Head south on Interstate-5 and Take Exit 9 (NE 179th Street)
2. Turn right at the end of exit ramp to travel west on NW179th Street
3. After 2.5mi, take slight right onto unnamed roadway off of NW179th Street
4. After 170ft, at bottom of hill and curve to the right, you will be at the wooden bridge/strategy location. Stage on roadway before bridge; LIGHT TRUCKS ONLY– NO TRAILERS OR VAC-TRUCKS.

Appendix 4B
Notification Strategy 2-Pagers

NOTIFICATION STRATEGIES – LIST

[CWLZR-4.7-N](#)

[CWLZR-49.8-N](#)

[LCR-100.8R-N**](#)

[CWLZR-5.2-N](#)

[CWMR-13.3-N](#)

[LEWR-7.0-N](#)

[CWLZR-22.3-N](#)

[KL MAR-2.6-N](#)

[LEWR-19.0-N](#)

[CWLZR-27.3-N](#)

[KL MAR-10.8-N](#)

[LKRVR-1.84-N**](#)

***Notification strategies from LCR-GRP that are included in this appendix*

Cowlitz River - Kelso Ranney Collector (Water Inta) CWLZR-4.7-N

Position - Location: 46° 8.543', -122° 54.830' 46° 8' 32.6", -122° 54' 49.8" 46.14238, -122.91383 Kelso

Strategy Objective: Notification : Notify City of Kelso so they can take action to protect their water intakes

Implementation: During Normal Business Hours call City of Kelso Public Works at 360-577-3360 or contact the city's water treatment plant directly at 360-577-1085. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream or downstream of the Ranney Collector/Water Intake. After hours, contact Kelso Police at 360-423-1270 and ask that the on- duty public works person return your call.

Field Notes: No information

Watercourse: River - With Tidal Influence - Cowlitz River

Resources at Risk: Water Intakes



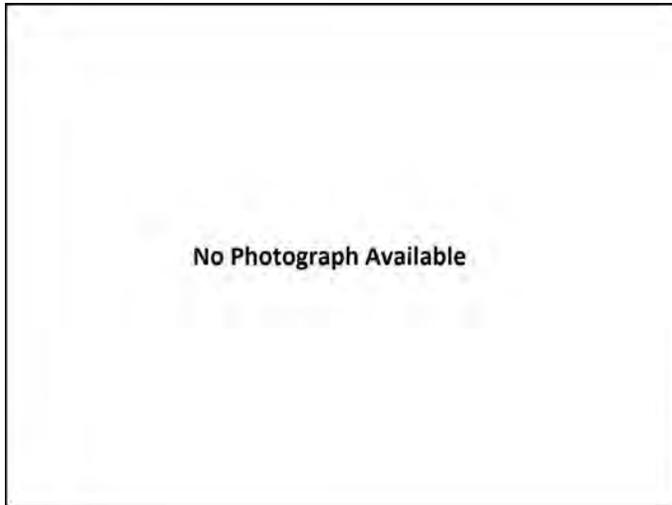
Communication Process and Action:

Call the City of Kelso Public Works at 360-577-3360 or 360-577-1085. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream or downstream of the Ranney Collector/Water Intake. After hours, contact Kelso Police at 360-423-1270 and ask that the on- duty public works person return your call.

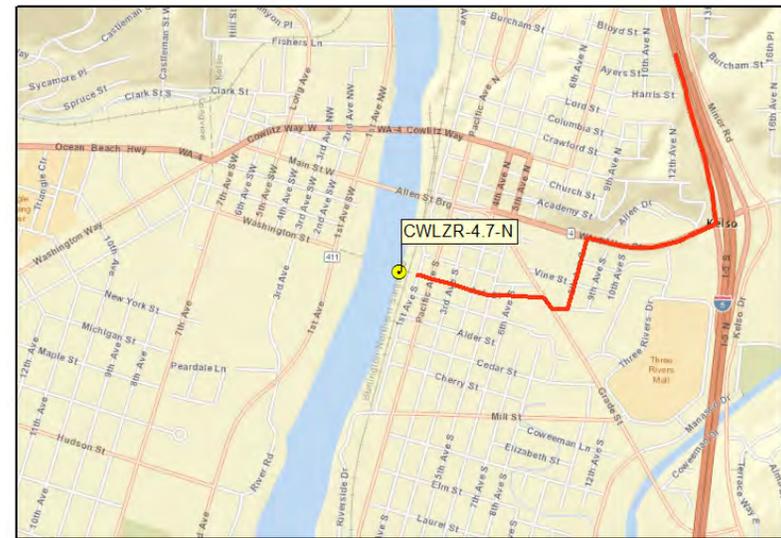
Once notified, the City of Kelso will determine what action(s) they need to take to protect the collector/intakes. Actions by the city might include shutting down the intake pumps and closing intake valves.

Cowlitz River - Kelso Ranney Collector (Water Inta

CWLZR-4.7-N



CWLZR-4.7-N Photo: No photo currently available.



Site Contact

City of Kelso - Public Works
 Municipality (County/City) :
 203 S Pacific Ave
 Kelso, WA 98626
 360-577-3360

Nearest Address

501 1st Ave S
 Kelso, WA 98626

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (WA-4 toward Kelso)
2. At end of exit, turn right onto highway WA-4/Allen Street
3. After 0.6mi, turn left onto S 4th Avenue
4. After ~0.2mi, turn right onto Ash Street
5. After 0.1 mile, turn left onto 1st Avenue S. The Kelso Ranney structure will be on the right, riverside of the railroad tracks behind the Kelso/Longview Amtrak Station.

Cowlitz River - Longview Water Intakes **CWLZR-5.2-N**

Position - Location: 46° 9.023', -122° 54.869' 46° 9' 1.4", -122° 54' 52.1" 46.15038, -122.91448 Kelso

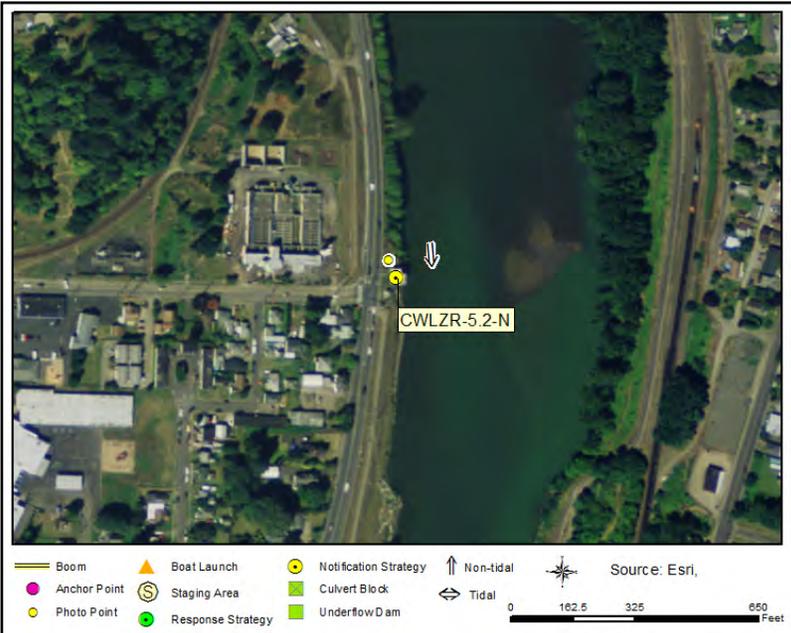
Strategy Objective: Notification : Notify City or Longview so they can take action to protect their water intakes

Implementation: During Normal Business Hours (Monday through Thursday 7am-6pm) call City of Longview Stormwater Division at 360-442-5299, 360-957-2720, or 360-442-5209. After hours call 360-578-0900.

Field Notes: No Information

Watercourse: River - With Tidal Influence - Cowlitz River

Resources at Risk: Economic Resource, Water Intakes



Communication Process and Action:

During Normal Business Hours (Monday through Thursday 7am-6pm) call the City of Longview Stormwater Division at 360-442-5299, 360-957-2720, or 360-442-5209. After hours call 360-578-0900.

After notice about a significant spill in the area is received, the City of Longview will determine what action(s) they need to take to protect the water intakes. Actions by the city might include shutting down the intake pumps and closing intake valves.

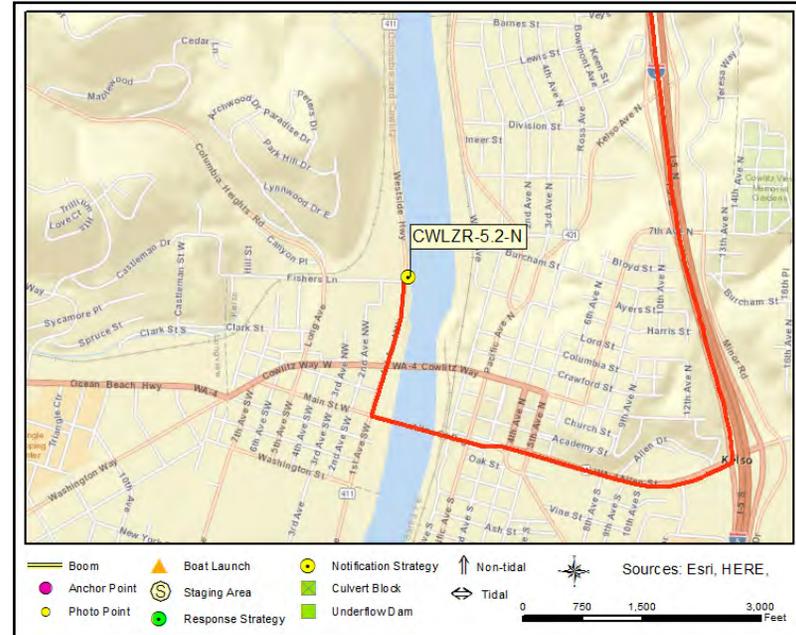
Implementation of response strategy CWLZR-5.2 by contractors is also an option to further protect the intakes from oiling.

Cowlitz River - Longview Water Intakes

CWLZR-5.2-N



CWLZR-5.2-N Photo: At City of Longview water intake pump station on river right of Cowlitz River, adjacent to the Westside Hwy, about 0.2mi upstream from the Cowlitz Way Bridge.



Site Contact

City of Longview - Stormwater
 Primary Contact :
 1525 Broadway
 Longview, WA 98632
 360-442-5299

Nearest Address

101 Fishers Lane
 Kelso, WA 98626

Driving Directions

1. Head south on Interstate-5 and Take Exit 39 (towards Kelso)
2. Turn right at the end of exit ramp, heading west on Hwy 4/Allen Street
3. After 0.9mi, just after the bridge over the Cowlitz River, turn right onto 1st Avenue NW
4. After 0.3 miles, the pump station will be on your right, adjacent to the river.

Cowlitz River - Castle Rock Water Intakes **CWLZR-22.3-N**

Position - Location: 46° 20.042', -122° 55.916' 46° 20' 2.5", -122° 55' 55.0" 46.33403, -122.93194 Castle Rock

Strategy Objective: Notification : Notify City of Castle Rock so they can take action to protect their water intakes

Implementation: During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility. If the business number is inoperative, or for after hours assistance, call the city's answering service at 360-751-7478.

Field Notes: No Information

Watercourse: River - Cowlitz River

Resources at Risk: Economic Resource, Water Intakes



Communication Process and Action:

Call the City of Castle Rock Public Works at 360-703-0167 or 360-751-7478 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility.

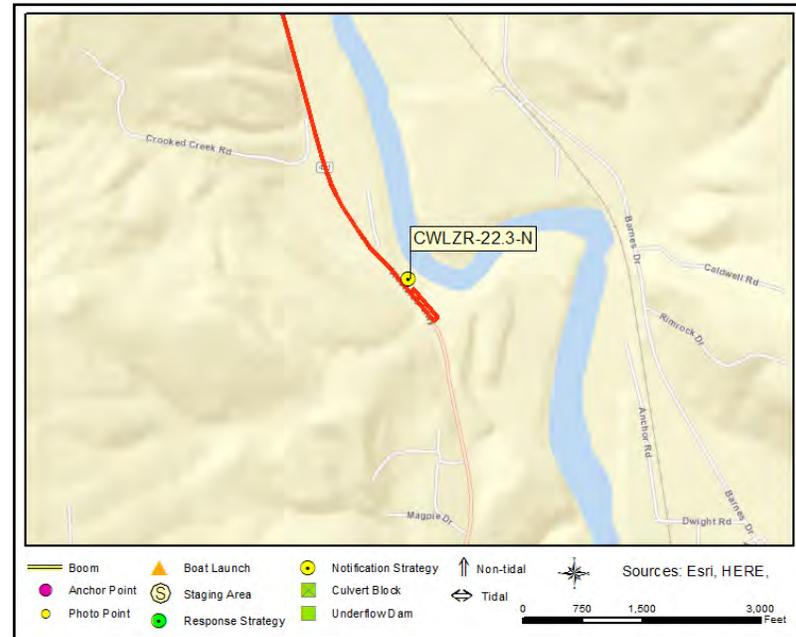
Once notified, the City of Castle Rock will determine what action(s) they need to take to protect the water intakes. Actions by the city might include shutting down the intake pumps and closing intake valves.

Cowlitz River - Castle Rock Water Intakes

CWLZR-22.3-N



CWLZR-22.3-N Photo: Looking NE towards the City of Castle Rock pump station from the Westside Highway.



Site Contact

City of Castle Rock - Public Works

Land/Property Contact :
 360 "A" Street SW - P.O. Box 370
 Castle Rock, WA 98611
 360-703-0167

Nearest Address

6810 Westside Hwy
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (WA-506, Vader/Ryderwood)
2. At end of exit, turn left to head west on highway WA-506
3. After ~3.0mi, turn left onto Westside Highway
4. After ~5.3mi, turn left onto unnamed dirt/gravel road and take long driveway to immediate left. The pump station is behind the gated fence at the end of the long driveway.

Cowlitz River - Vader Water Intakes CWLZR-27.3-N

Position - Location: 46° 24.365', -122° 56.002' 46° 24' 21.9", -122° 56' .1" 46.40608, -122.93336 Vader

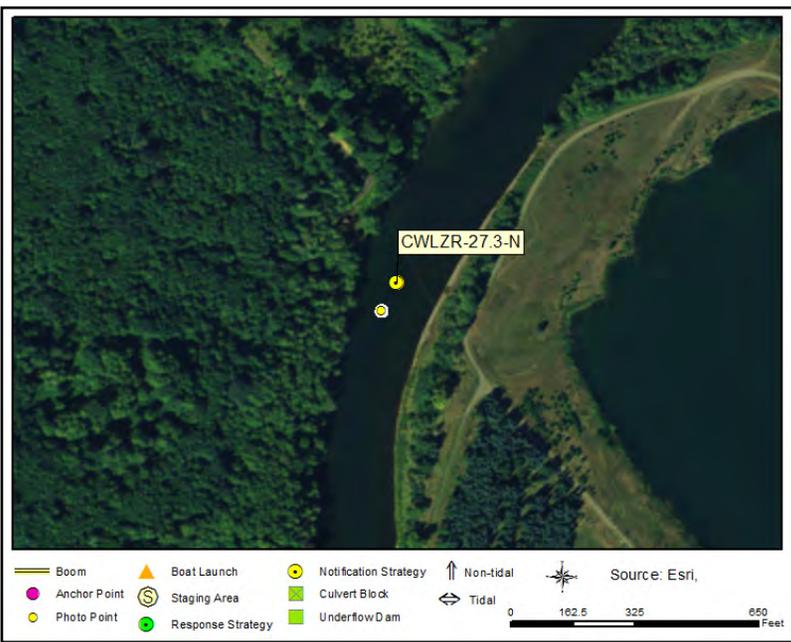
Strategy Objective: Notification : Notify Lewis County so they can take action to protect the City of Vader's water intakes

Implementation: During Normal Business Hours call Lewis County Public Works at 360-740-1123 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility. After hours call Lewis County Emergency Management at 360-740-1151 or the Sheriff's Office at 360-748-9286 for assistance.

Field Notes: No information

Watercourse: River - Cowlitz River

Resources at Risk: Water Intakes



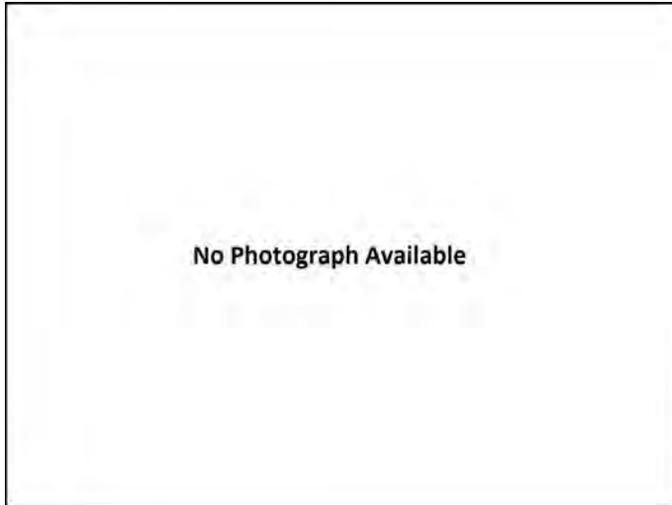
Communication Process and Action:

Call Lewis County Public Works at 360-740-1123 and inform them of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River upstream of the facility. Afterhours contact Lewis County Emergency Management at 360-740-1151 or the Sheriff's Office at 360-748-9286 for assistance.

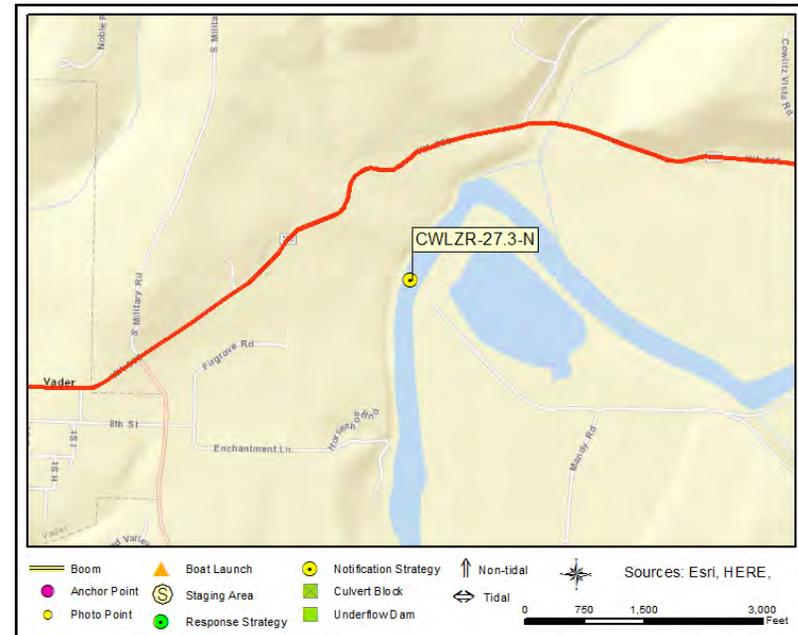
Once notified, the county will determine what action(s) they need to take to protect the City of Vader's water intakes. Actions by the county might include shutting down the intake pumps and closing intake valves.

Cowlitz River - Vader Water Intakes

CWLZR-27.3-N



CWLZR-27.3-N Photo: No photo currently available.



Site Contact

Lewis County - Public Works
 Municipality (County/City) :
 2025 NE Kresky Ave
 Chehalis, WA 98532
 360-740-1123

Nearest Address

108 Willmar Ct
 Vader, WA 98593

Driving Directions

1. Head south on Interstate-5 and Take Exit 59 (WA-506, Vader/Ryderwood)
2. At end of exit, turn left to head west on highway WA-506
3. After ~2.4mi, turn left onto dirt/gravel pullout with gate.
4. The City of Vader's water intakes are in the Cowlitz River, >1100ft beyond gate.

Cowlitz River - Salmon and Trout Hatcheries (WDFW) CWLZR-49.8-N

Position - Location: 46° 30.680', -122° 37.767' 46° 30' 40.8", -122° 37' 46.0" 46.51134, -122.62946 Salkum

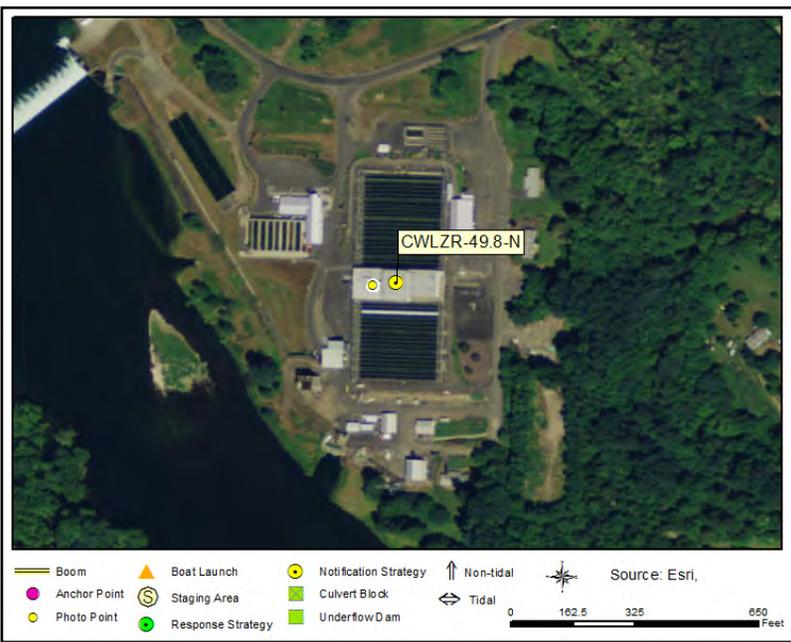
Strategy Objective: Notification : Notify WDFW Cowlitz River Hatcheries so they can take action to protect their fish resources

Implementation: Notify WDFW Cowlitz River Salmon Hatchery of any significant oil spill or potential spill that impacts or threatens to impact the Cowlitz River or downstream waters. CALL 360-864-6135.

Field Notes: No information

Watercourse: River - Below a Dam - Cowlitz River

Resources at Risk: Fish Hatchery



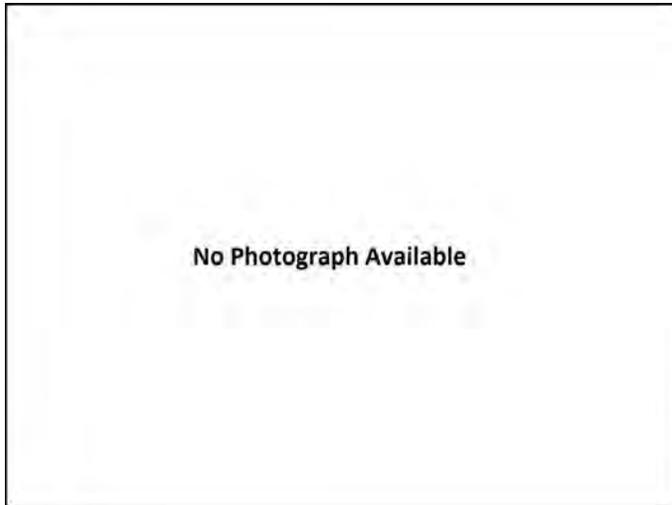
Communication Process and Action:

Notify Cowlitz River Salmon Hatchery by calling 360-864-6135. Inform them of the incident and any actual or threatened oil impacts on the Cowlitz River and downstream waters. The Cowlitz River Salmon Hatchery also manages the Cowlitz River Trout Hatchery, located ~7.0mi downstream, so this notification covers both facilities.

Once notified, the Hatchery Manager will decide what actions are necessary to protect the fish resources under their control; which may or may not include delaying the seasonal release of fish from the hatchery.

Cowlitz River - Salmon and Trout Hatcheries (WDFW)

CWLZR-49.8-N



CWLZR-49.8-N Photo: No photo currently available



Site Contact

WDFW - Cowlitz River Hatcheries

Land/Property Owner : Mark
 165 Osprey Lane
 Toledo, WA 98591
 360-864-6135

Nearest Address

125 Salmon Ln
 Salkum, WA 98582

Driving Directions

1. Head south on Interstate-5 and Take Exit 68 (US-12 East; Morton/Yakima)
2. At end of exit, turn left onto highway US-12 East
3. After 11.9mi, turn right onto Fuller Road
4. After 1.1mi turn left onto Spencer Road
5. After 0.2mi, keep right to remain on Barrier Dam Lane
6. After 0.4mi turn left onto Salmon Lane – the hatchery will be on the rig

Coweeman River - Rearing Pond **CWMR-13.3-N**

Position - Location: 46° 9.340', -122° 46.881' 46° 9' 20.4", -122° 46' 52.9" 46.15566, -122.78136 Kelso

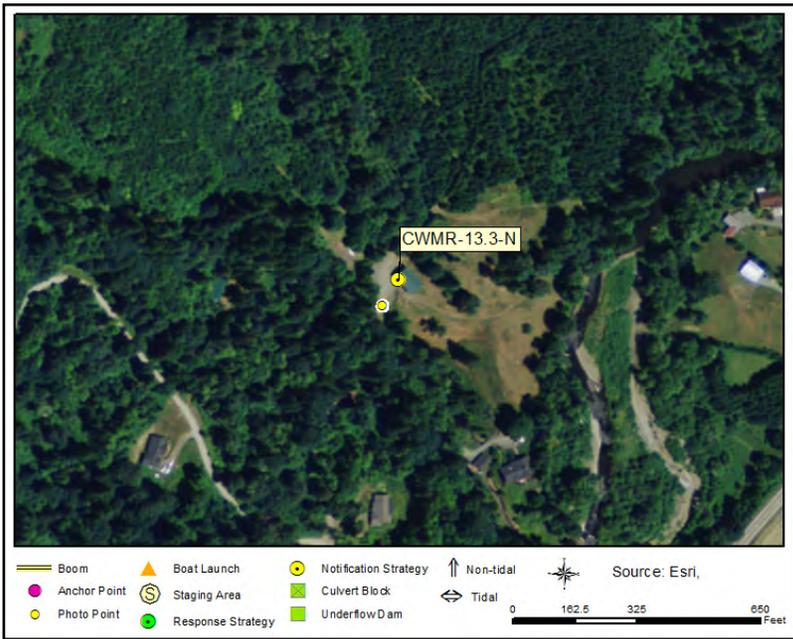
Strategy Objective: Notification : Notify Coweeman Rearing Pond so they can take action to protect their fish resources

Implementation: Notify Coweeman River Rearing Pond of any significant oil spill or potential spill that impacts or threatens to impact the river or downstream waters. CALL 360-577-0602.

Field Notes: No information

Watercourse: River - Coweeman River

Resources at Risk: Salmon, Steelhead



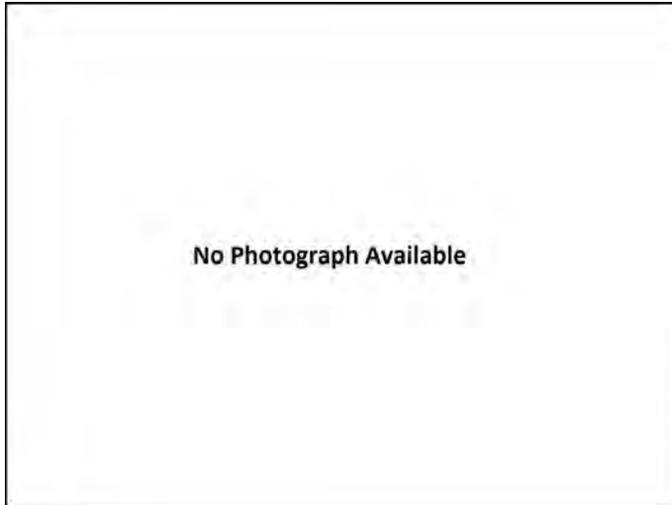
Communication Process and Action:

Notify Coweeman River Rearing Pond by calling 360-577-0602. Inform them of the incident and any actual or threatened oil impacts on the Coweeman River and downstream waters.

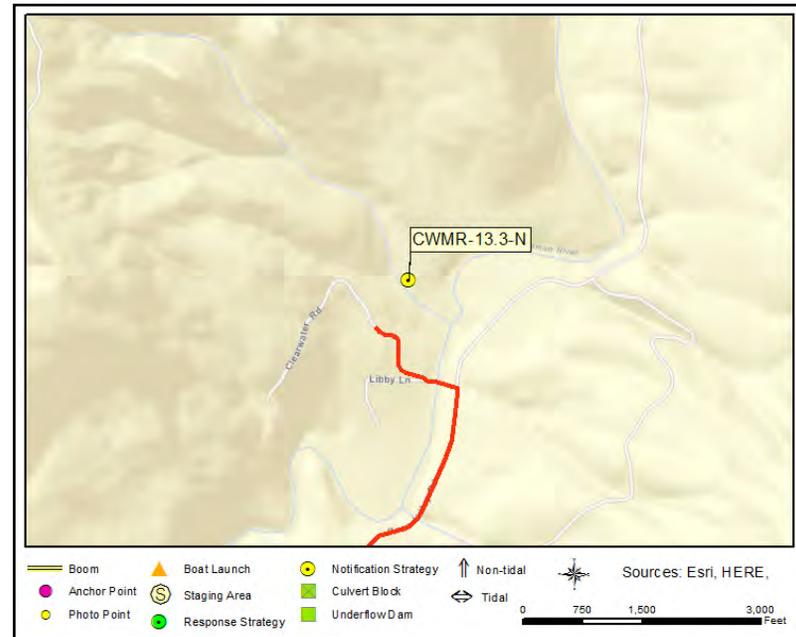
Once notified, the rearing pond owner/manager will decide what actions are necessary to protect their fish resources; which may or may not include delaying the seasonal release of fish from the rearing pond.

Coweeman River - Rearing Pond

CWMR-13.3-N



CWMR-13.3-N Photo: No photo currently available



Site Contact

Coweeman Rearing Pond
 Land/Property Owner : Owner/Manager
 278 Clear Water Rd (Libby Lane)
 Kelso, WA 98626
 360-577-0602

Nearest Address

278 Clear Water Rd
 Kelso, WA 98626

Driving Directions

1. Head south on Interstate-5 and Take Exit 36 (WA-432)
2. Within exit, keep right to take Exit 36B (Airport/Talley Way)
3. At end of exit, turn left onto Coweeman Park Drive
4. After 0.1mi, turn left onto Talley Way
5. After 0.2mi, turn left onto ramp for highway WA-432 E, stay left at split following sign for I-5 Seattle
6. After 0.4mi, take exit on left (Kelso Drive)— Do Not Get On Interstate-5 (North Bound)
7. At end of exit the roadway becomes Old Pacific Highway (heading towards Rose Valley/Carrols)
8. After 1.1mi, turn left onto Rose Valley Road
9. After 2.3mi, turn left to stay on Rose Valley Road

Kalama River - Kalama Ranney Collector (Water Inta **KLMAR-2.6-N**

Position - Location: 46° 2.617', -122° 50.341' 46° 2' 37.0", -122° 50' 20.5" 46.04361, -122.83902 Kalama

Strategy Objective: Notification : Notify City of Kalama so they can take action to protect their water intakes

Implementation: During Normal Business Hours call City of Kalama Public Works at 360-673-3706 or contact the city's water treatment plant directly at 360-673-4047. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Kalama River upstream of the Ranney Collector/Water Intake. After hours, contact Kalama Police/Dispatch at 360-577-3090 and ask that the on-duty public works person return your call.

Field Notes: No information

Watercourse: River - Kalama River

Resources at Risk: Water Intakes



Communication Process and Action:

Call the City of Kalama Public Works at 360-673-3706 or 360-673-4047. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Kalama River upstream of the Ranney Collector/Water Intake. After hours, contact Kalama Police/Dispatch at 360-577-3090 and ask that the on-duty public works person return your call.

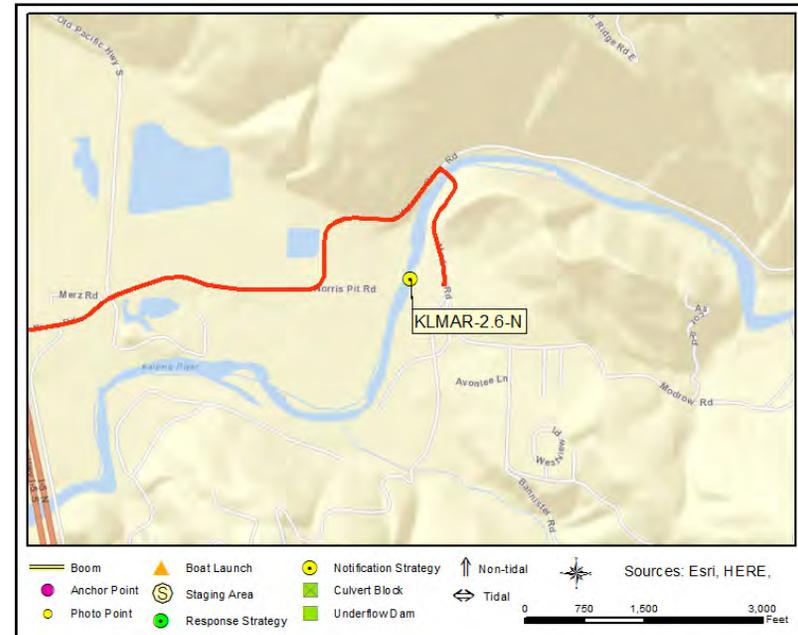
Once notified, the City of Kalama will determine what action(s) they need to take to protect the collector/intakes. Actions by the city might include shutting down the intake pumps and closing intake valves.

Kalama River - Kalama Ranney Collector (Water Inta

KLMAR-2.6-N



KLMAR-2.6-N Photo: On river left of the Kalama River looking west toward City of Kalama Ranney Collector behind fenced area, circled in yellow.



Site Contact

City of Kalama - Public Works
 Municipality (County/City) :
 6315 Old Pacific Hwy South
 Kalama, WA 98625
 360-673-3707

Nearest Address

164 Modrow Rd
 Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 32 (Kalama River Road)
2. Turn left at end of exit ramp to head east on Kalama River Road
3. After 1.3mi, turn right onto Modrow Road and cross bridge.
4. After ~0.3mi, the pump station will be on your right. The collector is adjacent to the Kalama River, behind the fenced area.

Kalama River - Kalama Falls Hatchery (WDFW) KLMAR-10.8-N

Position - Location: 46° .996', -122° 44.045' 46° 0' 59.7", -122° 44' 2.7" 46.01659, -122.73408 Kalama

Strategy Objective: Notification : Notify WDFW Kalama Falls Hatchery so they can take action to protect their fish resources

Implementation: Notify WDFW Kalama Falls Hatchery of any significant spill or potential oil spill that impacts or threatens to impact the Kalama River, Toutle River, Cowlitz River, Lewis River, or downstream waters. CALL 360-673-4825 or 360-864-6135.

Field Notes: No information

Watercourse: River - Kalama River

Resources at Risk: Salmon



Communication Process and Action:

Notify WDFW Kalama Falls Hatchery by calling 360-673-4825 or 360-864-6135. Inform them of the incident and any actual or threatened oil impacts on the Kalama River, Toutle River, Cowlitz River, or Lewis River. The Kalama Falls Hatchery also manages Fallert Creek, North Toutle, and Mossyrock Hatcheries. It is also responsible for the Modrow Fish Trap on the Kalama River. This notification covers all five facilities.

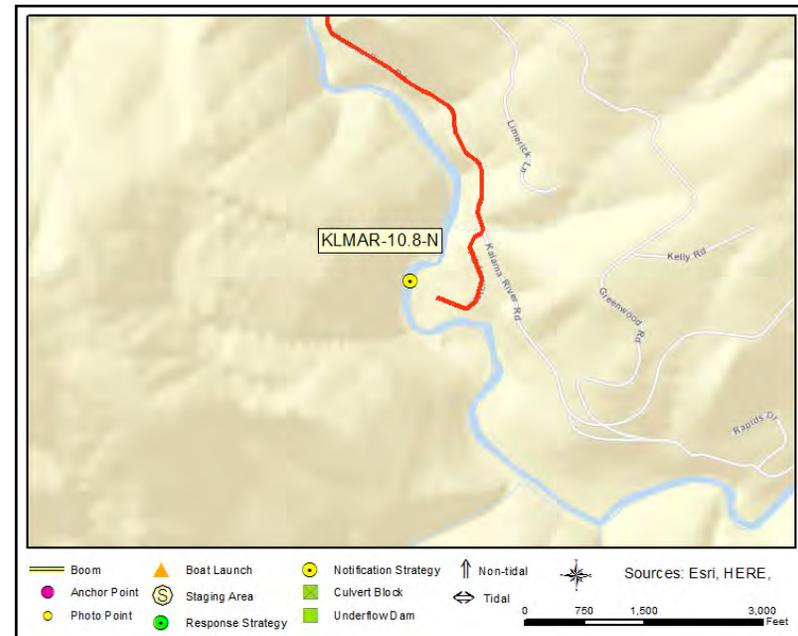
Once notified, the Hatchery Manager will decide what actions are necessary to protect their fish resources; which may or may not include delaying the seasonal release of fish from the hatchery.

Kalama River - Kalama Falls Hatchery (WDFW)

KLMAR-10.8-N



KLMAR-10.8-N Photo: At Kalama Falls Hatchery looking north from parking lot towards main building and fish pens beyond.



Site Contact

WDFW - Kalama Falls Hatchery
 Land/Property Owner : Hatchery Manager
 11285 Spirit Lake Highway
 Toutle, WA 98649
 360-673-4825

Nearest Address

3900 Kalama River Rd
 Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 32 (Kalama River Road)
2. Turn left at end of exit ramp to head east on Kalama River Road
3. After 8.6mi, turn right onto Hatchery Road.
4. After 0.3mi, you have reached the main hatchery building at the bottom of the hill.

Flushing Channel Pumping Station LCR-100.8R-N

Position - Location: 45° 40.151', -122° 44.720' 45° 40' 9.1", -122° 44' 43.2" 45.66919, -122.74533 Vancouver

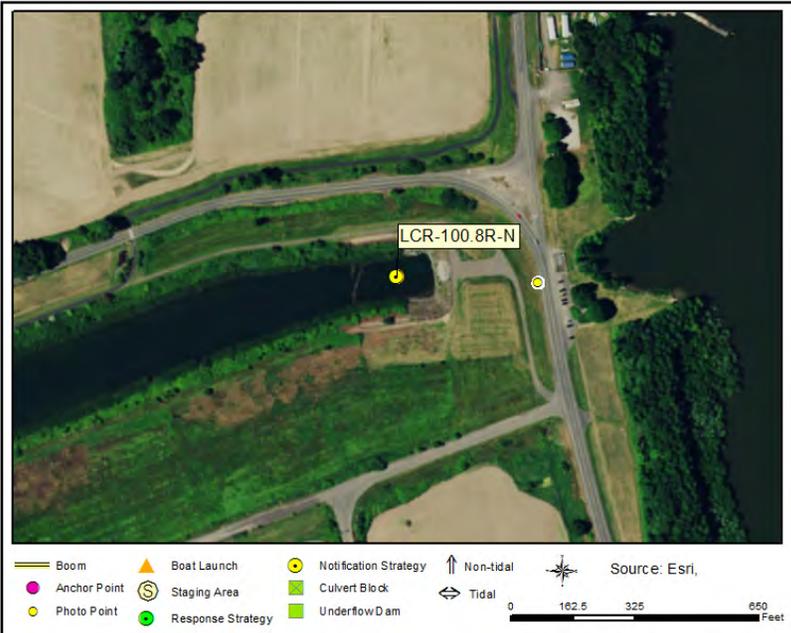
Strategy Objective: Notification : Contact Port of Vancouver to shut down pumping station between Columbia River and Vancouver Lake.

Implementation: Call Port of Vancouver to notify them of a spill on the Columbia River that could impact the Flushing Channel pumping station. They will shut down the pumps to prevent transfer of oil between the Columbia River and Vancouver Lake.

Field Notes: Water flows from Flushing Channel into Vancouver Lake, but not the other direction.

Watercourse: Lake - Vancouver Lake

Resources at Risk: Downstream Resources, Lake Habitat



Communication Process and Action:

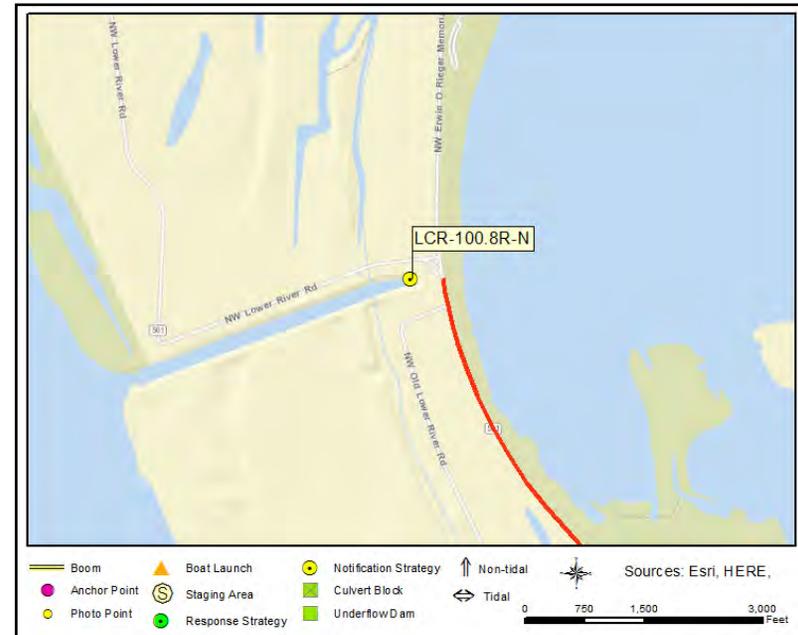
Call Port of Vancouver to notify them of a spill that could impact the pumping station and Flushing Channel. Port personnel will shut down pumps to prevent oil from travelling from Columbia River into Flushing Channel and Vancouver Lake.

Flushing Channel Pumping Station

LCR-100.8R-N



LCR-100.8R-N Photo: Pumping station between Vancouver Lake and Flushing Channel that flows into Columbia River



Site Contact

Port of Vancouver
 Primary Contact : 24-Hour Security
 3103 NW Lower River Road
 Vancouver, WA 98660
 360-992-1120

Nearest Address

6801 NW Lower River Rd.
 Vancouver, WA 98660

Driving Directions

- From I-5 S, Vancouver, WA
1. At exit 1D take ramp on the right to East-4th Plain Blvd-West (0.2 miles)
 2. At fork keep right (0.07 miles)
 3. Continue on E Fourth Plain Blvd (1.41 miles)
 4. Continue (0.14 miles)
 5. Continue on WA-501 (NW Lower River Rd) (3.21 miles)
 6. Finish at 6801 NW Lower River Rd., 98660, on the right

Lewis River - Woodland Ranney Collector (Water Int **LEWR-7.0-N**

Position - Location: 45° 54.609', -122° 44.409' 45° 54' 36.5", -122° 44' 24.5" 45.91014, -122.74015 Woodland

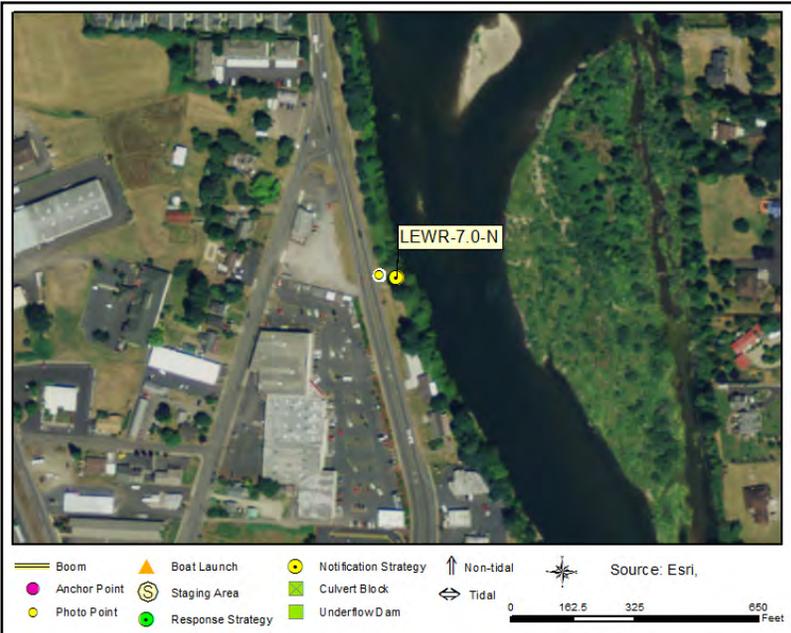
Strategy Objective: Notification : Notify City of Woodland so they can take action to protect their water intakes

Implementation: Call the City of Woodland Public Works at 360-606-1191, 360-608-1417, or 360-607-0968. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Lewis River upstream of the Ranney Collector/Water Intake.

Field Notes: No information

Watercourse: River - Lewis River

Resources at Risk: Water Intakes



Communication Process and Action:

Call the City of Woodland at 360-606-1191, 360-608-1417, or 360-607-0968. Inform them of any significant oil spill or potential spill that impacts or threatens to impact the Lewis River upstream of the Ranney Collector/Water Intake.

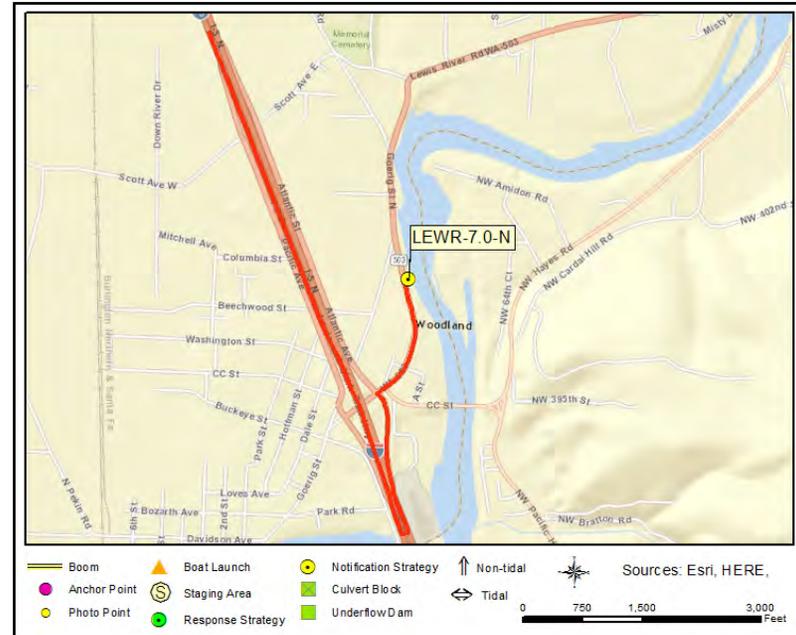
Once notified, the City of Woodland will determine what action(s) they need to take to protect the collector/intakes. Actions by the city might include shutting down the intake pumps and closing intake valves.

Lewis River - Woodland Ranney Collector (Water Int)

LEWR-7.0-N



LEWR-7.0-N Photo: At Bryant pump house on river right of the Lewis River in Woodland, looking SE towards the facility. Lewis River in background.



Site Contact

City of Woodland - Public Works
 Municipality (County/City) :
 300 E Scott Avenue
 Woodland, WA 98674
 360-225-7999

Nearest Address

1380 Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate-5 and Take Exit 21 (WA-503 East; Woodland/Cougar)
2. At end of exit, stay straight to remain on Pacific Avenue
3. After 0.7mi, turn left to stay on Pacific Avenue and then turn left onto highway WA503 South (Lewis River Road)
4. After ~0.4mi, the Bryant Pump House will be on your right, across the street from the Hi-School Pharmacy store.

Lewis River - Merwin Hatchery (WDFW) LEWR-19.0-N

Position - Location: 45° 57.279', -122° 33.888' 45° 57' 16.7", -122° 33' 53.3" 45.95464, -122.56479 Ariel

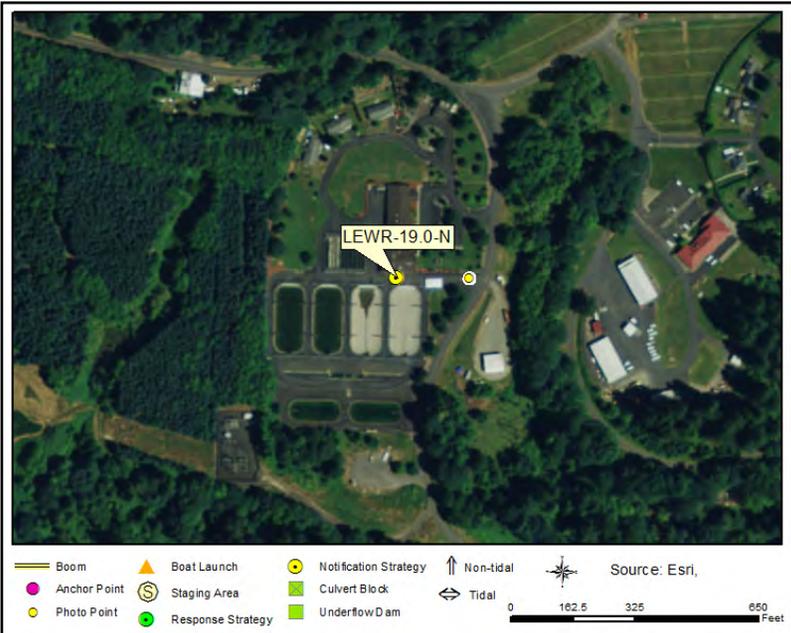
Strategy Objective: Notification : Notify WDFW Merwin Hatchery so they can take action to protect their fish resources

Implementation: Notify WDFW Merwin Hatchery of any significant oil spill or potential spill that impacts or threatens to impact the Lewis River or downstream waters. CALL 360-225-4390.

Field Notes: No information

Watercourse: River - Below a Dam - Lewis River

Resources at Risk: Salmon



Communication Process and Action:

Notify Merwin Hatchery by calling 360-225-4390. Inform them of the incident and any actual or threatened oil impacts on the Lewis River or downstream waters. The Merwin Hatchery also manages the Lewis River Hatchery, located ~3.2mi downstream, so this notification covers both facilities. ASK THEM TO DEPLOY THEIR SORBENT AND/OR HARD BOOM IN FRONT OF WATER INTAKES AT THE LEWIS RIVER FISH HATCHERY AND CONSIDER SHUTTING DOWN WATER INTAKES.

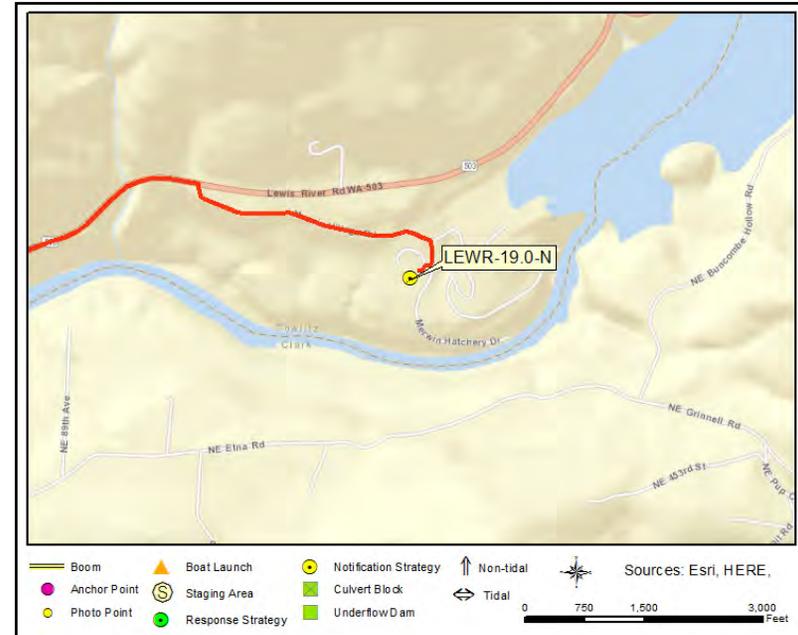
Once notified, the Hatchery Manager will decide what actions are necessary to protect the fish resources under their control; which may or may not include delaying the seasonal release of fish from the hatchery.

Lewis River - Merwin Hatchery (WDFW)

LEWR-19.0-N



LEWR-19.0-N Photo: Looking NW towards main hatchery building from Merwin Hatchery Court.



Site Contact

WDFW - Merwin Hatchery
 Land/Property Owner : Hatchery Manager
 111 Merwin Hatchery Court
 Ariel, WA 98603-9727
 360-225-4390

Nearest Address

125 Merwin Hatchery Ct
 Ariel, WA 98603

Driving Directions

1. Head south on Interstate-5 and Take Exit 21 (WA-503 East; Woodland/Cougar)
2. At end of exit, stay straight to remain on Pacific Avenue
3. After 0.7mi, turn left to stay on Pacific Avenue and then turn left onto highway WA503 South (Lewis River Road)
4. After 10.3mi, turn right onto Merwin Village Road
5. After 0.6mi, turn right onto Merwin Hatchery Court
6. After 0.1mi turn right into the hatchery facility

Ridgefield National Wildlife Refuge (WA) **LKRVR-1.84-N**

Position - Location: 45° 48.438', -122° 44.470' 45° 48' 26.3", -122° 44' 28.2" 45.80730, -122.74116 Ridgefield

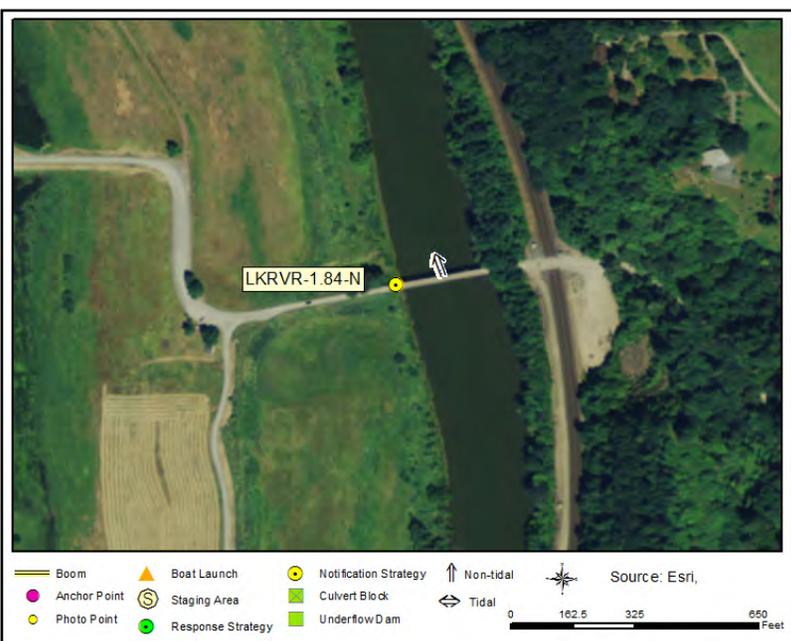
Strategy Objective: Notification : Notify Ridgefield National Wildlife Refuge of spills impacting the Columbia River and Lake River

Implementation: Call Ridgefield National Wildlife Refuge main office during business hours (7am - 5pm) or Project Leader after hours.

Field Notes: Ridgefield National Wildlife Refuge has 3 water intakes on Bachelor Island Slough at (45.81438, -122.759792),(45.817633, -122.760013), (45.799207, -122.768186), and one water intake on Lake River (45.762733, -122.750028). The intakes pump water into the Refuge's

Watercourse: Freshwater Wetland - Ridgefield National Wildlife Refuge

Resources at Risk: Federally Protected Area/Lands, Waterfowl Concentrations



Communication Process and Action:

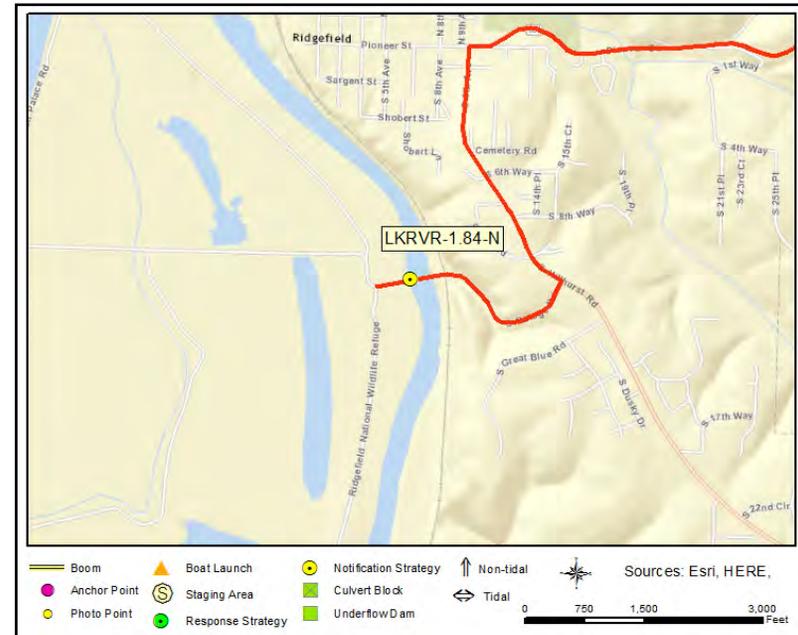
Call Ridgefield National Wildlife Refuge main office during business hours (7am - 5pm) or Project Leader after hours. They will initiate internal notifications, evacuate the Refuge if spill poses threat to Refuge staff and visitors, and shut down water intakes.

Ridgefield National Wildlife Refuge (WA)

LKRVR-1.84-N



LKRVR-1.84-N Photo: Ridgefield Wildlife Refuge looking SW



Site Contact

Ridgefield National Wildlife Refuge
 Primary Contact : Main Office
 360-887-4106

Ridgefield National Wildlife Refuge
 Alternate Contact : Project Lead
 360-823-8610

Nearest Address

1071 South Hillhurst Road
 Ridgefield, WA 98642

Driving Directions

- From I-5 South, Ridgefield, WA
1. At exit 14 take ramp on the right to WA-501 S/Pioneer St toward Ridgefield (0.34 miles)
 2. Turn right on WA-501 (Pioneer St) (0.74 miles)
 3. At roundabout, take 2nd exit to proceed west on WA-501 (Pioneer St) (1.81 miles)
 4. Turn left on S 9th Ave (0.26 miles)
 5. Continue on S Hillhurst Rd (0.36 miles)
 6. Turn right on S. Refuge Rd. at sign for Ridgefield National Wildlife Refuge and follow road for 0.5 mile.

Appendix 4C
Staging Area 2-Pagers

STAGING AREAS – LIST

<u>SA-CWLZR-1.6</u>	<u>SA-KLMAR-0.7**</u>	<u>SA-LEWR-11.7</u>
<u>SA-CWLZR-6.35</u>	<u>SA-KLMAR-2.8</u>	<u>SA-LEWR-12.4</u>
<u>SA-CWLZR-16.1</u>	<u>SA-LCR-72.7R**</u>	<u>SA-LEWR-14.7</u>
<u>SA-CWLZR-17.6</u>	<u>SA-LCR-74.5L**</u>	<u>SA-LEWR-15.5</u>
<u>SA-CWLZR-24.7</u>	<u>SA-LEWR-0.4**</u>	<u>SA-SALMC-5.6</u>
<u>SA-CWLZR-29.8</u>	<u>SA-LEWR-3.3</u>	<u>SA-SCHSC-0.6</u>
<u>SA-CWMR-1.0</u>		

*****Staging Areas from LCR-GRP that are included in this appendix***

Cowlitz River - Gerhart Gardens Park

SA-CWLZR-1.6

Staging Area

Position - Location: 46° 6.682', -122° 53.731' 46° 6' 40.9", -122° 53' 43.9" 46.11136, -122.89552 Longview

Comments: Gerhart Gardens Park belongs to the City of Longview. Coordinate staging with Parks Department; call 360-487-8337.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	3
Cell Phone Coverage	Yes	3 Bars/4G
Estimated Lot Size		120000 SqFt
Lot Cover (Primary)	Asphalt	85%
Parking - Car	Marked	25
Parking - Trailer	Marked	60
Power	No	
Restroom	Restroom - Flush	2
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

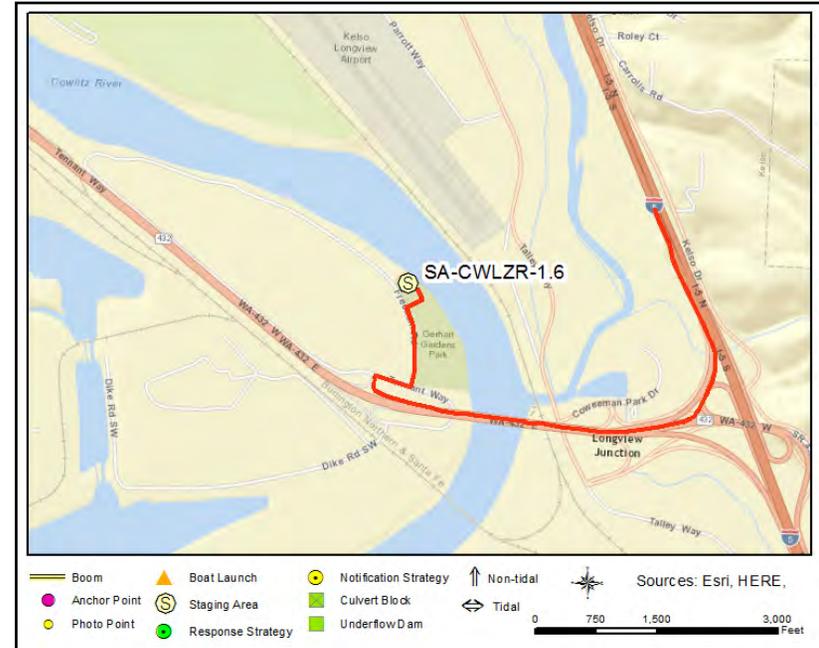
LCR-65.9R

Cowlitz River - Gerhart Gardens Park

SA-CWLZR-1.6



SA-CWLZR-1.6 Photo: On river right at Staging Area and Boat Launch in Gerhart Gardens Park in Longview, looking towards river with river left in background.



Site Contact

City of Vancouver Parks and Recreation

Primary Contact :
 415 Sixth Street
 Vancouver, WA 98660
 360-487-8337

Nearest Address

200 Freedom Way
 Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 toward Exit 36
2. Take Exit 36 and keep left to continue on Exit 36A (Washington 432 W/Longview)
3. After 0.8mi, take the exit for Dike Road (1st exit after bridge)
4. At end of exit, turn right onto Frontage Road
5. After 0.2mi, turn left onto Freedom Way
6. After 0.1mi, turn right into parking area for Gerhart Gardens Park. Stage equipment near boat launch.

Cowlitz River - Carnival Market **SA-CWLZR-6.35**

Staging Area			
Position - Location:	46° 9.938', -122° 54.937'	46° 9' 56.3", -122° 54' 56.2"	46.16564, -122.91561
Comments:	Carnival Market		



GRP Response Strategies Served:

Location Information

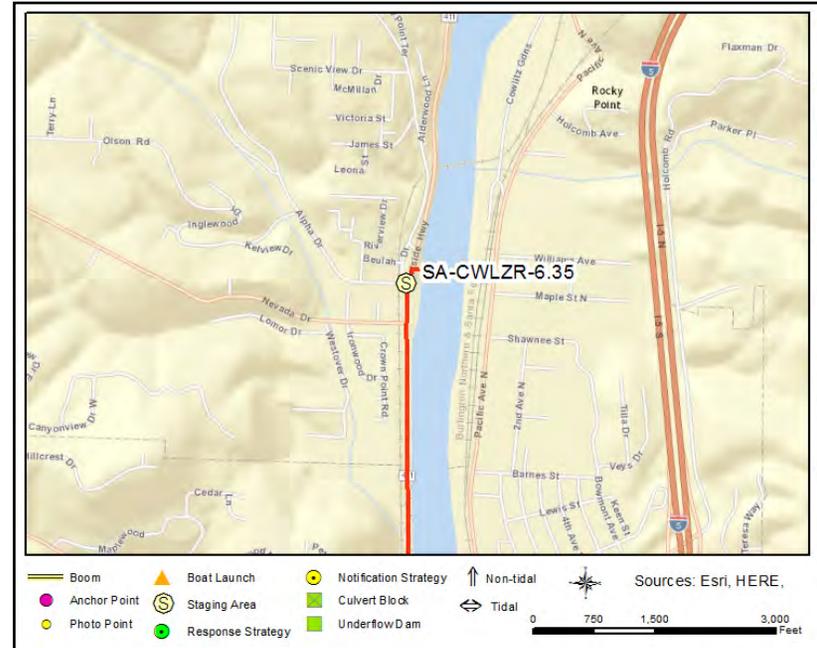
<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		2 4000 sq ft
Lot Cover (Primary)	Dirt/Gravel	
Parking - Car	None	
Parking - Trailer	None	
Power	No	
Restroom	None	
User Fee	No	
Water (potable)	No	

Cowlitz River - Carnival Market

SA-CWLZR-6.35



SA-CWLZR-6.35 Photo: Photo taken from staging area looking East



Site Contact

No Information
Not Determined :

Nearest Address

829 Westside Hwy
Kelso, WA 98626

Driving Directions

1. From Kalama, take I-5 N
2. Take exit 39 to WA-4 W toward Kelso (0.3 miles)
3. Turn left on WA-4 (Allen St) (0.73 miles)
4. Continue on Allen St Bridge (0.24 miles)
5. Turn right on WA-411 (1st Ave NW) (1.47 miles)
6. Finish at 829 Westside Hwy, 98626. Boat launch is on the right.

Cowlitz River - Camelot Beach **SA-CWLZR-16.1**

Staging Area

Position - Location: 46° 15.941', -122° 54.270' 46° 15' 56.5", -122° 54' 16.2" 46.26569, -122.90451 Castle Rock

Comments: Gravel lot



GRP Response Strategies Served:

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		20,000 sq ft
Lot Cover (Primary)	Dirt/Gravel	
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	20
Power	No	
Restroom	Restroom - Portable	2
User Fee	No	
Water (potable)	No	

Cowlitz River - Camelot Beach

SA-CWLZR-16.1



SA-CWLZR-16.1 Photo: Photo taken from river right looking NW



Site Contact

No Information
Not Determined :

Nearest Address

213 Camelot Spur
Castle Rock, WA 98611

Driving Directions

1. Take I-5 to Exit 49
2. Take exit 49 to WA-504 E toward S/Castle Rock/Toutle (0.43 miles)
3. Turn right on I-5-BL (Front Ave NW) (0.39 miles)
4. Bear right on Front Ave NW (0.34 miles)
5. Turn right on WA-411 (A St SW) (0.69 miles)
6. Turn left to stay on WA-411 (Westside Hwy) (1.54 miles)
7. Turn left onto Camelot Dr (0.1 miles)
8. Bear left onto Camelot Spur and follow dirt road to boat launch.

Cowlitz River - Castle Rock Sports Complex/Memoria SA-CWLZR-17.6

Staging Area

Position - Location: 46° 16.698', -122° 54.711' 46° 16' 41.9", -122° 54' 42.7" 46.27830, -122.91185 Castle Rock

Comments: During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of the need to use the Sports Complex/Memorial Park boat launch parking area for staging. If the business number is inoperative, or for after hours assistance, call the city's answering service at 360-751-7478.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	2
Boat Ramp(s)	Concrete, Solid	2
Cell Phone Coverage	Yes	Verizon, ATT - 4 bars, 4G
Estimated Lot Size		98,000 sq ft
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	25
Parking - Trailer	Marked	61
Power	Unknown	
Restroom	Restroom - Flush	
User Fee	Yes	\$5/day
Water (potable)	Yes	

GRP Response Strategies Served:

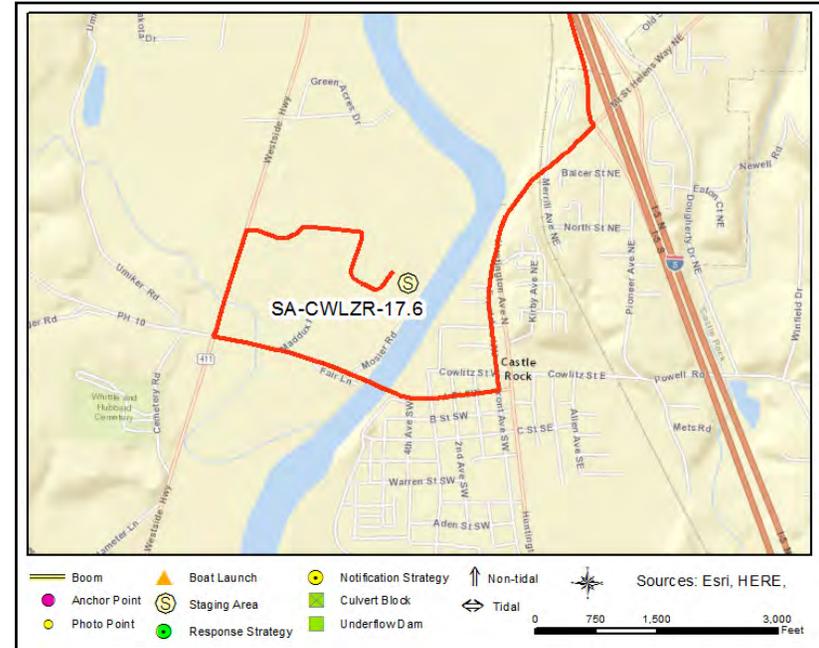
CWLZR-18.0

Cowlitz River - Castle Rock Sports Complex/Memoria

SA-CWLZR-17.6



SA-CWLZR-17.6 Photo: On river right at the Castle Rock Sports Complex/Memorial Park, looking SE towards the boat ramp and Cowlitz River.



Site Contact

City of Castle Rock - Public Works
 Municipality (County/City) :
 360 "A" Street SW - P.O. Box370
 Castle Rock, WA 98611
 360-703-0167

Nearest Address

5018 Westside Hwy
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 49 (Castle Rock/Toutle)
2. At end of exit ramp turn right onto Hwy 411/Huntington Avenue N
3. After 0.7mi, turn right on "A" Street to remain on Hwy 411
4. After 0.7mi, turn right onto the Westside Highway
5. After 0.3mi, turn right onto unnamed road that leads into the Sports Complex
6. After ~0.3mi, turn right onto unnamed road in park and follow it around to the boat ramp; stage equipment in boat launch parking area near ramps.

Cowlitz River - WDFW Water Access Site "Olequa Cre" SA-CWLZR-24.7

Staging Area

Position - Location: 46° 22.067', -122° 56.058' 46° 22' 4.0", -122° 56' 3.5" 46.36778, -122.93431 Castle Rock

Comments: WDFW Water Access Site "Olequa Creek" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		8000 square feet
Lot Cover (Primary)	Dirt	90 percent
Parking - Car	Not Marked	
Parking - Trailer	Not Marked	4
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discover Pass
Water (potable)	No	

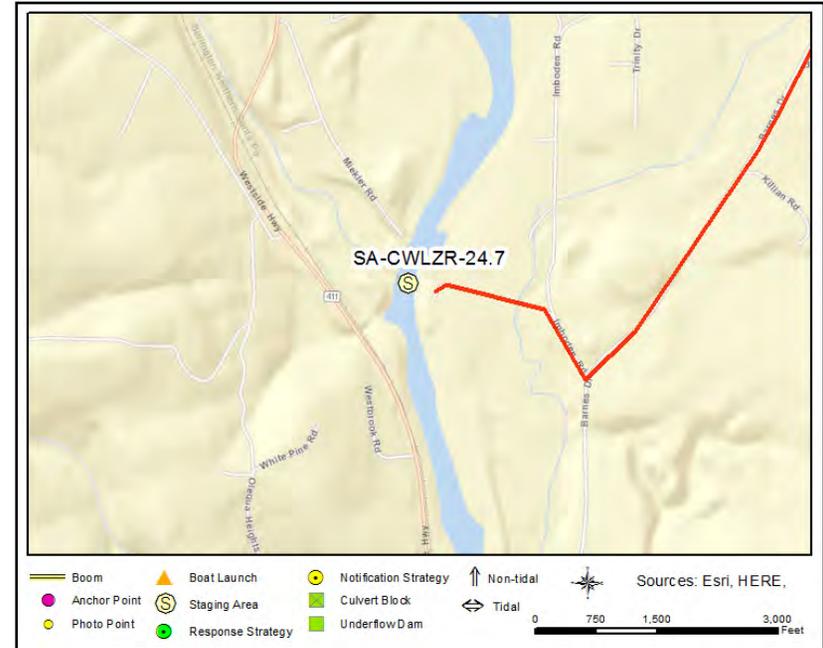
GRP Response Strategies Served:

HILLC-0.9, CWLZR-24.7

Cowlitz River - WDFW Water Access Site "Olequa Cre SA-CWLZR-24.7



SA-CWLZR-24.7 Photo: On river left at WDFW Water Access Site "Olequa Creek" looking west toward boat ramp with the Cowlitz River and river right in background.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

271 Miekler Rd
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road
3. After ~0.1mi, turn left onto Barnes Drive
4. After 2.1mi, turn right onto Imboden Road
5. After 0.2mi, stay left to travel on Miekler Road
6. After ~0.3mi at end of road, you have reached WDFW Water Access Site "Olequa Creek" on the Cowlitz River. Stage equipment in parking area to the south, adjacent to river.

Cowlitz River - WDFW "I-5" Water Access Site

SA-CWLZR-29.8

Staging Area

Position - Location: 46° 24.818', -122° 53.461' 46° 24' 49.1", -122° 53' 27.7" 46.41364, -122.89102 Toledo

Comments: WDFW "I-5" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Yes	Verizon - 4 bars
Estimated Lot Size		30,000 sq ft
Lot Cover (Primary)	Gravel	70 percent
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	10
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discover Pass
Water (potable)	No	

GRP Response Strategies Served:

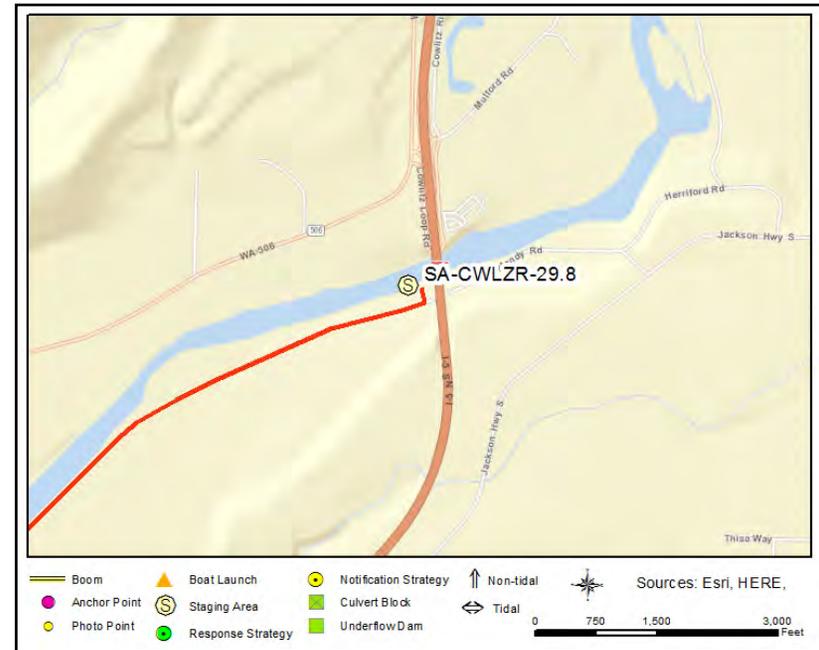
CWLZR-29.9

Cowlitz River - WDFW "I-5" Water Access Site

SA-CWLZR-29.8



SA-CWLZR-29.8 Photo: At WDFW "I-5" Water Access Site on the Cowlitz River (river left), looking NW towards the boat ramp and across to river right.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

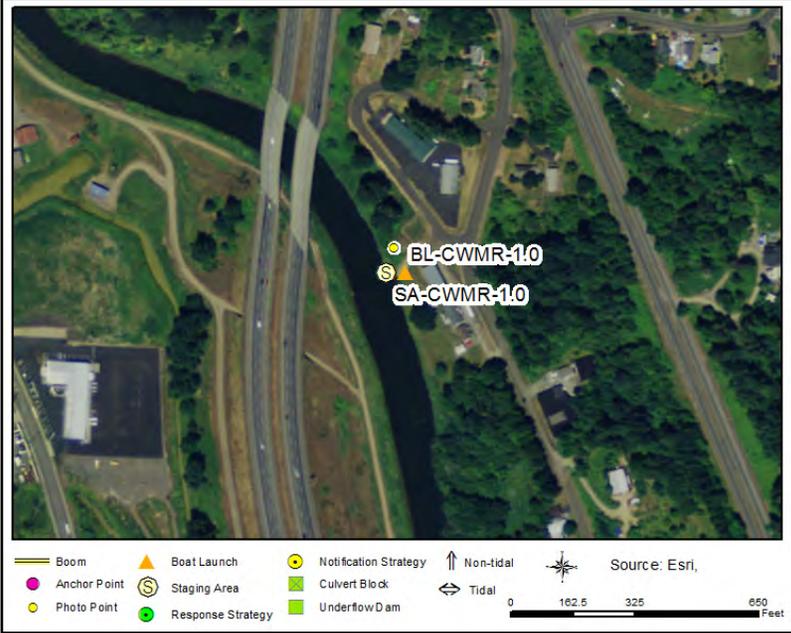
275 Mandy Rd
 Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, turn right onto Mandy Road
4. After 2.3mi, WDFW "I-5" Water Access Site will be on your left before passing under Interstate-5.

Coweeman River - Cowlitz County SAR SA-CWMR-1.0

Staging Area			
Position - Location:	46° 7.884', -122° 53.859'	46° 7' 53.0", -122° 53' 51.6"	46.13140, -122.89765
Comments:	Search and Rescue station across street from boat launch		



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		No lot
Lot Cover (Primary)	None	
Parking - Car	Not Determined	On the road
Parking - Trailer	Not Determined	On the road
Power	No	
Restroom	None	
User Fee	No	
Water (potable)	No	

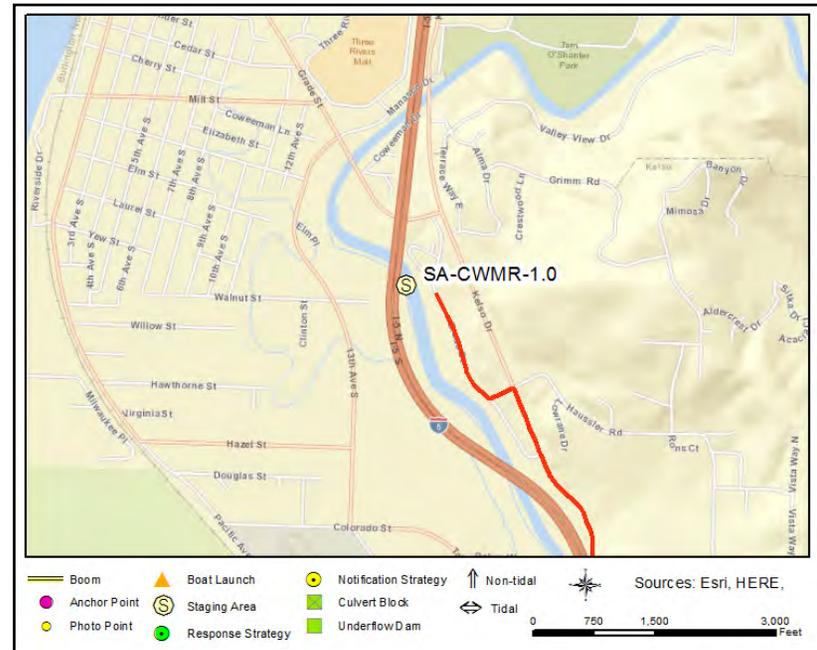
GRP Response Strategies Served:

Coweeman River - Cowlitz County SAR

SA-CWMR-1.0



SA-CWMR-1.0 Photo: Photo taken from top of boat ramp looking SW



Site Contact

No Information
Not Determined :

Nearest Address

1809 Grade St
Kelso, WA 98626

Driving Directions

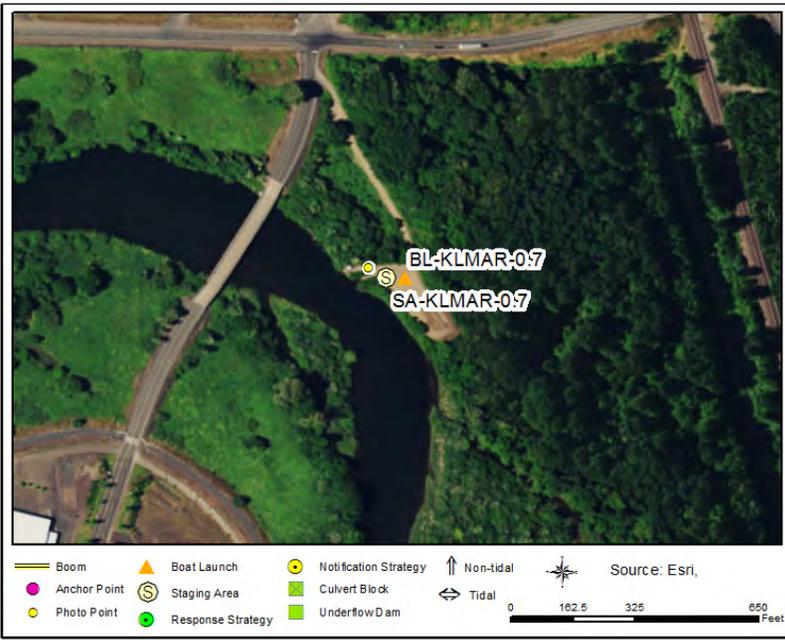
1. From Kalama, take I-5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep right toward Kelso Dr./Carrolls (0.46 miles)
4. Turn right on Kelso Dr (1.58 miles)
5. Turn left on Haussler Rd (0.06 miles)
6. Bear right on Grade St (0.28 miles)
7. Finish at 1809 Grade St, 98626, on the left

Sportman Loop Lower (WDFW) - Kalama River **SA-KLMAR-0.7**

Staging Area

Position - Location: 46° 2.333', -122° 51.861' 46° 2' 20.0", -122° 51' 51.7" 46.03889, -122.86435 Kalama

Comments: WDFW Boat Ramp Parking and Staging



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp(s)	Concrete, Plank	1
Parking - Car	Gravel	10 spaces
Parking - Trailer	Gravel	20

GRP Response Strategies Served:

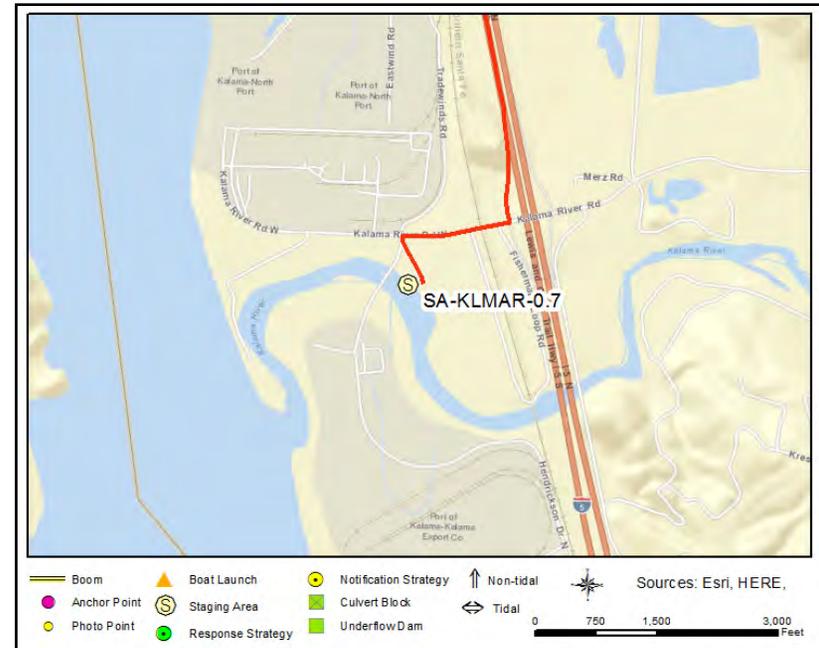
KLMAR-0.7

Sportman Loop Lower (WDFW) - Kalama River

SA-KLMAR-0.7



SA-KLMAR-0.7 Photo: River right at WDFW Kalama River boat ramp



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

222 Kalama River Rd.
 Kalama, WA 98625

Driving Directions

- From I-5 S, Kelso, WA
1. At exit 32 bear right onto ramp to Kalama River Road
 2. Turn right on Kalama River Rd W (0.5 mi)
 3. Turn left on Hendrickson Dr. N and then an immediate left on the gravel road.

Kalama River - WDFW Water Access "Modrow Bridge" SA-KLMAR-2.8

Staging Area

Position - Location: 46° 2.841', -122° 50.227' 46° 2' 50.5", -122° 50' 13.6" 46.04735, -122.83712 Kalama

Comments: WDFW Water Access Site "Modrow Bridge" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Yes	2 bars - No Data
Estimated Lot Size		20,000 SqFt
Lot Cover (Primary)	Asphalt	90%
Parking - Car	Not Marked	16
Parking - Trailer	Not Marked	8
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Water (potable)	No	

GRP Response Strategies Served:

Kalama River - WDFW Water Access "Modrow Bridge"

SA-KLMAR-2.8



SA-KLMAR-2.8 Photo: At WDFW Modrow Bridge Water Access Site on the Kalama River (river left), looking west towards the boat ramp, Modrow Bridge, and river right.



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

150 Modrow Rd
 Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 32 (Kalama River Road)
2. Turn left at end of exit ramp to head east on Kalama River Road
3. After 1.3mi, turn right onto Modrow Road and cross bridge.
4. Immediately after bridge, turn left and follow the road down to the boat launch and parking area.

Sportsmen's Club (WDFW) - Kalama River **SA-LCR-72.7R**

Staging Area

Position - Location: 46° 2.333', -122° 52.437' 46° 2' 20.0", -122° 52' 26.2" 46.03888, -122.87395 Kalama

Comments: Sportsmen's Club Parking and Staging



Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	1
Parking - Trailer	Gravel	6 spaces
User Fee	Yes	WDFW Discover Pass Required

GRP Response Strategies Served:

LCR-71.6R , LCR-70.0M, LCR-71.5M, LCR-71.4R

Sportsmen's Club (WDFW) - Kalama River

SA-LCR-72.7R



SA-LCR-72.7R Photo: River right looking SW at Sportsmen's Club boat ramp



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

32 Sportsmen's Club Rd
 Kalama, WA 98625

Driving Directions

- From I-5 S, Kalama, WA
1. At exit 32 bear right onto ramp to Kalama River Road
 2. Turn right on Kalama River Rd W
 3. Turn left on Sportsmens Club Rd
 4. Finish at 32 Sportsmens Club Rd, 98625, on the left

Scipio's Goble Landing **SA-LCR-74.5L**

Staging Area

Position - Location: 46° .964', -122° 52.457' 46° 0' 57.9", -122° 52' 27.4" 46.01607, -122.87428 Rainier

Comments: Paved parking area 150'x650'=97,500' sq ft, Boat fuel (non-ethanol unleaded) available.



GRP Response Strategies Served:

LCR-73.7L

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	300 Open slips
Boat Ramp(s)	Concrete, Solid	1
Estimated Lot Size		97500 Sq Ft
Fuel	Yes	
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	40
Parking - Trailer	Marked	40
Power	Yes	
Restroom	Restroom - with Showers	
User Fee	Yes	3 per launch; +\$3 parking
Waste Disposal	Pumpout	
Water (potable)	Yes	

Scipio's Goble Landing

SA-LCR-74.5L



SA-LCR-74.5L Photo: Top of ramp at Scipio's Goble Landing looking E at Columbia River and top of Sandy Island.



Site Contact

Scipio's Goble Landing
 Land/Property Owner : Goble Marina
 70360 Columbia River Hwy
 Rainier, OR 97048
 503-556-6510

Nearest Address

70360 Columbia River Hwy
 Rainier, OR 97048

Driving Directions

- Directions to Scipio's Goble Landing BL-LCR-74.5L
1. Start at Portland, OR
 2. Go north on NW 6th Ave toward NW Couch St (0.02 miles)
 3. Turn left on NW Couch St (0.45 miles)
 4. Turn right onto ramp and go on I-405 N (0.55 miles)
 5. At exit 3 bear left onto ramp toward St Helens/W (39.02 miles)
 6. Finish at 70360 Columbia River Hwy, 97048, on the right

Stevens' Moorage RV Park and Boat Launch **SA-LEWR-0.4**

Staging Area

Position - Location: 45° 51.489', -122° 46.487' 45° 51' 29.3", -122° 46' 29.2" 45.85815, -122.77479 Woodland

Comments: Stevens' Moorage Parking and Staging



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	50 ft.
Boat Ramp(s)	Asphalt	1
Estimated Lot Size		45000 Sq Ft
Lot Cover (Primary)	Dirt/Gravel	
Parking - Car	Gravel	15 spaces
Parking - Trailer	Gravel	10 spaces
Power	Unknown	
Restroom	Restroom - Portable	1
User Fee	Yes	\$6 for boat launch and trailer parking
Water (potable)	Unknown	

GRP Response Strategies Served:

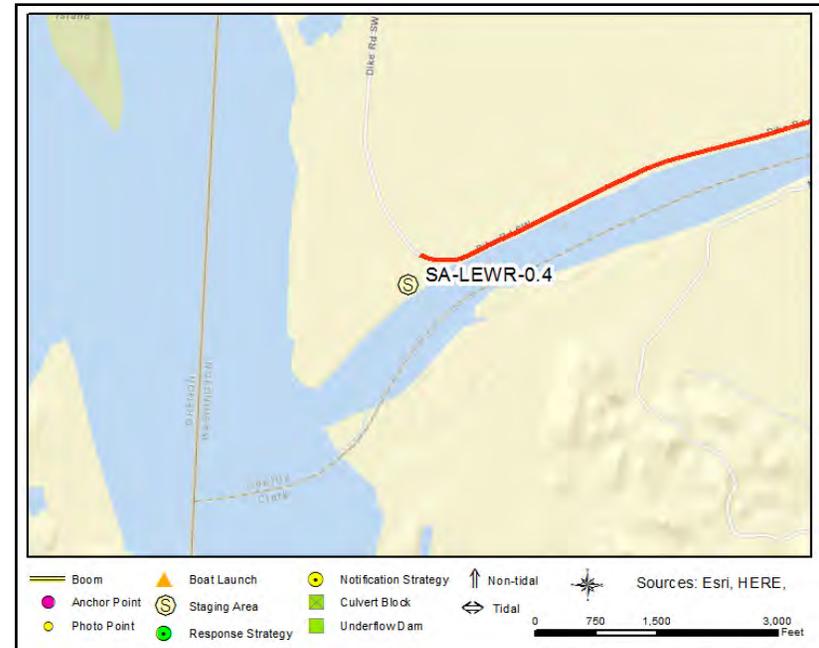
LEWR-0.4 , LEWR-0.35 , LCR-87.3R

Stevens' Moorage RV Park and Boat Launch

SA-LEWR-0.4



SA-LEWR-0.4 Photo: River right on Lewis River looking South



Site Contact

Stevens' Moorage
 Land/Property Contact : General Manager
 4005 Dike Rd.
 Woodland, WA 98674
 360-989-7367

Nearest Address

4005 Dike Road
 Woodland, WA 98674

Driving Directions

- From I-5 S, Woodland, WA
1. Take exit 21 toward WA-503 E/ Woodland/ Cougar(0.2 mi)
 2. Turn right onto W Scott Ave (0.5 mi)
 3. Turn left onto N Pekin Rd (0.9 mi)
 4. Turn left onto Davidson Avenue (0.2 mi)
 5. Turn right at the 2nd cross street onto 5th St (0.2 mi)
 6. Continue onto S Pekin Rd (0.5 mi)
 7. Slight right onto Whalen Rd (0.5 mi)
 8. Turn left onto Kuhn Rd (1.6 mi)
 9. Continue onto Dike Rd
- Destination will be on the left in 1.2 mi

Lewis River - WDFW Water Access Site "Martin" SA-LEWR-3.3

Staging Area

Position - Location: 45° 52.079', -122° 43.487' 45° 52' 4.8", -122° 43' 29.2" 45.86799, -122.72479 Woodland

Comments: WDFW Water Access Site "Martin" is open year round; For extended use, contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



GRP Response Strategies Served:

LEWR-3.4

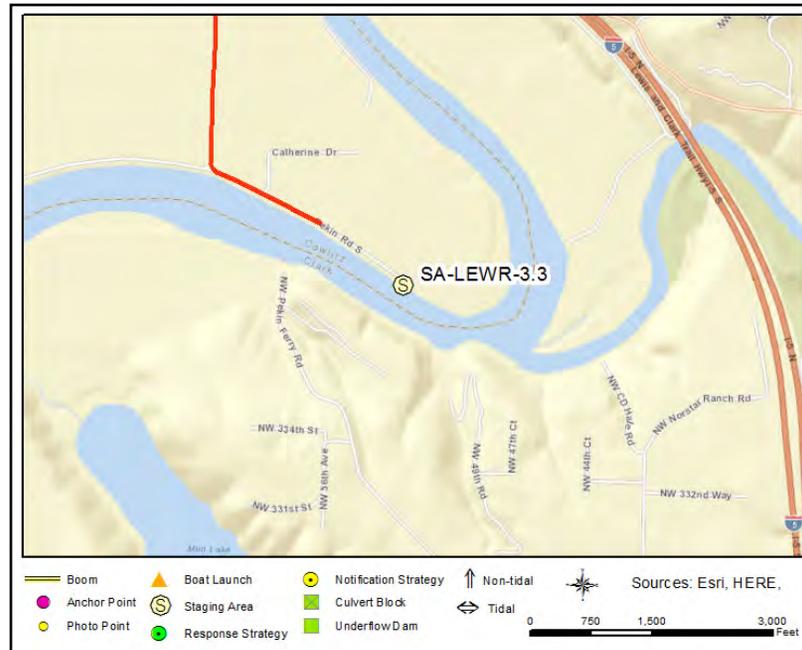
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	None
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		50,000 SqFt
Lot Cover (Primary)	Gravel	80%
Parking - Car	Gravel	5
Parking - Trailer	Gravel	20
Power	No	Not Available
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Waste Disposal	None	
Water (potable)	No	Not Available

Lewis River - WDFW Water Access Site "Martin" SA-LEWR-3.3



SA-LEWR-3.3 Photo: At WDFW Water Access site "Martin" looking west towards boat ramp with Lewis River (and river left) in background.



Site Contact

Washington Department of Fish and Wildlife
 Land/Property Contact : Region 5
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

1242 S Pekin Rd
 Woodland, WA 98674

Driving Directions

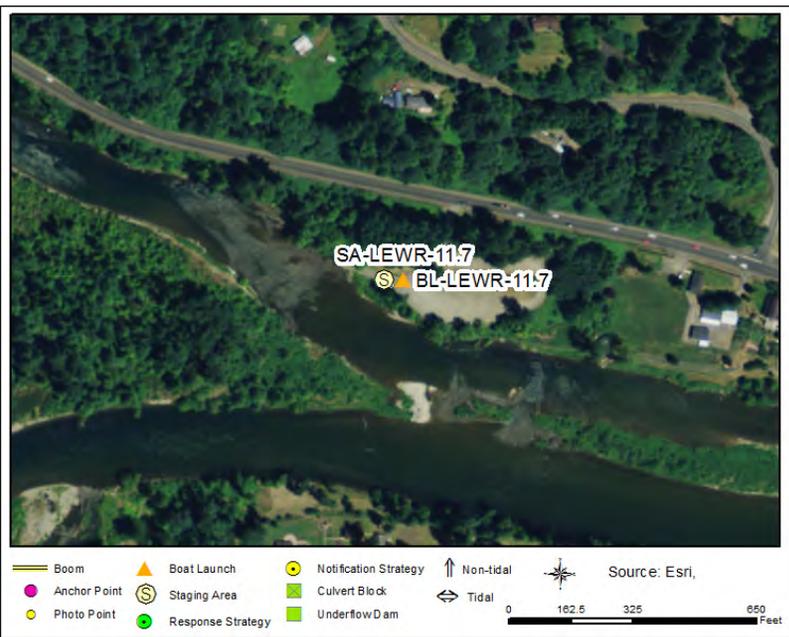
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp turn right onto W Scott Avenue
3. After 0.5mi, turn left onto N Pekin Road
4. After 0.9mi, turn left onto Davidson Avenue
5. After 0.2mi, turn right onto 5th Street (becoming S Pekin Road after 0.2mi)
6. After 2.3mi, stay left to remain on S Pekin Road
7. After 0.5mi (at end of the road) you will have reached WDFW Water Access Site "Martin." Stage equipment in parking lot near boat ramp.

Lewis River - WDFW "Island" Water Access Site **SA-LEWR-11.7**

Staging Area

Position - Location: 45° 56.360', -122° 40.911' 45° 56' 21.6", -122° 40' 54.7" 45.93933, -122.68185 Woodland

Comments: WDFW "Island" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

Asset	Type/Status	Amount/Number
		1
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		55,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	70%
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	10
Power	No	
User Fee	Yes	Discovery Pass
Water (potable)	No	

GRP Response Strategies Served:

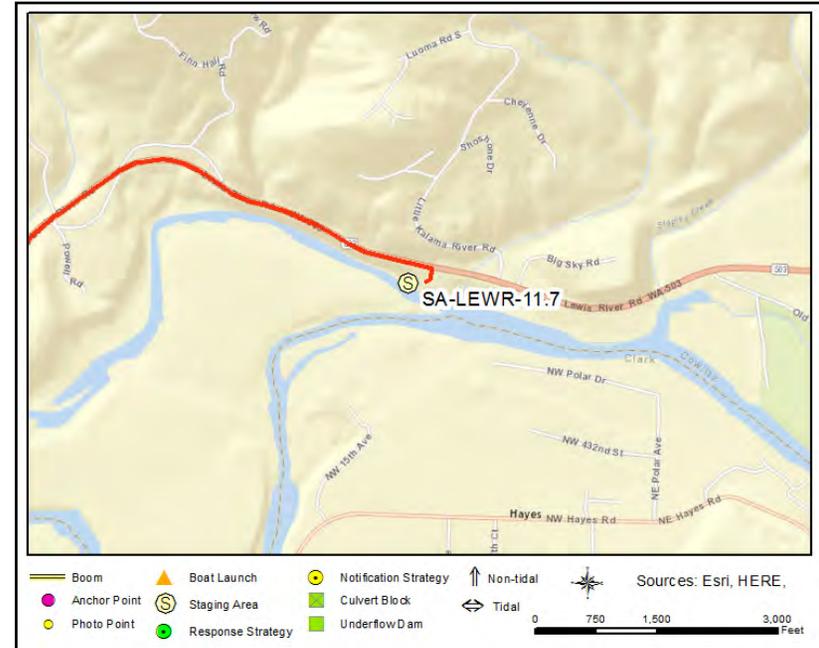
LEWR-11.7

Lewis River - WDFW "Island" Water Access Site

SA-LEWR-11.7



SA-LEWR-11.7 Photo: At WDFW "Island" Water Access Site on river right (channel right) of Lewis River looking NW towards boat launch. Lewis River and right channel left in background.



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

3020 Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 4.9mi, entrance to Lewis River Water Access Site "Island" will be on your right. Stage in parking lot near boat ramp.

Lewis River Golf Club Boat Launch **SA-LEWR-12.4**

Staging Area

Position - Location: 45° 56.173', -122° 39.959' 45° 56' 10.4", -122° 39' 57.5" 45.93622, -122.66598 Woodland

Comments: Lewis River Golf Club Boat Launch parking area can be used for staging. Coordinate use of parking area with golf course administration and operations office; call 360-225-8566 or 360-225-8254.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		12,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	100%
Parking - Car	Not Marked	15
Parking - Trailer	Not Marked	6
Power	No	
Restroom	None	
User Fee	Unknown	
Water (potable)	No	

GRP Response Strategies Served:

LEWR-11.8, LEWR-11.5, LEWR-12.2, LEWR-12.5, LEWR-12.3a, LEWR-12.3b

Lewis River Golf Club Boat Launch

SA-LEWR-12.4



SA-LEWR-12.4 Photo: On river right at Lewis Rive Golf Course Boat Ramp, looking downstream/west and across to river left.



Site Contact

Lewis River Golf Course
 Primary Contact :
 3209 Lewis River Road
 Woodland, WA 98674
 360-225-8566

Nearest Address

3209 Old Lewis River Rd
 Woodland, WA 98674

Driving Directions

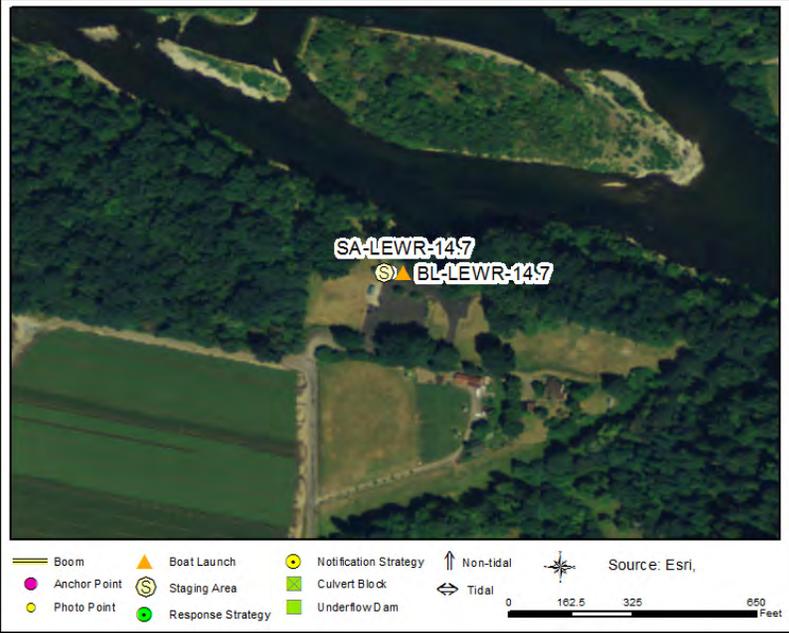
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 5.5mi, turn right onto Old Lewis River Road.
5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp.

Lewis River - Haapa Boat Launch **SA-LEWR-14.7**

Staging Area

Position - Location: 45° 56.153', -122° 38.260' 45° 56' 9.2", -122° 38' 15.6" 45.93589, -122.63767 Woodland

Comments: Haapa Park is open daily from 7AM to dusk. Contact Clark County Dispatch (CRESA) for after-hours access assistance; call 360-693-3111. Clark County Sheriff's Department and WDFW Enforcement Officers have a 24-hour access key to park.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		33,000 SqFt
Lot Cover (Primary)	Asphalt	85%
Parking - Car	Marked	35
Parking - Trailer	Marked	15
Power	Not Determined	
User Fee	Unknown	
Water (potable)	Yes	

GRP Response Strategies Served:

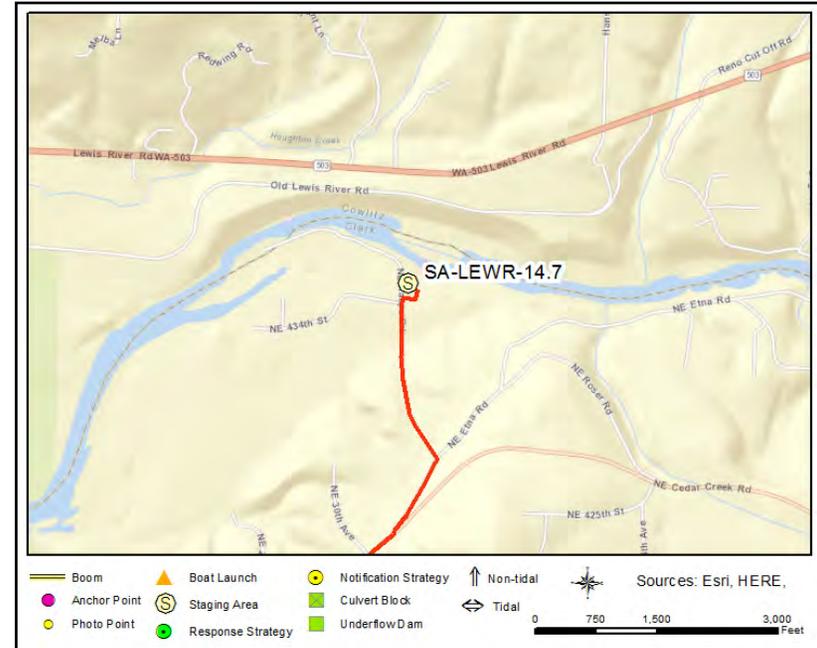
LEWR-13.3, LEWR-14.9, LEWR-13.8

Lewis River - Haapa Boat Launch

SA-LEWR-14.7



SA-LEWR-14.7 Photo: At Happa Park on river left of Lewis River looking north towards boat launch. River and bank on river right in background.



Site Contact

Clark County Parks and Trails

Primary Contact :
360-397-2285

CRESA

Secondary Contact : Clark Regional Emergency Services Agency
360-696-4461

Nearest Address

43309 NE Haapa Rd
Woodland, WA 98674

Driving Directions

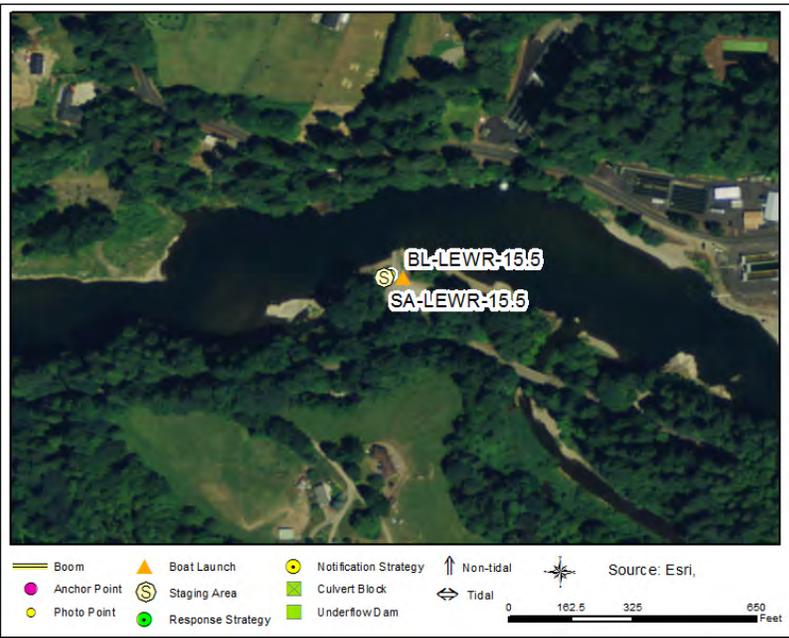
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 0.2mi, turn left onto NE Haapa Road
9. After 0.4, roadway curves to the right and becomes Haapa Pit. Entrance to Haapa Park is on the left. Stage equipment in parking area near boat ramp.

Lewis River - WDFW "Cedar Creek" Water Access Site SA-LEWR-15.5

Staging Area

Position - Location: 45° 56.186', -122° 37.230' 45° 56' 11.1", -122° 37' 13.8" 45.93643, -122.62050 Woodland

Comments: WDFW "Cedar Creek" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		18,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	100%
Parking - Car	Not Marked	30
Parking - Trailer	Not Marked	12
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Water (potable)	No	

GRP Response Strategies Served:

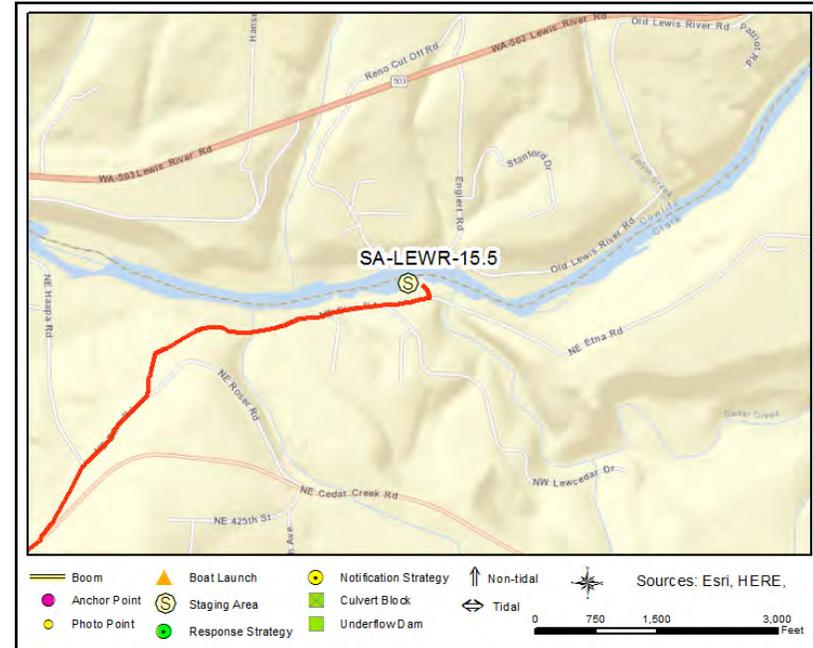
LEWR-15.6b, LEWR-15.5b, LEWR-15.6a, LEWR-15.5a

Lewis River - WDFW "Cedar Creek" Water Access Site

SA-LEWR-15.5



SA-LEWR-15.5 Photo: At WDFW "Cedar Creek" Water Access Site on river left of Lewis River looking north towards boat launch. Lewis River and river right in background.



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

5100 NE Etna Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.

NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

Staging Area - Kline Pond (Salmon Creek Region) SA-SALMC-5.6

Staging Area

Position - Location: 45° 42.392', -122° 39.490' 45° 42' 23.5", -122° 39' 29.4" 45.70654, -122.65817 Vancouver

Comments: Contact Clark County Parks and Recreation for access support; call 360-737-6118 or 360-397-2285. Normal park hours are 7AM to dusk



Location Information

Asset	Type/Status	Amount/Number
		No
Boat Dock(s)	No	
Cell Phone Coverage	Unknown	
Estimated Lot Size		180,000 SqFt
Lot Cover (Primary)	Asphalt	80%
Parking - Car	Marked	186
Parking - Trailer	None	
Power	Unknown	
Restroom	Restroom - Flush	1
User Fee	Not Determined	
Water (potable)	Yes	

GRP Response Strategies Served:

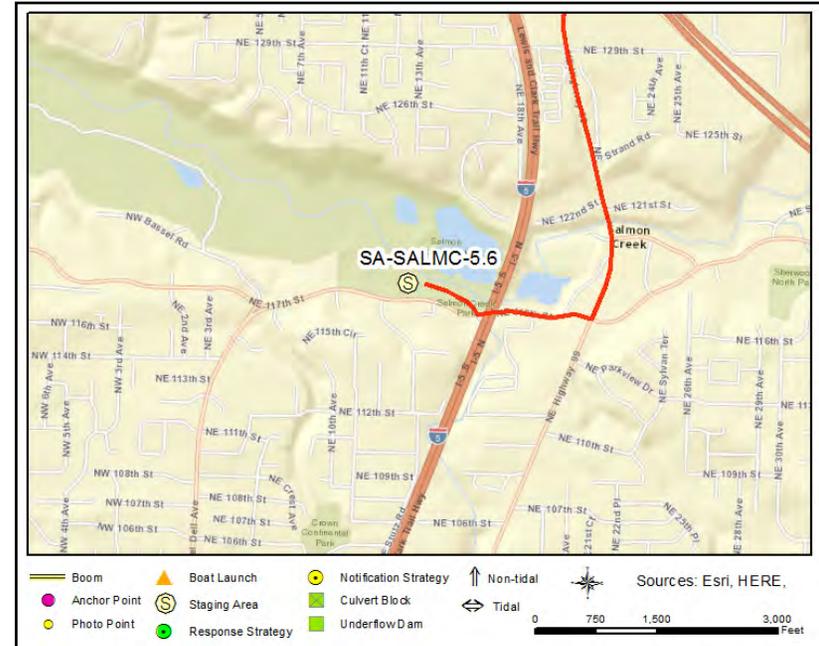
SALMC-5.6

Staging Area - Kline Pond (Salmon Creek Region)

SA-SALMC-5.6



SA-SALMC-5.6 Photo: At Salmon Creek Regional Park in Vancouver looking north from edge of parking area towards Kline Pond.



Site Contact

Clark County Parks and Trails

Primary Contact :
 4700 NE 78th Street
 Vancouver, WA 98665
 360-397-2285

Nearest Address

1717 NE 117th St
 Vancouver, WA 98686

Driving Directions

1. Head south on Interstate-5 and at Exit 7 keep right to stay on Interstate-205 (Salem)
2. On Interstate-205 take Exit 36 (NE 134th Street)
3. At end of ramp, turn left onto NE 134th Street
4. After 0.1mi, turn right onto NE Hwy 99/Pacific Hwy
5. After 0.9mi, turn right onto NE 117th Street
6. After 0.3mi, immediately after passing under Interstate-5, turn right into parking area for Salmon Creek Park. Stage equipment in parking lot near pedestrian bridge over the creek. If needed, contact Clark County Parks for access support; call 360-737-6118 or 360-397-2285.

Schoolhouse Creek - Old Pacific Highway near I-5 **SA-SCHSC-0.6**

Staging Area

Position - Location: 45° 58.876', -122° 49.409' 45° 58' 52.6", -122° 49' 24.5" 45.98127, -122.82349 Kalama

Comments: Location is gravel parking area off Old Pacific Highway South. Equipment trailer can be staged at this location so work trucks can be loaded and sent to deploy nearby strategies that have limited access or shoulder areas.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	None	
Cell Phone Coverage	Not Determined	
Estimated Lot Size		8,500 SqFt
Lot Cover (Primary)	Gravel	
Parking - Car	Not Marked	15
Parking - Trailer	Not Marked	5
Power	No	
Restroom	None	
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

MILLC-1.1, MILLC-0.3, BYBEC-0.8

Schoolhouse Creek - Old Pacific Highway near I-5 SA-SCHSC-0.6



SA-SCHSC-0.6 Photo: At staging area along Old Pacific Highway South looking SSE towards intersection with Robb Road and Todd Road in Kalama near I-5 Exit 27.



Site Contact

No Information
Not Determined :

Nearest Address

200 Robb Rd
Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 27 (Todd Road/Port of Kalama)
2. Turn left at the end of exit ramp to travel NE on Robb Road
3. After 0.1mi, turn left onto Old Pacific Highway S. Staging area is the gravel lot on the right immediately after turning onto Old Pacific Highway.

Appendix 4D
Boat Launch 2-Pagers

BOAT LAUNCHES_LIST

<u>BL-CWLZR-1.6</u>	<u>BL-CWLZR-29.8</u>	<u>BL-LEWR-3.3</u>
<u>BL-CWLZR-6.35</u>	<u>BL-CWMR-1.0</u>	<u>BL-LEWR-11.7</u>
<u>BL-CWLZR-16.1</u>	<u>BL-KLMAR-2.8</u>	<u>BL-LEWR-12.4</u>
<u>BL-CWLZR-17.6</u>	<u>BL-LCR-74.5L**</u>	<u>BL-LEWR-14.7</u>
<u>BL-CWLZR-24.7</u>	<u>BL-LEWR-1.8</u>	<u>BL-LEWR-15.5</u>

***Boat launch locations from LCR-GRP that are included in this appendix*

Cowlitz River - Gerhart Gardens Park **BL-CWLZR-1.6**

Boat Launch Location

Position - Location: 46° 6.682', -122° 53.731' 46° 6' 40.9", -122° 53' 43.9" 46.11136, -122.89552 Longview

Comments: Gerhart Gardens Park belongs to the City of Longview. Coordinate use of boat launch with Parks Department; call 360-487-8337.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	3
Cell Phone Coverage	Yes	3 Bars/4G
Estimated Lot Size		120000 SqFt
Lot Cover (Primary)	Asphalt	85%
Parking - Car	Marked	25
Parking - Trailer	Marked	60
Power	No	
Restroom	Restroom - Flush	2
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

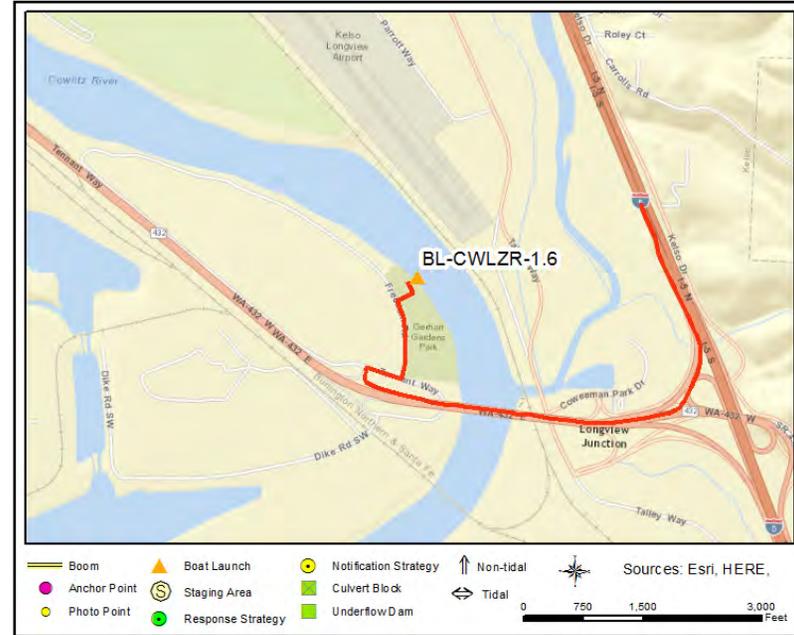
CWMR-0.2, CWLZR-1.0, LCR-65.9R, CWMR-0.5, LCR-66.2R, CWMR-0.1, CWLZR-1.65, CWMR-0.15, CWMR-0.35, CWMR-0.02, CWLZR-1.3

Cowlitz River - Gerhart Gardens Park

BL-CWLZR-1.6



SA-CWLZR-1.6 Photo: On river right at Staging Area and Boat Launch in Gerhart Gardens Park in Longview, looking towards river with river left in background.



Site Contact

City of Vancouver Parks and Recreation

Primary Contact :
 415 Sixth Street
 Vancouver, WA 98660
 360-487-8337

Nearest Address

200 Freedom Way
 Longview, WA 98632

Driving Directions

1. Head south on Interstate-5 toward Exit 36
2. Take Exit 36 and keep left to continue on Exit 36A (Washington 432 W/Longview)
3. After 0.8mi, take the exit for Dike Road (1st exit after bridge)
4. At end of exit, turn right onto Frontage Road
5. After 0.2mi, turn left onto Freedom Way
6. After 0.1mi, turn right into parking area for Gerhart Gardens Park. Stage equipment near boat launch.

Cowlitz River - Carnival Market

BL-CWLZR-6.35

Boat Launch Location

Position - Location: 46° 9.938', -122° 54.937' 46° 9' 56.3", -122° 54' 56.2" 46.16564, -122.91561 Kelso

Comments: Carnival Market - Small boats only



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		2 4000 sq ft
Lot Cover (Primary)	Dirt/Gravel	
Parking - Car	None	
Parking - Trailer	None	
Power	No	
Restroom	None	
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

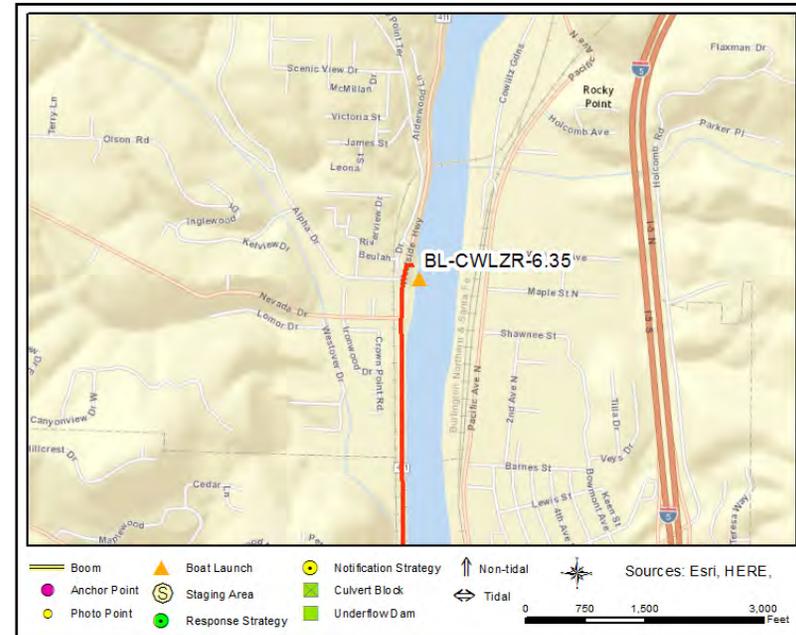
CWLZR-7.25, CWLZR-5.2, CWLZR-4.3, CWLZR-7.4, CWLZR-5.6

Cowlitz River - Carnival Market

BL-CWLZR-6.35



SA-CWLZR-6.35 Photo: Photo taken from staging area looking East



Site Contact

No Information

Not Determined :

Nearest Address

829 Westside Hwy
Kelso, WA 98626

Driving Directions

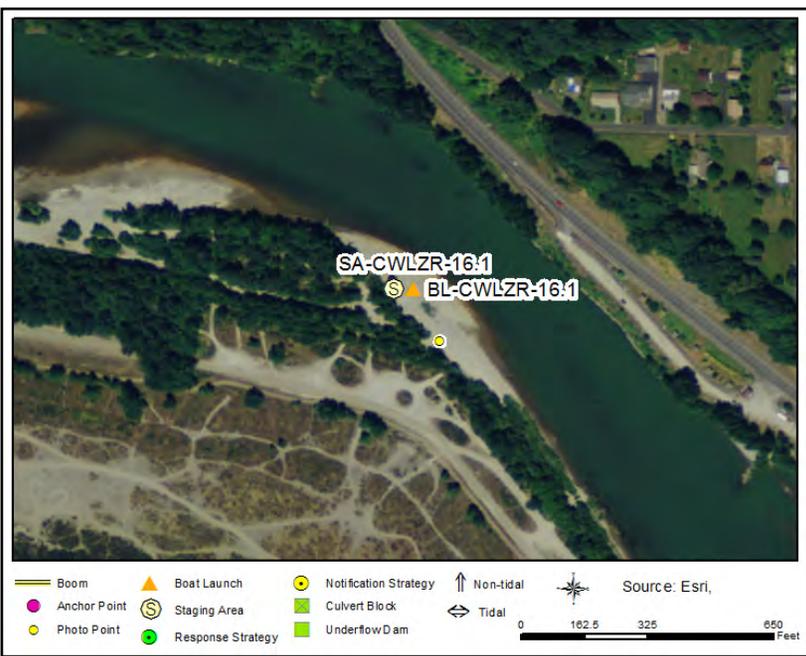
1. From Kalama, take I-5 N
2. Take exit 39 to WA-4 W toward Kelso (0.3 miles)
3. Turn left on WA-4 (Allen St) (0.73 miles)
4. Continue on Allen St Bridge (0.24 miles)
5. Turn right on WA-411 (1st Ave NW) (1.47 miles)
6. Finish at 829 Westside Hwy, 98626. Boat launch is on the right.

Cowlitz River - Camelot Beach **BL-CWLZR-16.1**

Boat Launch Location

Position - Location: 46° 15.941', -122° 54.270' 46° 15' 56.5", -122° 54' 16.2" 46.26569, -122.90451 Castle Rock

Comments: Camelot Beach boat launch - small boats only



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		20,000 sq ft
Lot Cover (Primary)	Dirt/Gravel	
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	20
Power	No	
Restroom	Restroom - Portable	2
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

CWLZR-15.8L, CWLZR-14.1, CWLZR-15.9, CWLZR-15.8R

Cowlitz River - Camelot Beach

BL-CWLZR-16.1



SA-CWLZR-16.1 Photo: Photo taken from river right looking NW



Site Contact

No Information
Not Determined :

Nearest Address

213 Camelot Spur
Castle Rock, WA 98611

Driving Directions

1. Take I-5 to Exit 49
2. Take exit 49 to WA-504 E toward S/Castle Rock/Toutle (0.43 miles)
3. Turn right on I-5-BL (Front Ave NW) (0.39 miles)
4. Bear right on Front Ave NW (0.34 miles)
5. Turn right on WA-411 (A St SW) (0.69 miles)
6. Turn left to stay on WA-411 (Westside Hwy) (1.54 miles)
7. Turn left onto Camelot Dr (0.1 miles)
8. Bear left onto Camelot Spur and follow dirt road to boat launch.

Cowlitz River - Castle Rock Sports Complex/Memoria **BL-CWLZR-17.6**

Boat Launch Location

Position - Location: 46° 16.698', -122° 54.711' 46° 16' 41.9", -122° 54' 42.7" 46.27830, -122.91185 Castle Rock

Comments: During Normal Business Hours call City of Castle Rock Public Works at 360-703-0167 and inform them of the need to use the Sports Complex/Memorial Park boat launch. If the business number is inoperative, or for after hours assistance, call the city's answering service at 360-751-7478.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	2
Boat Ramp(s)	Concrete, Solid	2
Cell Phone Coverage	Yes	Verizon, ATT - 4 bars, 4G
Estimated Lot Size		98,000 sq ft
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	25
Parking - Trailer	Marked	61
Power	Unknown	
Restroom	Restroom - Flush	
User Fee	Yes	\$5/day
Water (potable)	Yes	

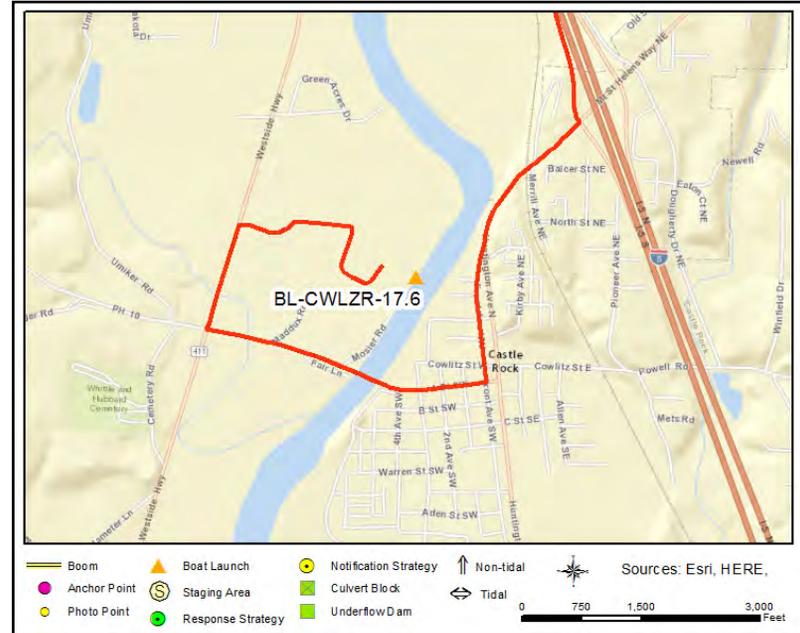
GRP Response Strategies Served:

CWLZR-18.0, CWLZR-17.2, CWLZR-17.4, CWLZR-17.75

Cowlitz River - Castle Rock Sports Complex/Memoria **BL-CWLZR-17.6**



SA-CWLZR-17.6 Photo: On river right at the Castle Rock Sports Complex/Memorial Park, looking SE towards the boat ramp and Cowlitz River.



Site Contact

City of Castle Rock - Public Works
 Municipality (County/City) :
 360 "A" Street SW - P.O. Box370
 Castle Rock, WA 98611
 360-703-0167

Nearest Address

5018 Westside Hwy
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 49 (Castle Rock/Toutle)
2. At end of exit ramp turn right onto Hwy 411/Huntington Avenue N
3. After 0.7mi, turn right on "A" Street to remain on Hwy 411
4. After 0.7mi, turn right onto the Westside Highway
5. After 0.3mi, turn right onto unnamed road that leads into the Sports Complex
6. After ~0.3mi, turn right onto unnamed road in park and follow it around to the boat ramp; stage equipment in boat launch parking area near ramps.

Cowlitz River - WDFW Water Access Site "Olequa Cre" BL-CWLZR-24.7

Boat Launch Location

Position - Location: 46° 22.067', -122° 56.058' 46° 22' 4.0", -122° 56' 3.5" 46.36778, -122.93431 Castle Rock

Comments: WDFW Water Access Site "Olequa Creek" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		8000 square feet
Lot Cover (Primary)	Dirt	90 percent
Parking - Car	Not Marked	
Parking - Trailer	Not Marked	4
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discover Pass
Water (potable)	No	

GRP Response Strategies Served:

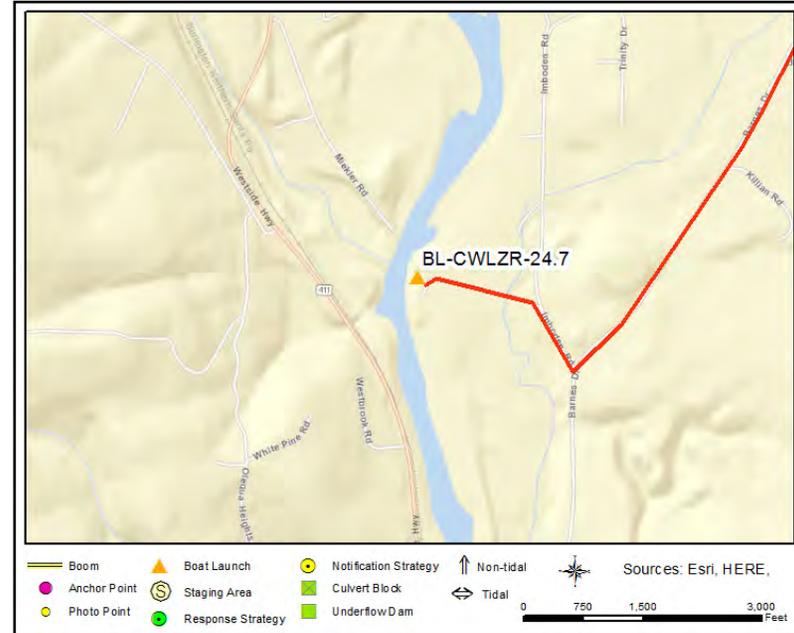
CWLZR-23.6, CWLZR-26.5, CWLZR-26.0, CWLZR-24.7

Cowlitz River - WDFW Water Access Site "Olequa Cre

BL-CWLZR-24.7



SA-CWLZR-24.7 Photo: On river left at WDFW Water Access Site "Olequa Creek" looking west toward boat ramp with the Cowlitz River and river right in background.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

271 Miekler Rd
 Castle Rock, WA 98611

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road
3. After ~0.1mi, turn left onto Barnes Drive
4. After 2.1mi, turn right onto Imboden Road
5. After 0.2mi, stay left to travel on Miekler Road
6. After ~0.3mi at end of road, you have reached WDFW Water Access Site "Olequa Creek" on the Cowlitz River. Stage equipment in parking area to the south, adjacent to river.

Cowlitz River - WDFW "I-5" Water Access Site **BL-CWLZR-29.8**

Boat Launch Location

Position - Location: 46° 24.818', -122° 53.461' 46° 24' 49.1", -122° 53' 27.7" 46.41364, -122.89102 Toledo

Comments: WDFW "I-5" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Yes	Verizon - 4 bars
Estimated Lot Size		30,000 sq ft
Lot Cover (Primary)	Gravel	70 percent
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	10
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discover Pass
Water (potable)	No	

GRP Response Strategies Served:

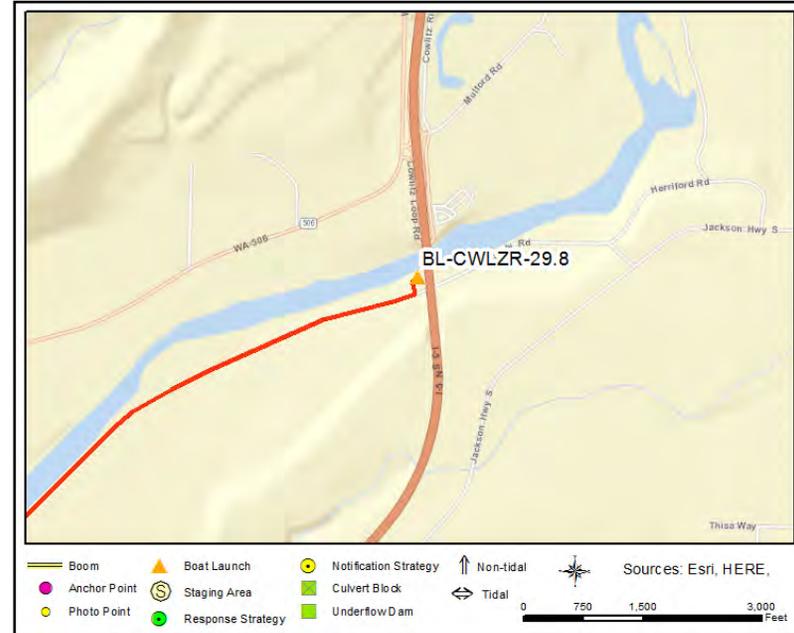
CWLZR-29.9, CWLZR-27.4

Cowlitz River - WDFW "I-5" Water Access Site

BL-CWLZR-29.8



SA-CWLZR-29.8 Photo: At WDFW "I-5" Water Access Site on the Cowlitz River (river left), looking NW towards the boat ramp and across to river right.



Site Contact

WDFW Region 5
 Land/Property Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

275 Mandy Rd
 Toledo, WA 98591

Driving Directions

1. Head south on Interstate-5 and Take Exit 57 (Jackson Hwy/Barnes Drive)
2. Turn right at the end of exit ramp to travel west on Rogers Road.
3. After 1.3mi, turn right onto Mandy Road
4. After 2.3mi, WDFW "I-5" Water Access Site will be on your left before passing under Interstate-5.

Coweeman River - Cowlitz County SAR

BL-CWMR-1.0

Boat Launch Location

Position - Location: 46° 7.884', -122° 53.859' 46° 7' 53.0", -122° 53' 51.6" 46.13140, -122.89765 Kelso

Comments: Boat launch on private property



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Yes	Verizon, ATT - 3 bars, 4G
Estimated Lot Size		No lot
Lot Cover (Primary)	None	
Parking - Car	Not Determined	On the road
Parking - Trailer	Not Determined	On the road
Power	No	
Restroom	None	
User Fee	No	
Water (potable)	No	

GRP Response Strategies Served:

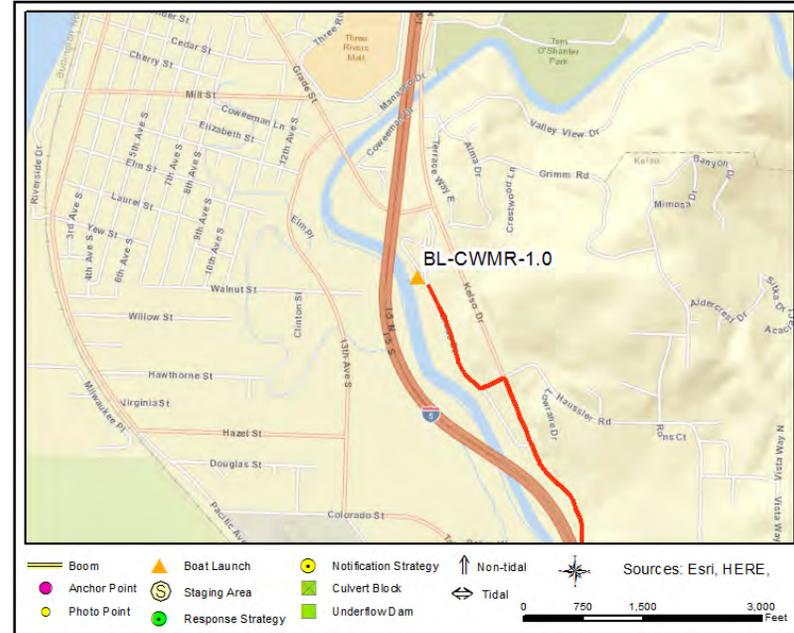
CWMR-1.4, CWMR-2.0, CWMR-1.75, CWMR-1.6, CWMR-1.3, CWMR-1.15

Coweeman River - Cowlitz County SAR

BL-CWMR-1.0



SA-CWMR-1.0 Photo: Photo taken from top of boat ramp looking SW



Site Contact

No Information
Not Determined :

Nearest Address

1809 Grade St
Kelso, WA 98626

Driving Directions

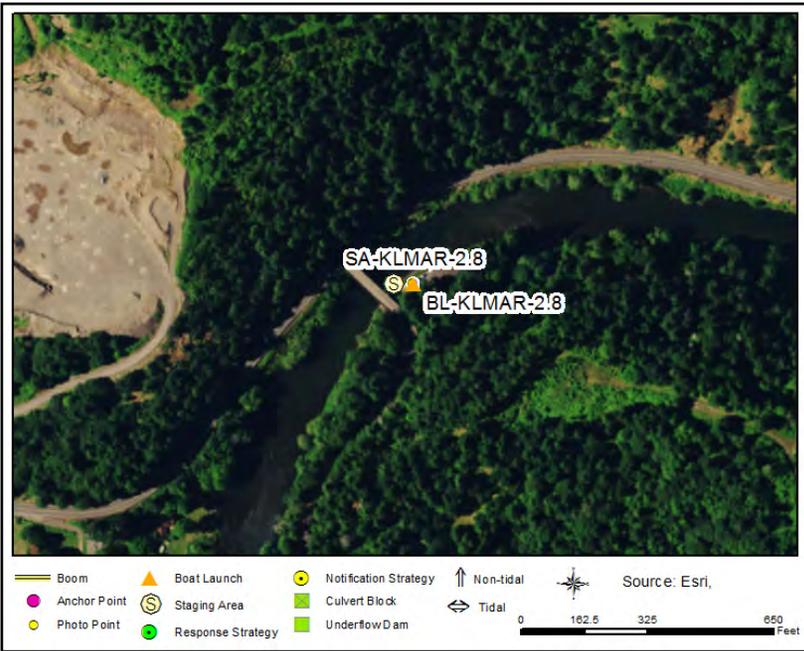
1. From Kalama, take I-5 N
2. Take exit 36 to WA-432 W toward WA-4/Longview/Long Beach (0.19 miles)
3. At fork keep right toward Kelso Dr./Carrolls (0.46 miles)
4. Turn right on Kelso Dr (1.58 miles)
5. Turn left on Haussler Rd (0.06 miles)
6. Bear right on Grade St (0.28 miles)
7. Finish at 1809 Grade St, 98626, on the left

Kalama River - WDFW Water Access "Modrow Bridge" BL-KLMAR-2.8

Boat Launch Location

Position - Location: 46° 2.841', -122° 50.227' 46° 2' 50.5", -122° 50' 13.6" 46.04735, -122.83712 Kalama

Comments: WDFW Water Access Site "Modrow Bridge" is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Yes	2 bars - No Data
Estimated Lot Size		20,000 SqFt
Lot Cover (Primary)	Asphalt	90%
Parking - Car	Not Marked	16
Parking - Trailer	Not Marked	8
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Water (potable)	No	

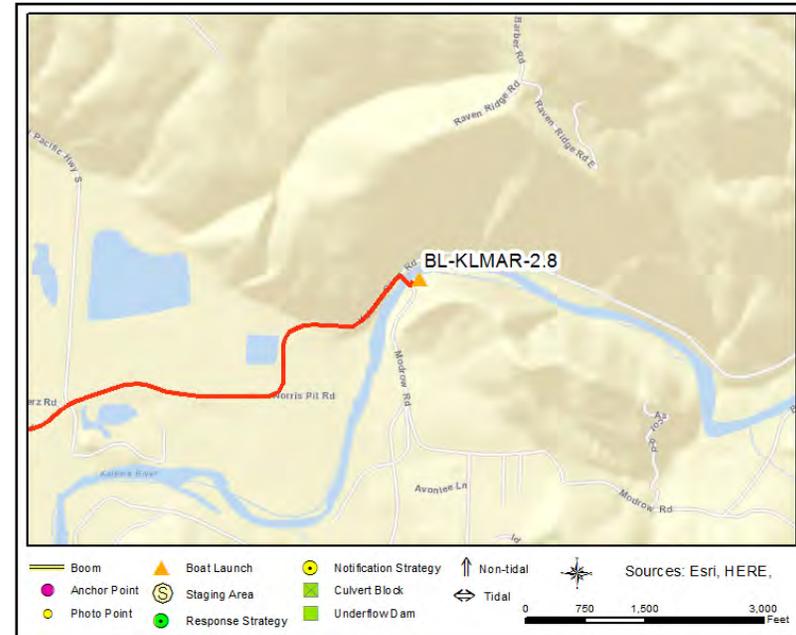
GRP Response Strategies Served:

Kalama River - WDFW Water Access "Modrow Bridge"

BL-KLMAR-2.8



SA-KLMAR-2.8 Photo: At WDFW Modrow Bridge Water Access Site on the Kalama River (river left), looking west towards the boat ramp, Modrow Bridge, and river right.



Site Contact

WDFW Region 5

Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

150 Modrow Rd
 Kalama, WA 98625

Driving Directions

1. Head south on Interstate-5 and Take Exit 32 (Kalama River Road)
2. Turn left at end of exit ramp to head east on Kalama River Road
3. After 1.3mi, turn right onto Modrow Road and cross bridge.
4. Immediately after bridge, turn left and follow the road down to the boat launch and parking area.

Scipio's Goble Landing **BL-LCR-74.5L**

Boat Launch Location

Position - Location: 46° .964', -122° 52.457' 46° 0' 57.9", -122° 52' 27.4" 46.01607, -122.87428 Rainier

Comments: Single concrete boat ramp with floating docks and slips at marina.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	300 Open slips
Boat Ramp(s)	Concrete, Solid	1
Estimated Lot Size		97500 Sq Ft
Fuel	Yes	
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	40
Parking - Trailer	Marked	40
Power	Yes	
Restroom	Restroom - with Showers	
User Fee	Yes	3 per launch; +\$3 parking
Waste Disposal	Pumpout	
Water (potable)	Yes	

GRP Response Strategies Served:

LCR-73.7L

Scipio's Goble Landing

BL-LCR-74.5L



SA-LCR-74.5L Photo: Top of ramp at Scipio's Goble Landing looking E at Columbia River and top of Sandy Island.



Site Contact

Scipio's Goble Landing

Land/Property Owner : Goble Marina
 70360 Columbia River Hwy
 Rainier, OR 97048
 503-556-6510

Nearest Address

70360 Columbia River Hwy
 Rainier, OR 97048

Driving Directions

- Directions to Scipio's Goble Landing BL-LCR-74.5L
1. Start at Portland, OR
 2. Go north on NW 6th Ave toward NW Couch St (0.02 miles)
 3. Turn left on NW Couch St (0.45 miles)
 4. Turn right onto ramp and go on I-405 N (0.55 miles)
 5. At exit 3 bear left onto ramp toward St Helens/W (39.02 miles)
 6. Finish at 70360 Columbia River Hwy, 97048, on the right

Lewis River - NW Lancaster Road Boat Launch BL-LEWR-1.8

Boat Launch Location

Position - Location: 45° 51.804', -122° 45.012' 45° 51' 48.2", -122° 45' .7" 45.86340, -122.75020 Ridgefield

Comments: Lower portion of boat ramp is washed out but ramp should be usable during periods of higher water, or for hand-launching a workboat. Entry is gated and may be locked (or appear locked); notify BNSF at 800-832-5452 before entry. This site is located below RR Bridge on south side of Lewis River in Washington State at BNSF Rail Mile 119 on the Seattle Line (52).



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Washed Out	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		1800 SqFt
Parking - Car	Not Marked	2
Parking - Trailer	Not Marked	1
Power	No	
Restroom	None	
User Fee	No	

GRP Response Strategies Served:

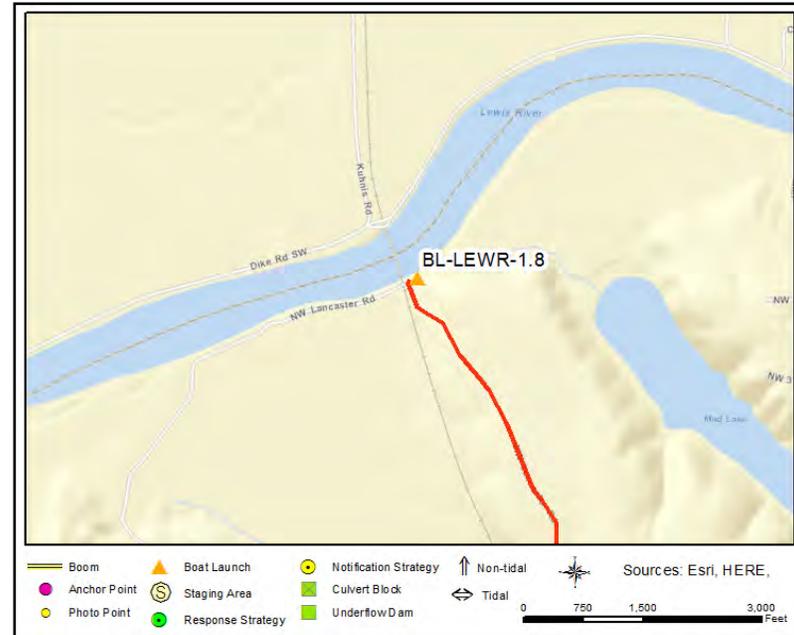
LEWR-1.9

Lewis River - NW Lancaster Road Boat Launch

BL-LEWR-1.8



Photo: At site location on river left looking NE towards boat ramp and the Lewis River.



Site Contact

No Information
Land/Property Contact :

Nearest Address

33301 NW Lancaster Rd
Ridgefield, WA 98642

Driving Directions

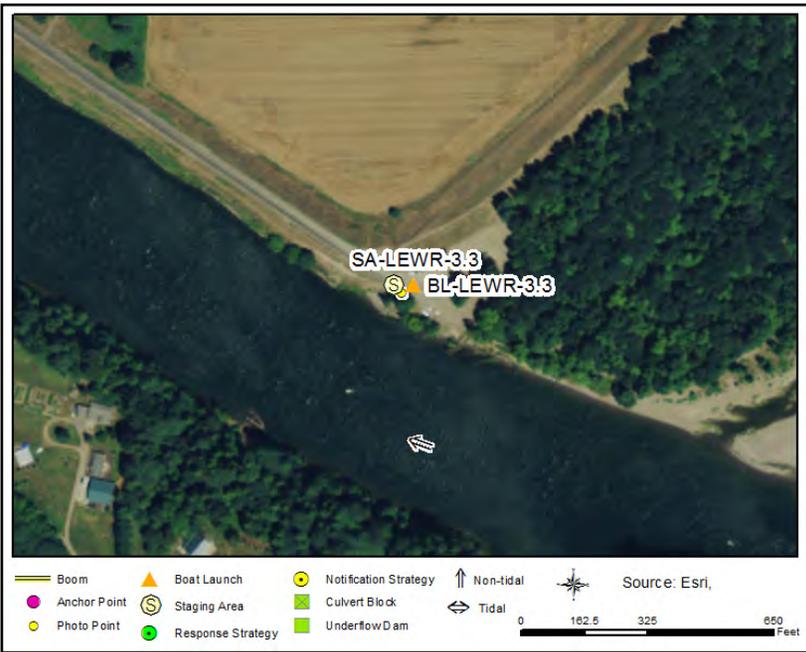
1. Head south on Interstate 5 and take Exit 14 (Hwy 501 towards Ridgefield/Battle Ground)
2. At end of ramp turn right onto Hwy 501 (NW 269th St/Pioneer St)
3. After 0.1mi, stay strait through the traffic circle to stay on NW269th St/Pioneer Street
4. After 0.6mi, take the first right within the traffic circle, onto N 45th Ave (becomes NW 31st Ave after 0.5mi)
5. After 1.0mi, turn left onto NW 289th Street
6. After 1.5mi, take slight right onto NW 61st Ave (becomes NW 291st Street after 400ft)
7. After ~0.5mi, turn right onto NW 71st Avenue (becomes NW Lancaster Rd after 1.6mi)
8. After 2.3mi, at the end of Lancaster Road, the boat ramp will be to your right (lower dirt path).

Lewis River - WDFW Water Access Site "Martin" BL-LEWR-3.3

Boat Launch Location

Position - Location: 45° 52.079', -122° 43.487' 45° 52' 4.8", -122° 43' 29.2" 45.86799, -122.72479 Woodland

Comments: WDFW Water Access Site "Martin" is open year round; For extended use, contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	None
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		50,000 SqFt
Lot Cover (Primary)	Gravel	80%
Parking - Car	Gravel	5
Parking - Trailer	Gravel	20
Power	No	Not Available
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Waste Disposal	None	
Water (potable)	No	Not Available

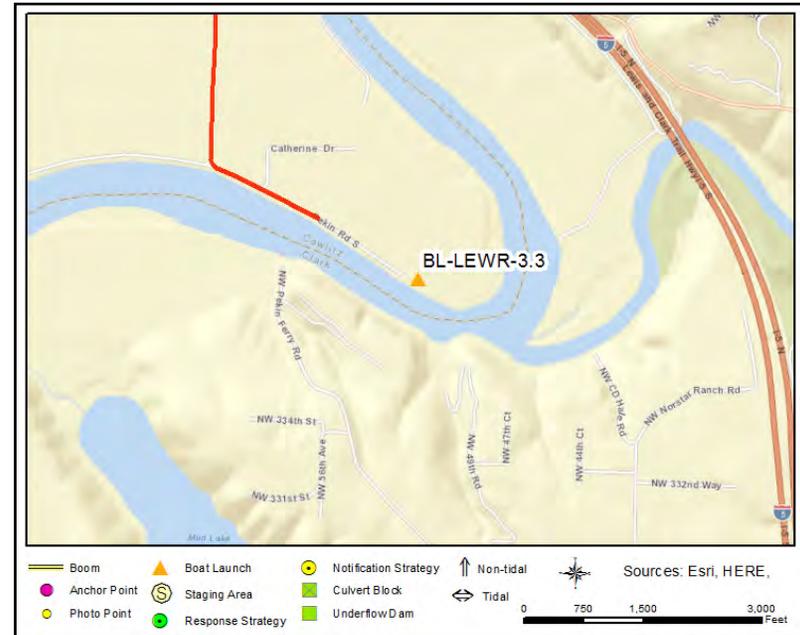
GRP Response Strategies Served:

LEWR-3.4

Lewis River - WDFW Water Access Site "Martin" BL-LEWR-3.3



SA-LEWR-3.3 Photo: At WDFW Water Access site "Martin" looking west towards boat ramp with Lewis River (and river left) in background.



Site Contact

Washington Department of Fish and Wildlife
 Land/Property Contact : Region 5
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

1242 S Pekin Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp turn right onto W Scott Avenue
3. After 0.5mi, turn left onto N Pekin Road
4. After 0.9mi, turn left onto Davidson Avenue
5. After 0.2mi, turn right onto 5th Street (becoming S Pekin Road after 0.2mi)
6. After 2.3mi, stay left to remain on S Pekin Road
7. After 0.5mi (at end of the road) you will have reached WDFW Water Access Site "Martin." Stage equipment in parking lot near boat ramp.

Lewis River - WDFW "Island" Water Access Site **BL-LEWR-11.7**

Boat Launch Location

Position - Location: 45° 56.360', -122° 40.911' 45° 56' 21.6", -122° 40' 54.7" 45.93933, -122.68185 Woodland

Comments: WDFW "Island" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

Asset	Type/Status	Amount/Number
		1
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		55,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	70%
Parking - Car	Not Marked	20
Parking - Trailer	Not Marked	10
Power	No	
User Fee	Yes	Discovery Pass
Water (potable)	No	

GRP Response Strategies Served:

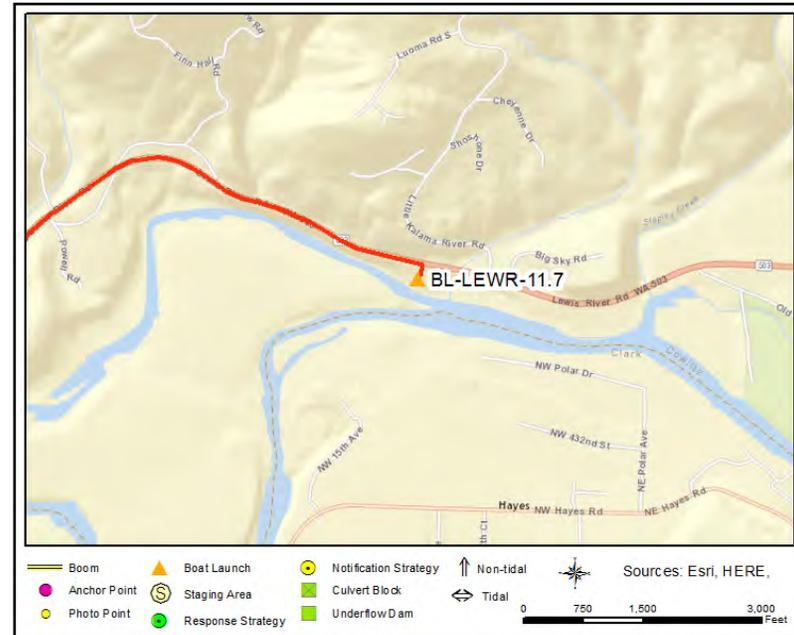
LEWR-11.7

Lewis River - WDFW "Island" Water Access Site

BL-LEWR-11.7



SA-LEWR-11.7 Photo: At WDFW "Island" Water Access Site on river right (channel right) of Lewis River looking NW towards boat launch. Lewis River and right channel left in background.



Site Contact

WDFW Region 5

Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

3020 Lewis River Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 4.9mi, entrance to Lewis River Water Access Site "Island" will be on your right. Stage in parking lot near boat ramp.

Lewis River Golf Club Boat Launch

BL-LEWR-12.4

Boat Launch Location

Position - Location: 45° 56.173', -122° 39.959' 45° 56' 10.4", -122° 39' 57.5" 45.93622, -122.66598 Woodland

Comments: Coordinate use of Lewis River Golf Club Boat Launch with golf course administration and operations office; call 360-225-8566 or 360-225-8254. Shallow ramp - jet drive work boat recommended.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Gravel	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		12,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	100%
Parking - Car	Not Marked	15
Parking - Trailer	Not Marked	6
Power	No	
Restroom	None	
User Fee	Unknown	
Water (potable)	No	

GRP Response Strategies Served:

LEWR-11.8, LEWR-11.5, LEWR-12.2, LEWR-12.5, LEWR-12.3a, LEWR-12.3b

Lewis River Golf Club Boat Launch

BL-LEWR-12.4



SA-LEWR-12.4 Photo: On river right at Lewis Rive Golf Course Boat Ramp, looking downstream/west and across to river left.



Site Contact

Lewis River Golf Course
 Primary Contact :
 3209 Lewis River Road
 Woodland, WA 98674
 360-225-8566

Nearest Address

3209 Old Lewis River Rd
 Woodland, WA 98674

Driving Directions

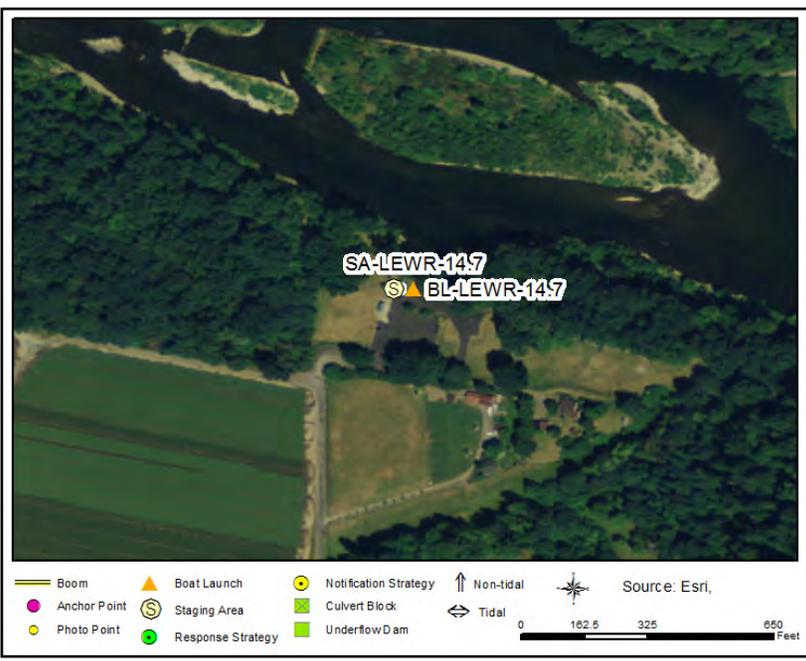
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue strait to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 5.5mi, turn right onto Old Lewis River Road.
5. After 0.1mi, turn right onto unnamed road (entrance to Lewis River Golf Course)
6. After ~900ft, immediately before golf course parking lot, stay to the right and follow dirt road down to boat launch parking area. Stage equipment in parking area near boat ramp.

Lewis River - Haapa Boat Launch BL-LEWR-14.7

Boat Launch Location

Position - Location: 45° 56.153', -122° 38.260' 45° 56' 9.2", -122° 38' 15.6" 45.93589, -122.63767 Woodland

Comments: Haapa Park is open daily from 7AM to dusk. Contact Clark County Dispatch (CRESA) for after-hours access assistance; call 360-693-3111. Clark County Sheriff's Department and WDFW Enforcement Officers have a 24-hour access key to park.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		33,000 SqFt
Lot Cover (Primary)	Asphalt	85%
Parking - Car	Marked	35
Parking - Trailer	Marked	15
Power	Not Determined	
User Fee	Unknown	
Water (potable)	Yes	

GRP Response Strategies Served:

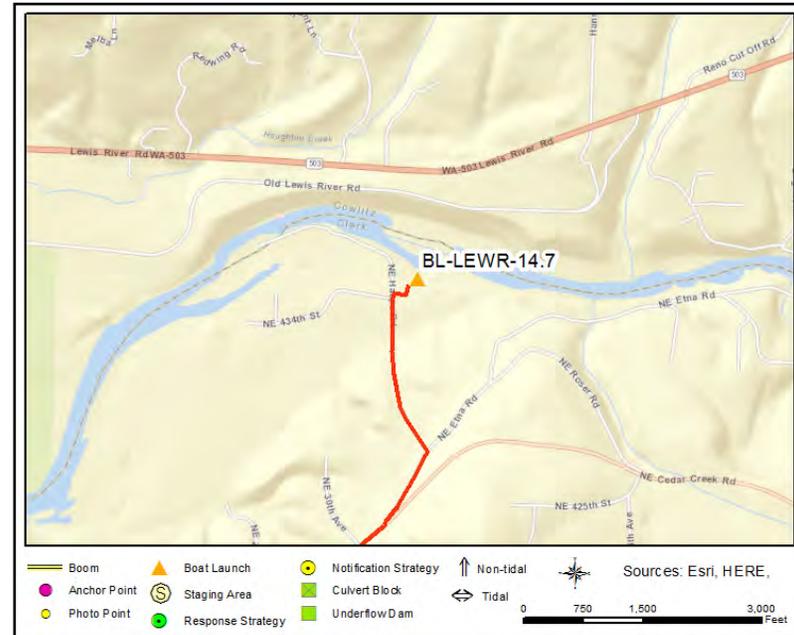
LEWR-13.3, LEWR-14.9, LEWR-13.8

Lewis River - Haapa Boat Launch

BL-LEWR-14.7



SA-LEWR-14.7 Photo: At Happa Park on river left of Lewis River looking north towards boat launch. River and bank on river right in background.



Site Contact

Clark County Parks and Trails

Primary Contact :
360-397-2285

CRESA

Secondary Contact : Clark Regional Emergency Services Agency
360-696-4461

Nearest Address

43309 NE Haapa Rd
Woodland, WA 98674

Driving Directions

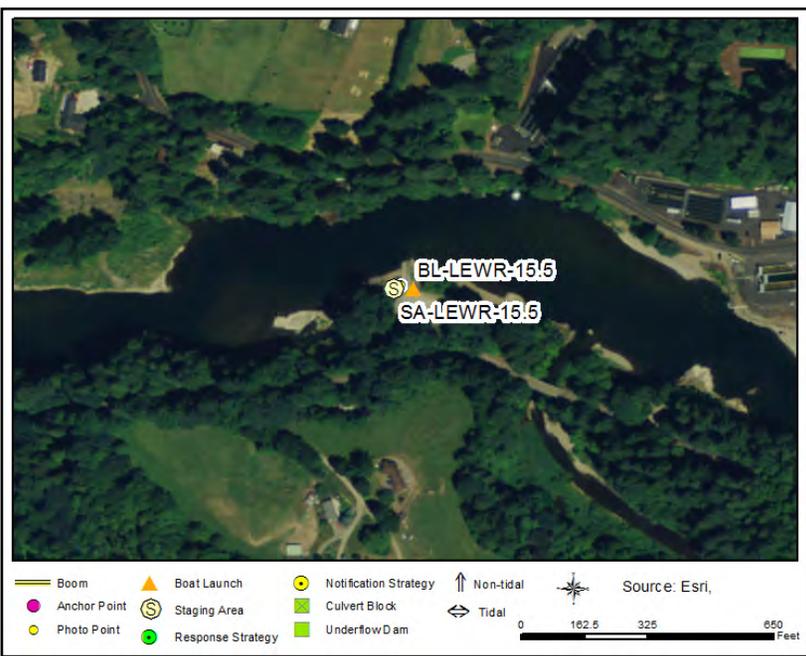
1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 0.2mi, turn left onto NE Haapa Road
9. After 0.4, roadway curves to the right and becomes Haapa Pit. Entrance to Haapa Park is on the left. Stage equipment in parking area near boat ramp.

Lewis River - WDFW "Cedar Creek" Water Access Site **BL-LEWR-15.5**

Boat Launch Location

Position - Location: 45° 56.186', -122° 37.230' 45° 56' 11.1", -122° 37' 13.8" 45.93643, -122.62050 Woodland

Comments: WDFW "Cedar Creek" Water Access Site is open year round; for more information contact WDFW Region 5 at 360-696-6211 or email TeamVancouver@dfw.wa.gov.



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Plank	1
Cell Phone Coverage	Not Determined	
Estimated Lot Size		18,000 SqFt
Lot Cover (Primary)	Dirt/Gravel	100%
Parking - Car	Not Marked	30
Parking - Trailer	Not Marked	12
Power	No	
Restroom	Restroom - Vault	1
User Fee	Yes	Discovery Pass
Water (potable)	No	

GRP Response Strategies Served:

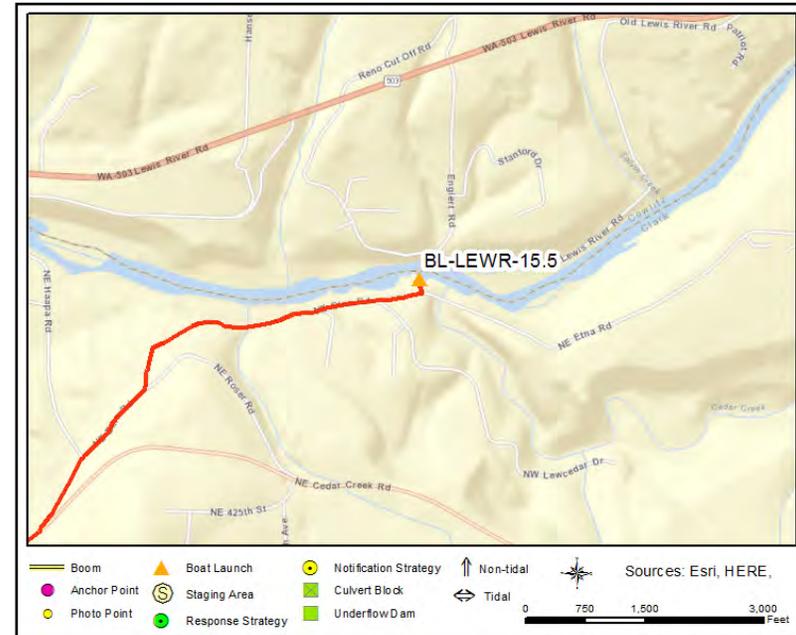
LEWR-15.6b, LEWR-16.1b, LEWR-16.1a, LEWR-15.5b, LEWR-15.6a, LEWR-15.5a

Lewis River - WDFW "Cedar Creek" Water Access Site

BL-LEWR-15.5



SA-LEWR-15.5 Photo: At WDFW "Cedar Creek" Water Access Site on river left of Lewis River looking north towards boat launch. Lewis River and river right in background.



Site Contact

WDFW Region 5
 Primary Contact : Vancouver
 2108 Grand Boulevard
 Vancouver, WA 98661
 360-696-6211

Nearest Address

5100 NE Etna Rd
 Woodland, WA 98674

Driving Directions

1. Head south on Interstate 5 and take Exit 21 (Hwy 503 E/Woodland-Cougar)
2. At end of ramp continue straight to head south on Pacific Avenue
3. After 0.7mi, stay left at curve in road and then turn left onto Lewis River Road
4. After 0.1mi, turn right onto E CC Street.
5. After 0.3mi, stay to left (after crossing bridge); roadway becomes NW Hayes Road
6. After 5.3mi, roadway becomes NE Cedar Creek Road
7. After 0.6mi, stay to left and travel on NE Etna Road
8. After 1.2mi, the site will be on your left. Stage equipment in parking area near boat ramp.

NOTE: DO NOT TRAVEL ON NE GRIST MILL ROAD. Historic Covered Bridge over Cedar Creek on Grist Mill Road has significant weight restrictions. Truck/Trailer combinations or vac-trucks would likely be too heavy to cross bridge.

CHAPTER 5
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CHAPTER 6

RESOURCES AT RISK

6.1 CHAPTER INTRODUCTION

This chapter provides a summary of natural, cultural, and economic resources at risk in the Lake Washington area. It provides general information on habitat, fish, and wildlife resources, and locations in the area where sensitive natural resource concerns exist. It offers a summary of cultural resources that include fundamental procedures for the discovery of cultural artifacts and human skeletal remains. General information about flight restrictions, hazing, and oiled wildlife can be found near the end of this chapter. A list of economic resources in the area is provided in the chapter's appendix.

This chapter is purposely broad in scope and should not be considered comprehensive. Some of the sensitive resources provided in this chapter are listed because they could not be addressed in Chapter 4 (Response Strategies and Priorities). Additional information from private organizations or federal, state, tribal, and local government agencies should also be sought during spills and considered.

The information provided in this chapter can be used in:

- Assisting the Environmental Unit (EU) and Operations in developing additional response strategies beyond those found in Chapter 4.
- Providing resource-at-risk “context” to responders, clean-up workers, and others during the initial phase of a spill response in the GRP area.
- Briefing responders and incident command staff that may be unfamiliar with sensitive resource concerns in the GRP area.
- Providing background information for personnel involved in media presentations and public outreach during a spill incident.

6.2 NATURAL RESOURCES AT RISK-SUMMARY

Most biological communities are susceptible to the effects of oil spills. Plant communities on land, eelgrass and marsh grasses in estuaries, and kelp beds in the ocean; microscopic plants and animals; and larger animals, such as fish, amphibians and reptiles, birds, mammals, and a wide variety of invertebrates, are all at potentially at risk from smothering, acute toxicity, and/or the chronic long-term effects that may result from being exposed to spilled oil. Classification types are

listed below, with the abbreviation of each type provided in the brackets (to the right of the classification).

The Cowlitz, Kalama, Lewis, EF Lewis River and Salmon Creek systems afford a wide variety of aquatic, riparian, and upland habitats. These varied habitats support a complex diversity of wildlife species, including large and small mammals; songbirds, birds of prey, upland birds, and waterfowl; reptiles; and amphibians. Some species are resident throughout the year; others are migratory either within the subbasin or, in many cases, seasonally migrate outside the subbasin. Many wildlife species found in the sub basin are classified as threatened, endangered, sensitive, or of special concern under the federal Endangered Species Act or Washington State guidelines.

- Federal Endangered (FE)
- Federal Threatened (FT)
- Federal Candidate (FC)
- Federal Species of Concern (FCo)
- State Endangered (SE)
- State Threatened (ST)
- State Candidate (SC)
- State Monitored (SM)
- State Sensitive (SS)

Sensitive species that may occur within this area, at some time of year, include the following federal and state listed species.

Birds:

- Bald eagle [FCo/SS],
- Brewer's sparrow [FCo],
- Caspian tern [FCo],
- Common loon [SS],
- Fox Sparrow [FCo],
- Marbled murrelet [FT/ST],
- Northern spotted owl [FT/SE],
- Olive-sided flycatcher [FCo],
- Oregon vesper sparrow [FCo],
- Peregrine falcon [FCo/SS],
- Pileated woodpeckers [SC],
- Purple martin [SC],
- Purple finch [FCo],

- Rufous hummingbird [FCo],
- Sandhill crane [SE],
- Short-billed dowitcher [FCo],
- Short-eared owl [FCo],
- Slender-billed white-breasted nuthatch [SC],
- Steaked horned lark [FT/SE],
- Vaux's swift [SC],
- Willow flycatcher [FCo],
- Yellow-billed cuckoo [FT/SC].

Mammals:

- Columbian white-tailed deer [FE],
- Mazama pocket gopher (Oregon subspecies) [FT/ST],
- Townsend's big-eared bat [SC],
- Western gray squirrel [ST].

Fish/Shellfish:

- Bull trout [FT/SC],
- Chinook [FT/SC],
- Coho [FT],
- Fall chum [FT/SC],
- steelhead [FT/SC],
- Coastal cutthroat [FCo],
- Pacific eulachon smelt [FT/SC],
- Pacific lamprey [FCo],
- California floater [SC].

Amphibian/Reptile:

- Dunn's salamander [SC],
- Oregon spotted frog [FT/SE],
- Western toad [SC]

Plants:

- Bradshaw's desert parsley [FE],
- Golden paintbrush [FT],
- Kincaid's lupine [FT],
- Nelson's checker-mallow [FT],

- Water howellia [FT],
- Whitebark pine [FC].

6.2.1 General Resource Concerns

6.2.1a-Habitats

- **Wetlands** in the lower reaches of this region are tidally influenced. Freshwater wetlands range from seasonal open marshes to forested swamps along rivers and streams. All wetland types support a diverse array of amphibian, bird, insect, fish, and wildlife species.
- **Riparian areas** serve as transitional zones between the uplands and the rivers and consequently are heavily used by a variety of wildlife. They also contribute to fish habitat by providing shade, cover, and food.
- **Side channels and impounded areas** provide feeding and resting areas for a variety of birds, including waterfowl and herons, and are important rearing areas for juvenile fish.
- **Islands** provide important nesting habitat for a variety of bird species, as well as habitat for a variety of mammals. Typical resident fish are likely present in most streams.
- **Stream mouths** are concentration areas for fish and are feeding areas for a variety of birds.

6.2.1b-Fish and Shellfish

- **Anadromous salmonids** species are present throughout the basin, including Bull trout [FT/SC], coho [FT], spring/summer/fall Chinook [FT/SC], fall chum [FT/SC], Summer/winter steelhead [FT/SC], Coastal cutthroat trout [FCo], Pacific lamprey [FCo], trout and Pacific eulachon smelt [FT].
- **Resident fish**, Brown bullhead, Carp, Largemouth bass, Large scale sucker, Long nose dace, Mountain whitefish, Northern pike minnow, Pea mouth, Rainbow trout, Resident cutthroat, sculpin, and Yellow perch.
- **Fresh water mussels**, including California floaters [SC], are found throughout most of the region.

6.2.1c-Wildlife

- **Wintering waterfowl concentrations**, (primarily ducks, geese and swans) are present along the main stem of the Columbia and Cowlitz. Field size, flood conditions, weather, and crop rotations of any given year help to determine the actual waterfowl distribution. Resident and migratory waterfowl heavily utilize the islands, backwaters, wetlands and adjacent uplands of the region from fall through spring.

- **Sandhill Cranes [SE]** congregate in large numbers along the Columbia River, Vancouver Lake and lower portion of the Cowlitz River.
- **Marbled Murrelet [FT/ST]** nesting areas known to be present in vicinity of river and associated uplands.
- **Great blue and Green herons**, along with Bald eagles [FCo/SS] and Ospreys, nest and forage year-round along waterways throughout the region.
- **Resident and migratory songbirds** heavily utilize riparian habitats year-round and are susceptible to oiling if riparian vegetation and shorelines become contaminated.
- **Mammals** common to the region include beaver, muskrat, river otter, mink and raccoon. All of these small mammals are vulnerable to contact with spilled oil because of their habitat preferences. Larger mammals are also present throughout this area.

6.2.2 Specific Geographic Areas of Concern-Overview

Cowlitz River (Columbia River ~RM 68)

- **Coweeman River** (Cowlitz River ~RM 1.4): From I-5 upstream to about Coweeman River RM 7 emergent and scrub shrub wetlands in the lower Coweeman River regularly provide large concentrations of wintering waterfowl, Great blue heron, Pileated woodpeckers [SC], Bald eagles [FCo/SS], Orioles and nesting Red-tailed Hawks. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- **Toutle River** (Cowlitz River ~RM 20): Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- **Olequa and Lacamas Creeks** (Cowlitz River ~RM 24.5 to RM 30): Pastures and emergent wetlands in the Cowlitz River floodplain and nearby ponds supports regular large concentrations of wintering waterfowl, geese, and osprey nesting. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.

Vancouver Lake

- **Burnt Bridge Creek** (Tributary of Vancouver Lake): Bald eagle [FCo/SS] nesting near the confluence with Vancouver Lake. Waterfowl concentration between I-5 and Vancouver Lake including Sandhill Cranes [SE]. Tundra swans, geese and ducks in the lowlands immediately upstream from Vancouver Lake. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Salmon Creek coho [ST], and freshwater mussels.

Lake River (Columbia River ~RM 87)

- **Salmon Creek** (Lake River ~RM 9): This stream reach includes Salmon Creek/Salmon Creek Greenway, and Salmon Creek County Park. Bald eagle [FCo/SS] nesting at ~ Salmon Creek RM 3. Waterfowl concentration between I-5 and confluence with Columbia River including Sandhill crane [SE], Tundra swan, geese and ducks. Mazama pocket gopher [FT/ST] usage near the City of Battle Ground. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels and freshwater mussels.
- **Whipple Creek** (Lake River ~RM 7): Bald eagle [FCo/SS] nesting near Whipple Creek Park. Waterfowl concentration downstream from approximately where the stream crosses NW 179th Street to the confluence with Lake River. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- **Flume Creek** (Lake River ~5.5): Waterfowl concentration including Sandhill crane [SE] and geese near the confluence with Lake Creek both upstream and downstream from the railroad crossing. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. This stream flows to the Ridgefield Wildlife Area.

Lewis River (Columbia River ~ RM 87):

- **Lewis River main stem and tributaries:** Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels, resident fish and freshwater mussels.
- **East Fork Lewis River** (Lewis River RM 3.5): Waterfowl concentration including Tundra swan, Duck, Geese from City of La Center upstream to about EF Lewis ~RM 7 where the power lines cross the river. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels and resident fish.
- **Staples Creek/Clover Valley area** (Lewis River ~RM 12): Sloughs, wetlands and riparian areas support cavity nesting ducks at the confluence with Lewis River.

6.2.3 Specific Geographic Areas of Concern – Maps and Descriptions**Cowlitz River** (See: Figure 6-1)

- 1) **Lewis and Clark State Park:** Boone Creek, a salmonid spawning stream, runs through the park and is tributary to Lacamas Creek. This 621-acre park is in one of the last major stands of old-growth forests in the state. Coniferous trees, streams, wetlands, dense vegetation, and wet prairie comprise the park environment along with a vast stand of rare old-growth forest.

- 2) Mouth of **Blue Creek** and vicinity (Cowlitz ~RM 42-47): Waterfowl concentration area. Cavity nesting Wood ducks and Mergansers in old river channels, beaver dams and flooded willow areas. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 3) Mouth of **Olequa and Lacamas Creeks and vicinity** (Cowlitz River ~RM 24.5 to RM 30): Pastures and emergent wetlands in the Cowlitz River floodplain and nearby ponds support regular large concentrations of wintering waterfowl, geese, and osprey nesting. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- 4) **Toutle River** (Cowlitz River ~RM 20/Toutle RM 3 to RM 4.5): Snag rich area used by Bald eagles. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- 5) **Arkansas, Delameter, and Whittle Creeks** (Cowlitz River ~RM 17): Wetlands across from town of Castle Rock provide habitat for cavity nesting ducks. Emergent and scrub shrub wetlands and flood plains provide regular large concentrations of wintering waterfowl including Canada geese. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 6) **Pleasant Hill** (Cowlitz River ~RM 8.5): An unnamed stream and associated wetland complex between I-5 and Pleasant Hill Road near the town of Lexington. Wood ducks and other cavity nesting ducks regularly inhabit these areas.

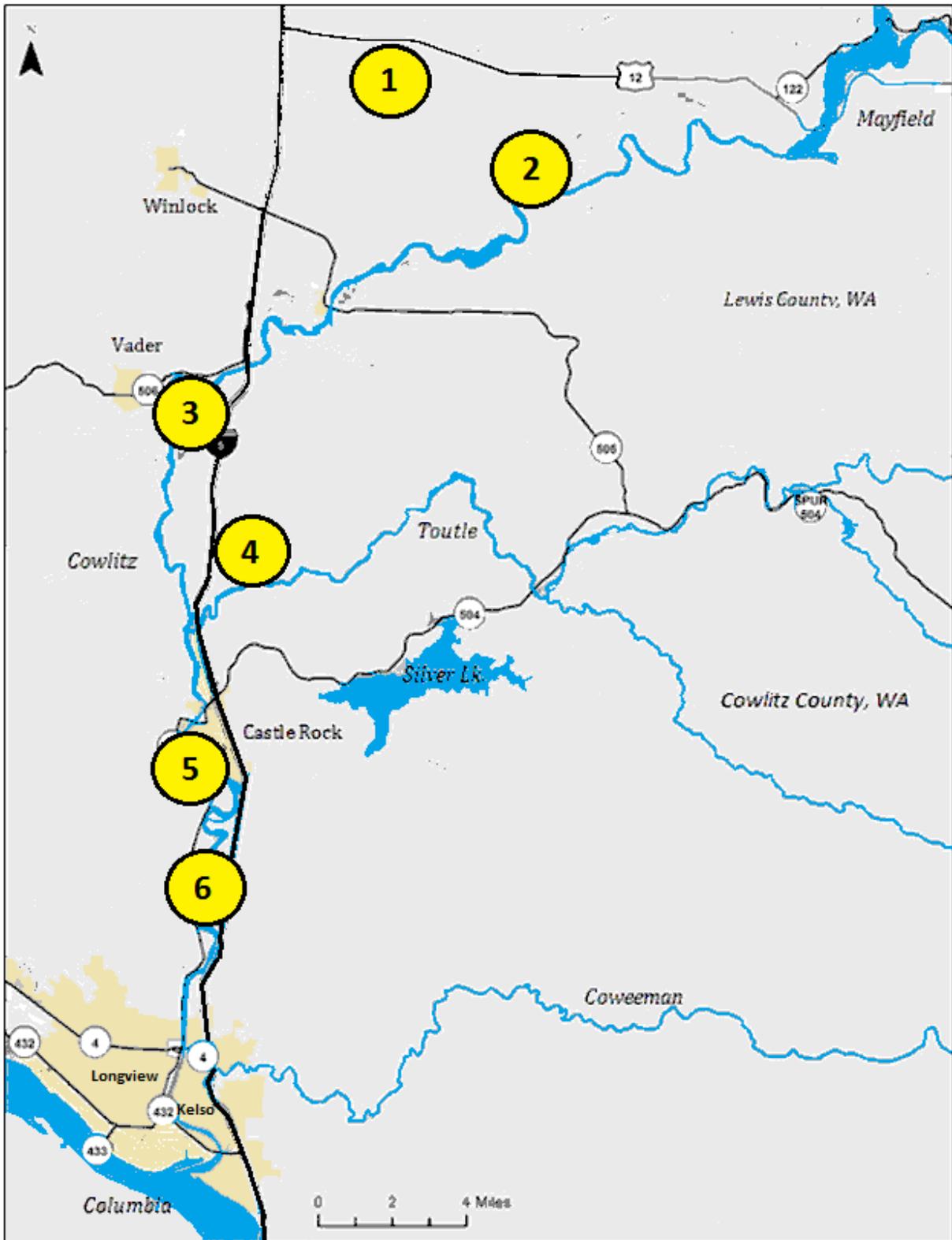


Figure 6-1: Specific geographic areas of concern within the Cowlitz River system

Columbia River (See Figure 6-2)

- 7) **Carrolls Channel and Owl Creek Mouth** (Columbia River ~RM 69 to 71): Concentrations of waterfowl including swans, ducks, and geese. Seabirds, harbor seals and California sea lions coincide with winter run of Pacific eulachon smelt [FT] in Carrolls Channel. Heron rookery, Short-eared owls and wetlands in the lower reach of Owl Creek near I-5. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 8) Mouth of **Kalama River** (Columbia River ~RM 73): Concentrations of waterfowl including swans, ducks, and geese. Seabirds, harbor seals and California sea lions coincide with winter run of Pacific eulachon smelt [FT] near mouth of river. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 9) **Martin/Burke Islands and Vicinity** (Columbia River ~RM 79-81): Riparian habitat. Juvenile salmonid rearing habitat in off-river channels. Concentration area for breeding, migrating and wintering waterfowl. Sandhill crane [SE]. Area supports cavity nesting ducks.
- 10) **Horseshoe Lake (and vicinity) near Woodland** (Lewis River ~RM 6): Cavity nesting duck concentration in the sloughs wetlands, and riparian areas in this area.
- 11) **Ridgefield National Wildlife Refuge** (Columbia River ~ RM 87-92): Concentration area for migrating and wintering waterfowl, shorebirds and Sandhill cranes [SE]. Resident nesting waterfowl, Bald eagles [FCo/SS] and Great Blue herons. Riparian habitat. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Audubon Important Bird Area.
- 12) **Frenchman's Bar/Shillapoo Wildlife Area/Vancouver Lake** (~RM 96-99): Riparian habitat, pasture and agricultural land that supports wintering and migrating concentrations of waterfowl, shorebirds and Sandhill cranes [SE]. Common loon [SS], Purple martin [SC], Slender-billed white-breasted nuthatch [SC] also present. Juvenile salmonid rearing habitat in off-river channels. **Shillapoo Vancouver Wildlife Area** (~2,300 acres) includes one of the largest Great blue heron rookeries on the lower Columbia River. **Vancouver Lake State Park** (~190 acre) has 2.5 miles of publically accessible shoreline and is also used by wildlife and migratory waterfowl.

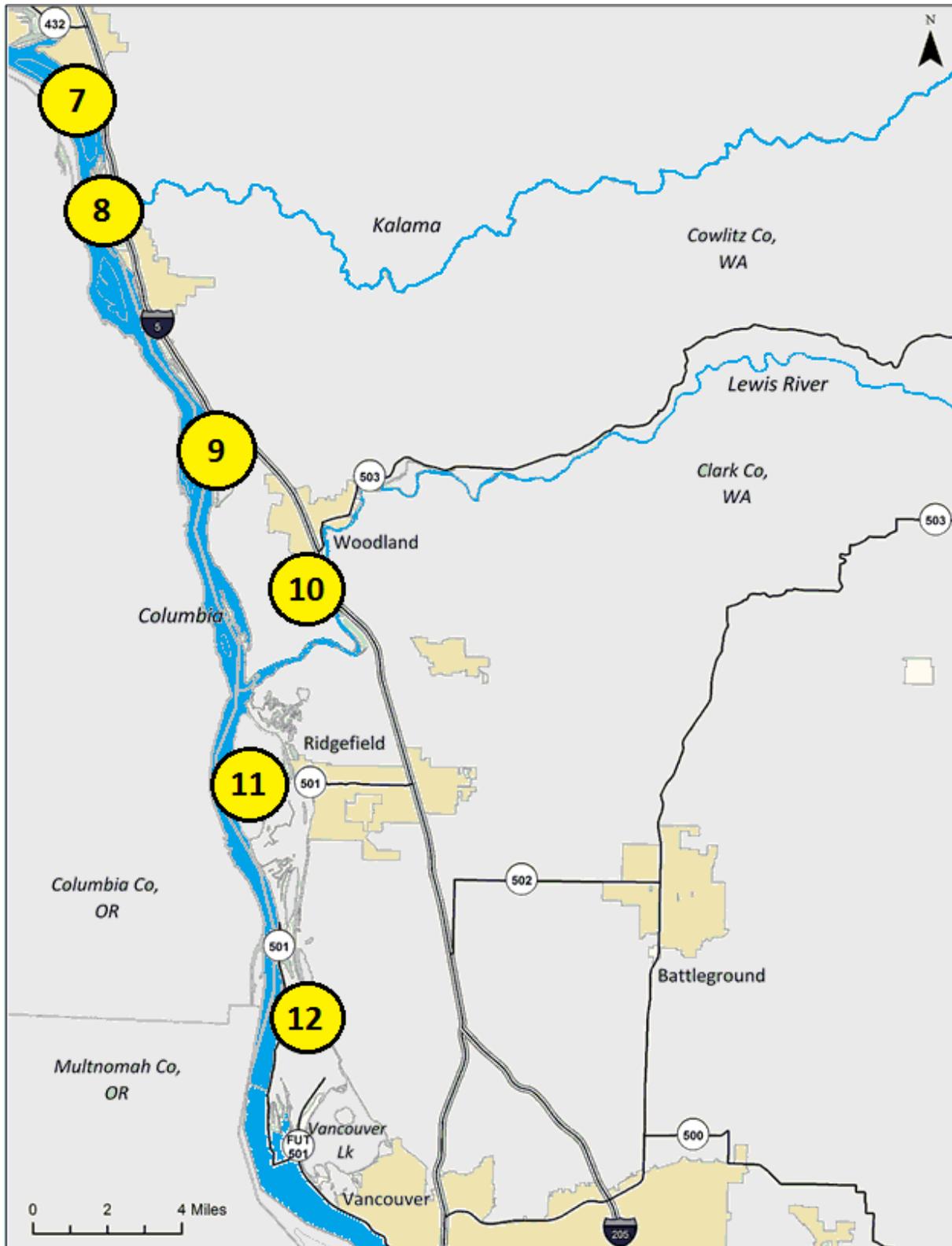


Figure 6-2: Specific geographic areas of concern in area near the Lower Columbia River

6.3 CULTURAL RESOURCES AT RISK-SUMMARY

Culturally sensitive sites are present within the Clark Cowlitz area. Due to the sensitive nature of this information, details regarding the location and type of cultural resources present are not included in this document. However, in order to ensure that tactical response strategies do not inadvertently harm historical and culturally sensitive sites, Washington Department of Archeology and Historic Preservation (WDAHP) should be consulted before disturbing any soil or sediment during a response action. WDAHP may assign a person to monitor cleanup operations, or provide a list of professional archeologists that can be contracted to monitor response activities.

Information on the location of culturally sensitive sites is maintained by WDAHP and made available to Washington Department of Ecology for oil spill preparedness and response planning. After the Unified Command is established, information related to specific archeological concerns will be coordinated through the Environmental Unit.

6.3.1 Discovery of Human Skeletal Remains

Any human remains, burial sites, or burial-related materials that are discovered during a spill response must be treated with respect at all times. Refer to [Section 9403 of the Northwest Area Contingency Plan](#) for National Historic Preservation Act Compliance Guidelines during an emergency response.

6.3.2 Procedures for the Discovery of Cultural Resources

All work must be stopped immediately and the Incident Commander and Cultural Resource Specialist notified if any person monitoring work activities or involved in spill response believes that they have encountered cultural resources. The area of work stoppage must be adequate to provide for the security, protection, and integrity of the material or artifact(s) discovered.

Prehistoric Cultural Resources (May include but not limited to any of the following items):

- Lithic debitage (stone chips and other tool-making byproducts)
- Flaked or ground stone tools
- Exotic rock, minerals, or quarries
- Concentrations of organically stained sediments, charcoal, or ash
- Fire-modified rock
- Rock alignments or rock structures
- Bone (burned, modified, or in association with other bone, artifacts, or features)
- Shell or shell fragments
- Petroglyphs and pictographs
- Fish weirs and traps
- Culturally modified trees
- Physical locations or features (traditional cultural properties)

Historic cultural material (May include any of the following items over 50 years old):

- Bottles, or other glass
- Cans
- Ceramics
- Milled wood, brick, concrete, metal, or other building material
- Trash dumps
- Homesteads, building remains
- Logging, mining, or railroad features
- Piers, wharves, docks, bridges, dams

6.4 ECONOMIC RESOURCES AT RISK SUMMARY

Socio-economic sensitive resources are facilities or locations that rely on a body of water to be economically viable. Because of their location, they could be severely impacted if an oil spill were to occur. Economically sensitive resources are separated into three categories: critical infrastructure, water dependent commercial areas, and water dependent recreation areas. Appendix “6A” of this chapter provides a list of economic resources for this GRP area.

6.5 GENERAL INFORMATION

6.5.1 Flight Restriction Zones

Flight restriction zones may be recommended by the Environmental Unit (Planning Section) for the purpose of minimizing disturbance that could result in injury to wildlife during an oil spill. By keeping a safe distance or altitude from identified sensitive areas, pilots can minimize the risk of aircraft/ bird collisions, prevent the accidental hazing of wildlife into oiled areas, and avoid causing abandonment of nests or marine mammal pupping areas. Implementation of Flight Restriction Zones will take place within the Air Operations Branch (Operations Section) after a Unified Command is formed. The Planning Section’s Environmental Unit will work with the Air Ops Branch Director to resolve any potential conflicts with flight activities that are essential to the spill response effort. Typically, the area within a 1,500 ft radius and below 1,000 ft in altitude is restricted to flying in areas that have been identified as sensitive. However, some areas have more restrictive zones. In addition to restrictions associated with wildlife, Tribal authorities may also request notification when overflights are likely to affect culturally sensitive areas within reservations. See [Section 9301.3.2](#) and [Section 9301.3.3 of the Northwest Area Contingency Plan](#) for more information on the use of aircraft and helicopters in open water and shoreline responses.

6.5.2 Hazing

After a Unified Command is formed, the Wildlife Branch (Operations Section) in consultation with the appropriate trustee agencies and the Environmental Unit will evaluate hazing options for the

purpose of keeping un-oiled birds and marine mammals away from oil during a spill. Hazing options might include the use of acoustic or visual deterrent devices, boats, aircraft or other situation-appropriate tools.

For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#) and [Northwest Area Wildlife Deterrence Resources \(NWACP Section 9311\)](#).

6.5.3 Oiled Wildlife

Attempting to capture oiled wildlife can be hazardous to both the animal and the person attempting the capture the animal. Response personnel should not approach or attempt to recover oiled wildlife. Responders should report their observations to the Wildlife Branch so appropriate action can be taken. Information provided should include the location, date, and time of the sighting, and the estimated number and kind of animals observed. Early on in the response, before a Unified Command is established, oiled wildlife sightings should be reported to Washington Emergency Management Division. For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#).

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Appendix 6A – List of Economic Resources

Category	Resource	Location	Latitude	Longitude	Contact	Phone	Email
A1 - Drinking Water Intakes	Castle Rock Water Intakes	Cowlitz River - City of Castle Rock	46.33403	-122.93194	City of Castle Rock - Public Works	360-703-0167	
A1 - Drinking Water Intakes	Kalama Ranney Collector (Water Intakes)	Kalama River - City of Kalama	46.04361	-122.83902	City of Kalama - Public Works	360-673-3707	
A1 - Drinking Water Intakes	Kelso Ranney Collector	Cowlitz River - City of Kelso	46.14238	-122.91383	City of Kelso- Public Works	360-577-3360	
A1 - Drinking Water Intakes	Longview Water Intakes	Cowlitz River - City of Longview	46.15037	-122.91448	City of Longview - Stormwater	360-442-5299	
A1 - Drinking Water Intakes	Vader Water Intakes	Cowlitz River - City of Vader	46.40608	-122.93336	Lewis County - Public Works	360-740-1123	
A1 - Drinking Water Intakes	Woodland Ranney Collector	Lewis River - City of Woodland	45.91006	-122.73998	City of Woodland - Public Works	360-225-7999	
A2 - Energy/Power Generation Water	Mayfield Dam	Cowlitz River - Silver Creek, WA	46.502592	-122.58813	Tacoma Public Utilities	253-502-8530	
A2 - Energy/Power Generation Water	Merwin Dam	Lewis River - Ariel, WA	45.956807	-122.55577	Pacificorp	503-813-6078	
B6 - Fish Hatcheries	Coweeman River - Rearing Pond	Coweeman River - Kelso Area	46.15566	-122.78136	Coweeman Rearing Pond Manager	360-577-0602	
B6 - Fish Hatcheries	Cowlitz River Salmon and Trout Hatcheries	Cowlitz River - Salkum, WA	46.51134	-122.62946	WDFW - Cowlitz River Hatcheries	360-864-6135	
B6 - Fish Hatcheries	Kalama Falls Hatchery	Kalama River - City of Kalama Area	46.01659	-122.73408	WDFW - Kalama Falls Hatchery	360-673-4825	
B6 - Fish Hatcheries	Lewis River Merwin Hatchery	Lewis River - Ariel, WA	45.95464	-122.56479	WDFW - Merwin Hatchery	360-225-4390	
C4 - Parks & Beaches	Abrams Park	Gee Creek - Ridgefield	45.817391	-122.735793	City of Ridgefield - Public Works	360-887-3897	

Category	Resource	Location	Latitude	Longitude	Contact	Phone	Email
C4 - Parks & Beaches	Arnold Park	Burnt Bridge Creek - Vancouver	45.651032	-122.646587	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	Beaver Marsh Open Space Park	Burnt Bridge Creek - Vancouver	45.652212	-122.571359	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	Burnt Bridge Creek Park	Burnt Bridge Creek - Vancouver	45.642384	-122.632861	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	Gerhart Gardens Park	Cowlitz River - Longview	46.109751	-122.894769	City of Longview - Parks Department	360-442-5421	
C4 - Parks & Beaches	Leverich Park	Burnt Bridge Creek - Vancouver	45.651257	-122.659279	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	Meadowbrook Marsh Park	Burnt Bridge Creek - Vancouver	45.636888	-122.582036	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	North County Sports and Recreation Complex	Cowlitz River - Castle Rock	46.278597	-122.912681	City of Castle Rock - Parks	360-274-7478	crpwd@ci.castle-rock.wa.us
C4 - Parks & Beaches	NW Paradise Park State Park	Lewis River (East Fork) - Ridgefield	45.86828	-122.705376	Washington State Parks	360-263-2350	
C4 - Parks & Beaches	Riverside County Park	Cowlitz River - Kelso	46.192126	-122.902843	Cowlitz County - Parks and Recreation	360-577-3174	beand@co.cowlitz.wa.us
C4 - Parks & Beaches	Salmon Creek Greenway	Salmon Creek - Vancouver	45.713809	-122.683238	Vancouver Parks and Recreation	360-487-8311	parksrec@cityofvancouver.us
C4 - Parks & Beaches	Salmon Creek Regional Park	Salmon Creek - Vancouver	45.707563	-122.6639	Clark County Public Works - Parks	360-397-2285	parks@clark.wa.gov
C4 - Parks & Beaches	Tam O'Shatner Park	Coweeman River - Kelso	46.138581	-122.890589	City of Kelso	360-423-1371	
C4 - Parks & Beaches	Whipple Creek Regional Park	Whipple Creek - Vancouver	45.742052	-122.695276	Clark County Public Works - Parks	360-397-2285	parks@clark.wa.gov