<< Go Back

MIDDLE COLUMBIA RIVER

The Dalles Pool

Geographic Response Plan

(MCRD-GRP)

<< Go Back

MIDDLE COLUMBIA RIVER

THE DALLES POOL

Geographic Response Plan

(MCRD-GRP)

October 2015

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<< Go Back

Spill Response Contact Sheet

Required Notifications for Oil Spills and Hazardous Substance Releases	
Federal Notification - National Response Center	(800) 424-8802*
State Notification – Oregon Emergency Response System	(800) 452-0311*
State Notification - Washington Emergency Management Division	(800) 258-5990*
USACE Dam Operators - Emergency Contact - Dam Control Room	
Bonneville Lock and Dam - River Mile: 145.4	541-374-8338*
The Dalles Lock and Dam - River Mile: 192.7	541-298-7505*
John Day Lock and Dam - River Mile: 216.5	541-298-9712*
McNary Lock and Dam - River Mile: 292.55	541-922-2231*
Ice Harbor Lock and Dam - (Snake) River Mile: 9.6	509-547-7783*
U.S. Environmental Protection Agency	
Region 10 - Spill Response	(206) 553-1263*
- Washington Ops Office	(360) 753-9437
- Oregon Ops Office	(503) 326-3250
- RCRA/CERCLA Hotline	(800) 424-9346
- Public Affairs	(206) 553-1203
U.S. Coast Guard	
Sector Columbia River - Emergency/Watchstander	(503) 861-2242*
Sector Columbia River - Command Center	(503) 861-6211*
Sector Columbia River - Incident Management Division	(503) 861-6477
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	(503) 261-9246
NOAA HAZMAT	(206) 526-4911*
Other Federal Agencies	
U.S. DOI Fish and Wildlife Service (pager)	(360) 534-9313*
U.S. DOI Office of Environmental P and C	(503) 720-1212*
USACE Portland District Office	(503) 784-7469*
USACE Walla Walla District Office	(541) 922-2231*
U.S. Forest Service, Columbia River Gorge National Scenic Area	(541) 308-1700
Tribal Contacts	
Columbia River Inter-Tribal Fisheries Commission	(541) 386-6363*
Cowlitz Indian Tribe, Cultural Resources Director	(360) 577-6962
Nez Perce Tribe, Spill Responder and Water Quality	(208) 621-3893
Confederated Tribes of the Umatilla Indian Reservation	(541) 377-2959*
Warm Springs Confederated Tribes	(541) 553-1171*
Confederated Tribes of the Yakama Indian Nation	(509) 865-5121
Confederated Tribes of the Colville Reservation, THPO	(509) 634-2695
Northwest Indian Fisheries Commission	(360) 438-1180
Pipeline Companies and Railroads	
BNSF Railway	(800) 832-5452*
Union Pacific Railroad	(888) 877-7267*
Tesoro Logistics Operations	(509) 543-6100*
Tidewater Terminal Company	(509)-547-7701

* Contact Numbers staffed 24-hour/day

<< Go Back

Oregon State Agencies	
OR Dept of Environmental Quality	(800) 452-0311*
OR Fish and Wildlife	(800) 720-ODFW
OR State Historic Preservation Office	(503) 986-0690
OR Parks and Recreation Department	(503) 986-0690
OR State Patrol, The Dalles Area Command	(541) 296-9646
Washington State Agencies	
WA Dept of Archaeology and Historic Preservation	(360) 586-3065
Washington Department of Ecology - ECY Headquarters - Spills	(360) 407-7455
Washington Department of Ecology - Southwest Regional Spill Response Team	(360) 407-6300*
Washington Department of Ecology - Central Region Spill Response Team	(509) 575-2490*
Washing Department of Fish and Wildlife - Region 6	(360) 696-6211
Washing Department of Fish and Wildlife - Oil Spill Team	(360) 534-8233*
Washing Department of Fish and Wildlife - Emergency HPA	(360) 534-8233*
WA Dept of Health - Drinking H2O Program	(887) 481-4901
WA Dept of Health - Drinking H2O Program (Afterhours)	(800) 521-0323
WA Dept of Natural Resources	(360) 902-1000
WA Dept of Natural Resources - Aquatic Lands (M-Th) daytime)	(360) 902-1064
WA Dept of Natural Resources - Aquatic Lands (Nights/Weekends)	(360) 556-3921
WA Dept of Transportation	(360) 705-7000
Washing State Patrol - District #3	(509) 575-2320
Washington State Patrol - District #5	(360) 449-7909
Response Contractors	
Cowlitz Clean Sweep	(888) 423-6316*
Global Diving and Salvage	(800) 441-3483*
Marine Spill Response Corporation (MSRC)	(425) 252-1300*
NRC Environmental Services	(800) 337-7455*
Able Clean-Up	(866) 466-5255*
Ballard Marine Construction	(866) 782-6750
Big Sky Industrial	(800) 582-4949
Clean Harbors Environmental Services	(800) 645-8265*
Clean Rivers Cooperative	(503) 220-2040*
Moran Environmental	(888) 233-5338*
NWFF Environmental	(800) 942-4614*
West Coast Marine Cleaning	(877) 926-2462
Local Government - The Dalles Pool	
The Dalles Police Department	(541) 296-2233
Middle Columbia Fire and Rescue	(541) 296-9445
Port of The Dalles	(541) 298-4148
The Dalles Irrigation District	(541) 296-3366
Klickitat County Sheriff	(509) 493-1811
Klickitat County Emergency Management	(509) 250-0528
Klickitat County Fire District 6 (Dallesport)	(509) 767-1252
Port of Klickitat, WA	(509) 493-1655
North Sherman County Rural Fire District	(541) 442-5252
Sherman County Sheriff	(541) 565-3622
Umatilla County Sheriff	(541) 966-3651
Umatilla Fire Department	(541) 922-2770

* Contact Numbers staffed 24-hour/day

<< Go Back

Before you print this document

Chapter 4 with appendices (pages 35-202) and Appendix 6A (pages 216-218) of this document are provided in "landscape" page orientation; all other chapters and appendices are oriented in "portrait." The appendices in Chapter 4 (pages 75-202) 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 response in the planning area. It's meant to aid the response community during the initial phase of an oil spill; from the time a spill occurs until a Unified Command is established. The plan prioritizes tactical response strategies based on locations where spills might occur and the proximity of those locations to sensitive natural, cultural, and economic resources. By using this document it's hoped that immediate and proper action can be taken to reduce oil's impact on sensitive resources.

After a spill occurs, efforts to control and contain the spill at or near the source should be a top priority. Beyond those efforts, the booming and notification strategies provided in Chapter 4 should be implemented as soon as possible using the priority tables in Section 4.3, unless overflight information, spill trajectory models, or circumstances unique to a particular spill situation dictate otherwise. Changes to the order listed in the priority tables may be made if approved by the Incident Commander or Unified Command.

Information meant to support initial Environmental Unit functions can be found in Chapter 6 (Resources at Risk). The chapter and its appendix provide specific information about the type and location of natural and economic resources in the area. Cultural resource locations were considered in the development of this plan but, because of the sensitive nature of the information, specifics about the location of those resources aren't included in this document.

RECORD OF CHANGES

Date	Change Number	Summary of Changes	Name of Person Making Change
June 1, 2002	MCR-GRP 002	Comprehensive review and update of Chapter 4	N/A
May 1, 2004	MCR-GRP 003	Comprehensive review and update of all chapters.	N/A
June 30, 2015	MCR 004 The Dalles Pool-GRP (MCRD-GRP)	Separation of the MCR-GRP into four individual GRPs based on pool areas, including the: Bonneville Pool, The Dalles Pool, John Day Pool, and McNary Pool. Conducted comprehensive reviews and updates of all chapters, with significant changes to Chapter 4.	Susan Vezeau, PhD
October 1, 2015	MCR 005 The Dalles Pool-GRP	Update of Purpose and Use, Chapter 1, Chapter 3, Chapter 4, and Chapter 6. Removal of Protection Techniques and GRP Contributors from appendices. Moved Appendix C to 1A.	Susan Vezeau, PhD

TABLE OF CONTENTS

CHAPTER 1 15

1.1 GRP Chapters and Appendices 16

1.2 Geographic Response Plan Development Process 16

1.3 Standardized Response Language 17

1.4 Terminology and Definitions 17

APPENDIX 1A 19

CHAPTER 2 21

2.1 Chapter Introduction 21

2.2 Physical Features 21

2.3 Hydrology 25

2.4 Climate AND Winds 25

2.5 Tides and Currents 26

2.6 Risk Assessment 26

2.7 References 29

CHAPTER 3 33

CHAPTER 4 35

4.1 Chapter Introduction 37

4.1.1 On-site Considerations 37

4.1.2 Historical River Streamflow Ranges 40

4.2 Area Overview Maps 42

4.3 Strategy and Response Priorities 48

4.3.1 General Response Priorities 48

4.3.2 Strategy Priorities based on Potential Oil Spill Origin Points 48

4.4 Sector Maps (Strategy Locations) 54

4.5 Matrices 56

4.5.1 Naming Conventions (Short Names) 56

4.5.2 Response Strategy Matrices 57

4.5.3 Notification Strategy Matrices 68

4.5.4 Staging Area Matrices 70

4.5.5 Boat Launch Matrices 72

APPENDIX 4A 75

APPENDIX 4B 153

APPENDIX 4C 163

APPENDIX 4D 183

CHAPTER 5 203

CHAPTER 6 205

6.1 Chapter Introduction 205

6.2 Natural Resources at Risk - Summary 205

6.2.1 General Resource Concerns 208

6.2.2 Specific Geographic Areas of Concern 209

6.3 Cultural Resources at Risk - Summary 211

6.3.1 Discovery of Human Skeletal Remains 211

6.3.2 Procedures for the Discovery of Cultural Resources 212

6.4 Economic Resources at Risk Summary 213

6.5 General information 213

6.5.1 Flight restriction zones 213

6.5.2 Hazing 213

6.5.3 Oiled Wildlife 214

APPENDIX 6A 216

<< Go Back

LIST OF FIGURES

Figure 4-1: USGS Mean Monthly Discharge Measurements forColumbia River and Tributaries.....41

Figure 6-1: Middle Columbia River, The Dalles Pool, Lake Celilo (~RM 192-215)..... 210

<< Go Back

LIST OF TABLES

Table 4-1: Water Speed Drift Measurement Table 39

Table 4-2: Historical River Streamflow Ranges 40

Table 4-3: D-A (John Day Lock and Dam ~D-216.5) 50

Table 4-4: D-B (I-84 Bridge Maryhill Area ~D-209) 51

Table 4-5: D-C (Railroad Bridge/Wishram ~D-202) 52

Table 4-6: D-D (Horsethief Lake Area ~D-195) 53

<< Go Back

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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 Nisqually River 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.

This GRP has been developed for The Dalles Pool of the Middle Columbia River (MCRD-GRP). The Columbia River provides a border between Oregon and Washington from the river's mouth, through The Dalles Pool-GRP area, to river mile 310 where it leaves Oregon and continues on through Washington State until reaching its origin in Canada. The MCRD-GRP planning area covers 24.8 miles of the Columbia River, extending from The Dalles Dam at river mile 191.6 to the base of the John Day Dam at river mile 216.4. Numerous cities and towns are located on the banks of the Columbia River within The Dalles Pool, including: The Dalles, Biggs Junction, and Rufus, Oregon, and Maryhill, Washington. Additional information about the planning area, including physical features, hydrology, climate and winds, tides and currents, and spill risks, can be found in Chapter 2 (Site Description). Information about potential response options in the planning area can be found in Chapter 3 (Response Options and Considerations).

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 of this document (Resources at Risk). Chapter 6 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 GRP 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.

<< Go Back

GRP Comment Form

Mail Completed Form to:

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

Washington State Department of Ecology
Spills Program (GRPs)
P.O. Box 47600
Olympia, WA 98504-7600

Today's Date: _____

Your Name: _____

Title: _____

Company/Agency: _____

Address: _____

City: _____

State/Province: _____ Zip: _____

Email: _____ Ph: _____

GRP Page Number: _____ Section or Paragraph: _____

Comment(s): _____

<< Go Back

CHAPTER 2

Site Description

2.1 CHAPTER INTRODUCTION

This chapter provides a description of the physical features, hydrology, climate, and winds, found along the Middle Columbia River (MCR) corridor and includes an overview of the oil spill risks in the region. The Columbia River travels 1,243 miles, originating in British Columbia, Canada and running through Washington, providing a border between Washington and Oregon before eventually entering the Pacific Ocean. Although the Columbia River originates in Canada, the NOAA river mile system used in these geographic response plans (GRPs) begins at the confluence of the river with the Pacific. The Lower Columbia River Geographic Response Plan (LCR-GRP) starts at river mile one and ends at the base of the U.S. Army Corps of Engineers (USACE) Bonneville Lock and Dam located at river mile 145.4. The Middle Columbia Region begins at river mile 145.4 on the upstream side of the Bonneville Lock and Dam and is subdivided into four separate GRPs, each a specific pool created by one of four USACE dams in the region: Bonneville, The Dalles, John Day, and McNary.

The MCRD-GRP encompasses The Dalles Pool (a.k.a. Lake Celilo), and covers a 25 mile reach of the Columbia River, continuing to run east from just upstream of The Dalles Lock and Dam (located at river mile D-191.6) to the John Day Lock and Dam (located at river mile J-216.4). The Dalles Pool is bordered by Klickitat County on the Washington side of the river, Wasco and Sherman counties on the Oregon side.

2.2 PHYSICAL FEATURES

Volcanic activity built up a stratum of mud, ash, and lava in the geologic column in the area now known as eastern and central Washington and Oregon during the Eocene (55.8-33.9 million years ago), Oligocene (33.9-23 million years ago), and Miocene (23-5.3 million years ago) Epochs.[1] [2] Basalt flows then covered the area in layers, forming a strong foundation of basaltic rock. Subsequent lava and ash eruptions raised the Cascade Mountains during the Miocene Epoch, and the mountains began to lift when hundreds of volcanoes erupted during the Pleistocene Epoch (2.6 million – 11,700 years ago). As the mountains rose, the Columbia River carved out a deep gorge. Towards the end of the Pleistocene (~16,000-14,000 years ago) the Missoula floods battered the gorge over 100 times when the Missoula Lake was repeatedly breached, releasing high velocity debris-filled waters to a height of 900 feet and scouring the landscape with a discharge of 10 million

[1] http://www.columbiariverhighway.com/columbia_river_geologic_history.htm

[2] http://www.ucmp.berkeley.edu/cenozoic/cenozoic.php

cubic feet per second. This intense geomorphic action formed the sheer basalt cliffs that are now emblematic of the Columbia River Gorge National Scenic Area.[3] This series of events has been described as one of the greatest flood occurrences in the history of the earth.[4]

The nearly vertical cliffs of the Gorge are vulnerable to landslides, four of which occurred approximately 500 years ago, covering five square miles near Bonneville where they blocked the Columbia River and created a land bridge. The land bridge was located in the area of the current bridge known as "The Bridge of the Gods" and was perhaps the origin of the name, having been passed down through oral tradition. The dam formed by the land bridge created a lake of approximately the same size as the modern day Bonneville Pool, although within a few months the Columbia River breached this natural dam creating a flood 100 feet deep at Troutdale, OR. The Gorge is still susceptible to landslides; in 1984 two children were killed in a slide along Interstate 84 near Cascade Locks. In 1990 four highway workers were injured near Troutdale, and in 1996 a landslide in the Dodeson/Warrendale area of Oregon destroyed numerous homes, before sweeping across the railroad line and Interstate 84.[5] The features of this area continue to be shaped by landslides and the geomorphology of the Columbia River's flow.

The river runs through the eastern plateau/steppe and then cuts through the Cascade and Coastal Mountain Ranges before entering the Pacific Ocean with much of the Middle Columbia located within the Columbia River Gorge National Scenic Area. As a result of the changing landscape, the climate surrounding the river changes drastically. The western side of the Gorge includes rainforests with an average annual rainfall of 75 inches. It is a place rich in wildlife, with forests, lakes, streams, wetlands, and more waterfalls than any other part of the country. The eastern Gorge has an annual rainfall of less than 15 inches, consists of a shrub steppe ecosystem, and is a place of rock bluffs and rolling hills used for farming and ranching.

Humans have also had an impact on the Columbia River. Archaeological evidence shows that nomads were staying in the Gorge over 14,500 years ago, and that settlements were established as early as 11,230 years ago.[6] Well before the establishment of white settlements, the Native people had developed the largest trading center in the Northwest at the Long Narrows of The Dalles/Celilo Falls area. Celilo is believed to be the oldest continuously inhabited community on the North American continent.[7] The center linked a trade network that extended along the entire Pacific Coast and inland to the Great Plains. Native people living on the Columbia River received a variety of trade goods from all across the region, much of it received in return for one of their most prized

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[3] http://inside.mines.edu/UserFiles/File/Geology/Missoula.pdf pg. 16

[4] http://www.dnr.wa.gov/ResearchScience/Topics/GeologyofWashington/Pages/columbia.aspx

[5] http://www.oregongeology.org/sub/DERT/LandslideExamples.pdf

[6] Bureau of Indian Affairs, 2013.

[7] Dietrich, William (1995). *Northwest Passage: The Great Columbia River*. Seattle, Washington: University of Washington Press. p. 52. ISBN 0-295-97546-6.

resources — salmon. Salmon were central to the culture of the region's peoples, a part of their religious belief system, providing sustenance and trade goods. [8]

Europeans and Americans began exploring and trading in the Pacific Northwest in the late 18th and early 19th centuries. In 1792 Captain Robert Gray explored the lower river and named it for his ship, the Columbia Rediva. [9] In 1805 the Lewis and Clark Expedition traveled down the Snake and into the Columbia River, arriving at The Dalles/Celilo Falls area, which Clark noted as being a "great mart of trade".[10] Within the next 50 years numerous white settlements were established along the river by people following the Oregon Trail or arriving by ship via the Pacific Ocean. The earliest treaties were negotiated with the region's Native peoples in 1855, and by 1859 Oregon had become a state; Washington followed, with statehood granted in 1889. The first salmon cannery was established on the river in 1866. In 1873 the USACE began modifying the river to aid navigation by removing obstructions, and from 1876-1915 building canals.[11]

The USACE further shaped the Middle Columbia River into its current form through the construction of dams, beginning with the Bonneville Lock and Dam started in 1934 and completed in 1938, to the McNary Lock and Dam finished in 1957, The Dalles Lock and Dam finished in 1960, and the John Day Lock and Dam, completed in 1971.[12] The dams tamed the river's once notorious rapids and created the sub-sectional pools of the area. Fish lost due to the creation of the dams were ensured by the Mitchell Act (1938) to be replenished by the creation of hatcheries. The dams inundated many of the Native American's traditional fishing areas and in 1939, In-Lieu sites were promised to the affected Tribes to compensate for their losses.[13] The USACE began constructing In-Lieu sites in 1953 and as of the publishing of this document in 2015 there are 31 sites located in the area covered within the MCR.[14]

By taming the rapids, the dams allowed the river to function as an industrial transportation corridor, with ships running import containers and autos east from Portland, OR and Vancouver, WA through a series of locks up to the Tri-Cities area (Kennewick, Pasco, and Richland, WA), before continuing east via the Snake River to Lewiston, Idaho, where they eventually travel on to 43 states.[15] As of 2014, more than 4 million tons of petroleum products are received at terminals in

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[8] Ulrich, R. (2007). *Empty nets: Indians, dams, and the Columbia River* (2nd ed).

[9] Lewis & Clarks Journals http://frontiers.loc.gov/cgi-bin/query (2:527).

[10] Lewis & Clarks Journals http://frontiers.loc.gov/cgi-bin/query (2:527).

[11] Bureau of Indian Affairs, 2013.

[12] https://www.nwcouncil.org/energy/powersupply/dam-guide/dam

[13] Bureau of Indian Affairs, 2013.

[14] http://www.critfc.org/for-tribal-fishers/in-lieutreaty-fishing-access-sites/

[15] http://www.pnwa.net/new/Articles/Lower_Columbia_River_Ports.pdf

Portland each year with approximately half of that volume barged upriver to inland ports.[16] The river corridor also provides a route for the transport of grain from farms in the interior of the county to the river's gateway at the Pacific Ocean. The Columbia River is the number one export route in the nation for wheat and barley, number two for soybeans, and the third largest grain export gateway in the world.[17]

The dams also provide irrigation and flood control, important to an area with substantial farmland (grains and livestock), as well as hydroelectric power to Oregon and Washington. In addition, the Columbia River Gorge, renowned for its stunning beauty and spectacular history, supports tourism in the area, providing a wealth of recreational opportunities such as hiking, fishing, mountain biking, windsurfing, and kayaking.

Within the MCR, each pool has its own unique attributes and communities. The Dalles Pool is 25 miles long, has a capacity of 330,000 acre/feet.[18] The western half of the pool forms the eastern end of the Columbia River Gorge National Scenic Area.[19] Prior to the creation of the reservoir, this section of the river contained Celilo Falls, one of the numerous rapids that were formerly characteristic of the Middle Columbia. The construction of the dams raised the water level of the river above the geologic falls formation, leaving it submerged. The falls were an important traditional fishing location for the tribes and although submerged, the site remains a place of integral cultural value.[20] There is very little development in the area surrounding The Dalles Pool. Located in the transition zone of the Gorge, between the eastern steppe and the western rain forests, the area serves primarily as a transportation, and salmon, corridor. Along with the river itself, there are highways on either bank, with the Sam Hill Memorial Bridge (Highway 97) spanning the Columbia connecting Central Washington to Central Oregon. Located on the Washington side are the small communities of Wishram and Maryhill, with Celilo Village, Biggs Junction, and Rufus on the Oregon side of the river. Celilo Village is the modern incarnation of the ancient tribal settlement sites that surrounded the falls prior to their inundation by the reservoir.

Despite the diverse change in scenery surrounding the river through each of its various pools, the shoreline habitats remain relatively consistent over the course of the MCR. They can be characterized as: exposed rocky headlands, wave-cut platforms, pocket beaches along exposed rocky shores, sand beaches, sand and gravel beaches, sand and cobble beaches, sheltered rocky shores, and sheltered marshes.[21]

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[16] http://graphics.thomsonreuters.com/F/12/US_CSFACT1210.pdf

[17] http://www.portoflongview.com/Portals/0/Documents/Columbia_River_Channel_Deepening.pdf

[18] http://www.ecy.wa.gov/programs/wr/cwp/images/pdf/wtrbud/dalles.pdf

[19] https://www.nwasco.com/client/pdfs/Exhibit%20E.pdf (pg. 1-2)

[20] http://www.critfc.org/salmon-culture/tribal-salmon-culture/celilo-falls/

[21] http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_tropical.pdf

<< Go Back

2.3 HYDROLOGY

The Columbia River is the fourth largest river in North America and the largest in the Pacific Northwest. It originates in Columbia Lake, high in the Canadian Rockies, where it first travels northwest, and then turns south entering the US in Washington, where it eventually turns west and forms the border between Washington and Oregon before flowing into the Pacific Ocean.[22] The river travels a total of 1,243 miles, providing drainage for approximately 258,000 sq. miles of the Western United States and British Columbia, with numerous tributaries, both rivers and creeks, adding to the flow along the way. [23]

The flow of water in the MCR-GRP's 200 mile reach of the Columbia River is controlled by dam outflows within each pool. The Dalles Pool has an average elevation of 158 feet above mean sea level.[24] The main tributary river feeding into The Dalles Pool is the Deschutes River located on the Oregon side. On the Washington side, there are several creeks draining into the pool which forms part of the Klickitat Watershed, WRIA 30.[25] On the Oregon side, The Dalles Pool is adjacent to the Hood River and Deschutes watersheds.

2.4 CLIMATE AND WINDS

The West-East corridor of the Columbia Gorge through the Cascade mountain range creates a climate interaction between the Washington/Oregon coasts and the interior of the states. Due to the geologic formations and the atmospheric pressure imbalance surrounding this area, strong wind is frequently channeled through the Gorge year round. These conditions, in addition to the scenic surroundings, have made the Gorge a renowned sporting destination for windsurfing.[26] In the summer, the wind comes predominately from the west, while during the winter it will oscillate between east and west. This channeled Gorge wind is a conduit for air temperature in the surrounding regions as it funnels warm maritime air inland, and cold interior wind towards the coast.[27]

Western winds carrying moisture in the air from the Pacific are pushed up against the Coast Range, the Olympic Mountains, and finally the Cascade mountains, creating a phenomenon known as a rain shadow. A rain shadow is an area on the leeward side of the mountains which is sheltered from the

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[22] http://geonames.usgs.gov/apex/f?p=gnispq:3:0::NO::P3_FID:1140014

[23] http://pubs.usgs.gov/of/1987/ofr87-242/

[24] http://www.nwp.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2043/Article/492595/the-dalles-lock-and-dam.aspx

[25] http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm

[26] http://www.nwp.usace.army.mil/Portals/24/docs/pubs/pamphlets/TDJDWCBrochure.pdf

[27] http://www.ocs.oregonstate.edu/county_climate/Morrow_files/Morrow.html

<< Go Back

rain, creating a distinct shift in climate.[28] As the air rises to pass over the mountains it expands and cools, releasing moisture in the form of precipitation on the western flanks. By the time these winds pass over the Cascades there is little moisture remaining, creating the shrub steppe ecosystem that is emblematic of Eastern Washington.

The Dalles Pool is on the eastern end of the transition zone, demarking the beginning of a much drier region than that of the downstream sections of the Columbia. The Dalles' mean annual temperature is 54°F, ranging from an average low of 35°F in January, to an average high of 74°F in July. Recorded temperature extremes include a low of -6°F and a high of 109°F. Mean precipitation is 14 inches with more than three quarters occurring between November and March. Annual snowfall is 11 inches, with more than half occurring in January.

2.5 TIDES AND CURRENTS

There are no tidally influenced areas within the MCR area. The river's flow is governed strictly by the various dams, with the USACE determining exactly when and how much water is allowed to pass through the spillways; there are no free-flowing waters.

2.6 RISK ASSESSMENT

The Columbia River is one of the principal resources found in the Pacific Northwest with a plethora of natural, cultural, and economic resources intrinsically connected to the river, all at risk of injury from oil spills. Potential risks to these resources include large commercial vessels, pipelines, roads, rail systems, and other factors.

Large Commercial Vessel Traffic

There is significant commercial movement through the Middle Columbia corridor which offers six separate port facilities, including the Ports of: Arlington, Hood River, The Dalles, Kennewick, Klickitat, and Skamania. The Dalles Lock reports "an average of 8 million tons of cargo, mostly grain and petroleum products, passing through each year."[29] Future oil movement along the Columbia River Vessel Route is estimated to reach 566 million gallons/yr (based on best annual estimates and 2013 data).[30] The potential for vessel collisions or groundings presents a significant spill risk. Large commercial vessels typically carry significant amounts of heavy and blended fuel oils and other petroleum products, increasing the risk for sensitive resources to be impacted if an oil spill incident were to occur.

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[28] http://usatoday30.usatoday.com/weather/tg/wrnshdw/wrnshdw.htm

[29] http://www.nwp.usace.army.mil/Portals/24/docs/pubs/pamphlets/TDJDWCBrochure.pdf pg. 3

[30] https://fortress.wa.gov/ecy/publications/publications/1508010.pdf

Road Systems

Vehicle traffic on roadways pose an oil spill risk in areas where they run adjacent to the shoreline, or cross over lakes, rivers, creeks, and ditches, that drain into the Columbia River. Several main highways run parallel to the river, including Highway 14 in Washington and Interstate-84 in Oregon. Within the MCR area there are six major highway bridges that cross the Columbia River, two that cross the Yakima River, and one that crosses the Snake River. In addition, there are approximately 30 smaller bridges or causeways where vehicles cross tributaries or small lakes on the shores of the Columbia. A vehicle spill onto one of these bridges or roadways can cause fuel or oil to flow from hardened surfaces into the Columbia River or its tributaries. Commercial trucks can contain hundreds to thousands of gallons of fuel and oil, especially fully loaded tank trunks, and may carry almost any kind of cargo, including hazardous waste or other material that would pose a risk to the environment. Smaller vehicle accidents pose a risk as well — commensurate to the volume of fuel and oil they carry.

Rail Transportation

Similar to the highways systems that run along much of the Columbia River, rail transportation runs closely parallel to the river banks throughout the Lower and Middle Columbia River areas. BNSF Railroad's Fallbridge Subdivision runs along the Columbia River on the Washington side, while Union Pacific's Portland Subdivision runs along the opposing bank in Oregon. These two major railroad companies employ mixed cargo trains that can carry hazardous materials on both of these lines, including Bakken crude oil from the east to refineries along the coast.

The majority of the transportation of oil by rail into Washington and Oregon enters Washington at the border with Idaho near Spokane. Once in Washington, oil trains cross the Spokane River, travel to Pasco, and then continue westward along the Columbia River through the Columbia River Gorge to Portland, OR and Vancouver, WA. After reaching the coast, oil trains are heading north through Tacoma and Seattle, WA towards refineries in Anacortes and Ferndale, WA near the Canadian border.[31] Prior to 2012, there was little to no transport of crude oil by rail to Washington or Oregon, as oil was traditionally transported by water via tanker or barge.[32] With the surge in production at the North Dakota Bakken oil fields, and oil sands coming from Canada, rail has become an option for transporting crude to refineries throughout the country.

Locomotives by themselves typically hold several thousand gallons of diesel fuel plus large quantities of lube and motor oils. Individual tank cars can contain just over 30,000 gallons of crude oil or other petroleum products. Trains can carry 3,000,000 gallons of oil in a unit train of 100 tank cars; at 42 gallons per barrel that equates to 71,428 barrels. In 2013, approximately 17 million barrels were shipped through Washington, increasing to somewhere in the vicinity of 55 million

[31] https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (320)

[32] Ecology data; rail data estimated based on refinery throughput data, ANT data, pipeline throughput for refineries, predicted volume transported by rail reported by refineries, and estimated increases in total crude transported through the state.

barrels in 2014.[33] These numbers are only predicted to rise as facilities are improved or increased.[34]

The NuStar Energy facility in Vancouver, WA is planning on adding rail-offload capability and converting a 120,000 barrel methanol tank to store oil instead, allowing it to handle one crude-by-rail train approximately every three days.[35] Vancouver Energy is a facility proposed for the Port of Vancouver, which if approved, would initially handle one to two crude-by-rail trains per day, and would be capable of receiving up to four per day. When oil is transported by train it is usually carried by crude-by-rail unit trains, trains carrying 100 oil tank cars or more. Unit trains carrying crude oil are now commonly found travelling along the Columbia River. As of June 2014, nineteen loaded unit trains with Bakken oil were passing through the Middle Columbia River weekly.[36]

Oil Pipelines

Two pipeline terminals are located in the MCR area. The Tidewater pipeline terminal and the Tesoro Logistics NW pipeline terminal are both situated in the McNary Pool, on the eastern shore of the Snake River near the its confluence with the Columbia in Pasco, Washington. These facilities receive, store and distribute bulk liquid products such as gasoline, diesel, bio-fuels, fertilizer, and industrial/agricultural chemicals.[37] Along with the pipelines, the facilities are accessible by barge, rail, and truck. A spill from a pipeline, or one of the other associated modes of transporting petroleum products, has the potential to significantly impact sensitive resources in the area.

Aircraft

Several airports are located within the MCR area including the: Cascade Locks State Airport, Columbia Gorge Airport, Arlington Municipal Airport, and Tri-Cities Airport. Landing strips at these airports are used for recreational, commercial, and transit purposes. With airports in the area, the potential exists for aircraft failures during inbound or outbound flights that could result in a spill with a release of jet fuel to the Columbia River or its tributaries.

Recreational Boating

Accidents involving recreational water craft on the Columbia River have the potential to result in spills of anywhere from a few gallons of gasoline, up to hundreds of gallons of diesel fuel. Examples of such accidents include: collisions, a vessel grounding, catching on fire, sinking, or exploding.

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[33] http://www.Statesmanjournal.com/story/news/2014/05/26/west-coast-oil-trains/9605759/

[34] https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (460)

[35] https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (317)

[36] https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (320)

[37] http://tidewater.com/pasco

<< Go Back

These types of accidents, as well as problems with bilge discharges and refueling operations, the most typical types of spills to occur, have a negative impact on sensitive river resources.

Other Spill Risks

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

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<< Go Back

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<< Go Back

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<< Go Back

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<< Go Back

CHAPTER 3

THE DALLES POOL

Spill Response Options and Considerations

		Location			
		Horsethief Lake	Maryhill	Rufus	John Day Dam
Waterbody	Rivers	●	●	●	●
	Creeks	●	●	●	●
	Lakes	●	●	●	●
	Pool Area formed by Dam	●	●	●	●
	Tidally Influenced Areas				
	Wetland Area(s)	●	●	●	●
	Intermittent Streams (Seasonal Flow)	●	●	●	●
Potential Response Options	Source Control and Containment Activities	●	●	●	●
	Aerial / Vessel Surveillance Activities	●	●	●	●
	Wildlife Rescue and Rehabilitation Activities	●	●	●	●
	Collection for Skimming Operations *(Note: 1)*	●	●	●	●
	Vessel Based Skimming Operations *(Note: 2)*	●	●	●	●
	Shore Based Skimming Operations *(Note: 3)*	●	●	●	●
	Shoreside Protection Booming *(Note: 4)*	●	●	●	●
	Shoreside Cleanup Activities *(Note: 5)*	●	●	●	●
	In-Situ Burning ***Areas not pre-approved (Note: 8)***				
	Dispersant Use ***Areas not pre-approved(Note: 9)***				
Considerations	Shoreside Access can be Limited by Private Property				
	State or National Wildlife Refuge / Recreation Area	●	●	●	●
	Threatened/Endangered Terrestrial Species *(Note: 6)*		●		
	Public or Commercial Marina(s) in Area				
	Commercial Vessel Movement / Port Area	●	●	●	●
	Recreational Boat Traffic	●	●	●	●
	Tribal Lands or U and A Interests *(Note: 7)*	●	●	●	●
	Historic / Cultural District(s) in Area	●	●	●	
	Dam(s) in Area	●			●
	Interstate Highway Corridor	●	●	●	●
	Oil Movement by Rail in Area	●	●	●	●
	Oil Pipeline(s) in Area				

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.

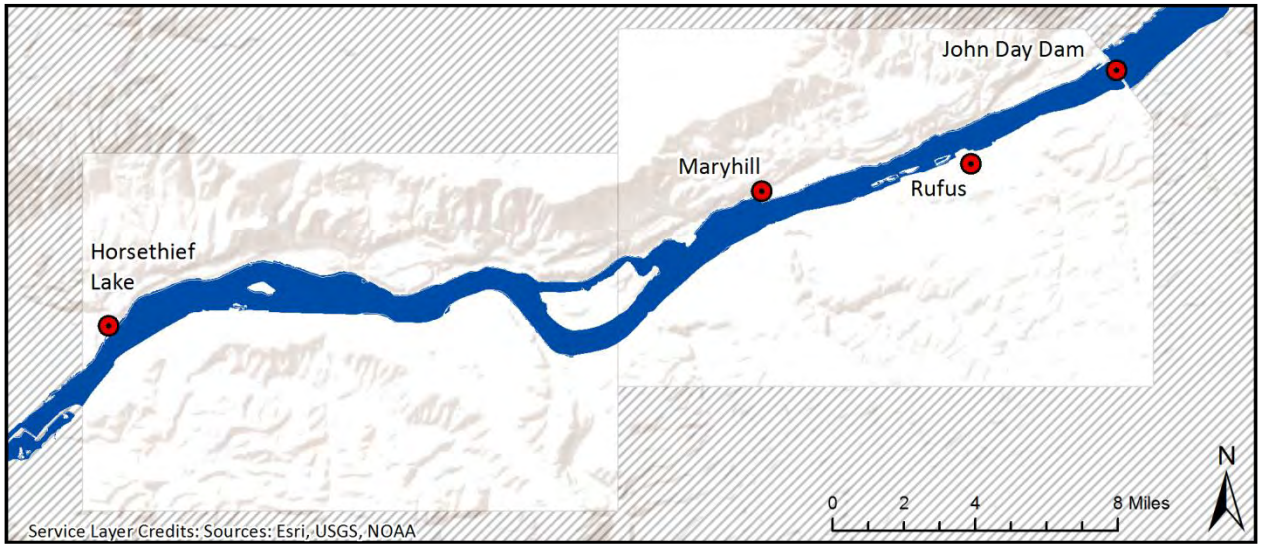
Note 5: Shoreside Cleanup options depend on safe and efficient access to locations and the type of river, creek, or stream bank present. Potential activities could include flooding, flushing, manual removal, vacuum, mechanical removal, sorbents, vegetation cutting, mechanical tilling/aeration, and/or 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: These areas are not pre-approved for the use of in-situ burning. Refer to the Northwest Area Contingency Plan for the dispersant Policy.

Note 9: These areas are not pre-approved for the use of dispersants. Refer to the Northwest Area Contingency Plan for the dispersant Policy.



<< Go Back

MIDDLE COLUMBIA RIVER

THE DALLES POOL

Geographic Response Plan

(MCRD-GRP)

CHAPTER 4

Response Strategies and Priorities

OCTOBER 2015

<< Go Back

Before you print this document

This chapter and its appendices, as well as the appendix at the end of Chapter 6, are provided in "landscape" page orientation. The detailed 2-page information sheets for each pool's response strategies, notification strategies, staging areas, and boat launch locations in appendices 4A though 4D (pages 75-202) have been designed for duplex printing (front and back side of paper), "open to top" configuration.

4.1 CHAPTER INTRODUCTION

This chapter provides information on GRP response strategies and the order (priority) they should be implemented, based on potential spill origin points and their proximity to sensitive resources. 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 downstream movement of oil and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting implementation priorities. Information on resources at risk, sensitive areas, and flight restrictions can be found in Chapter 6 of this plan. Information on protection techniques can be found in Appendix A. 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 river environment is the spilled oil likely to travel before response personnel will be ready and able to deploy GRP response strategies?
- Are 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, the Oregon State Police, 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 #3 (509) 575-2320
    - Washington State Patrol District #5 (360) 449-7909
    - Oregon State Patrol, The Dalles Area (541) 296-9646
    - See Local Government Contact Sheets Spill Response Contact Sheet1

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 4.1). 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.

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

4.1.2 Historical River Streamflow Ranges

Gauge/streamflow data from U.S. Geological Survey (USGS) was used to determine the mean monthly river discharge for the Columbia River and its tributaries. River discharge is recorded in cubic feet per second (cfs); velocities in miles per hour (mph). Table 4.1 provides information that can be used to calculate river velocities 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 on calculating river velocities can be found in the Northwest Area Contingency Plan Section 9302. Information on USGS river gauge readings can be found online at http://maps.waterdata.usgs.gov/mapper/index.html.

Table 4-2: Historical River Streamflow Ranges

Monthly Average Flow in Cubic Feet per Second (cfs)						
	Priest Rapids USGS 12472800	The Dalles USGS 14105700	Walla Walla USGS 14018500	Yakima USGS 12510500	Klickitat USGS 14113000	White Salmon USGS 14123500
Jan	114,000	168,000	1,120	4,190	2,090	1,510
Feb	109,000	171,000	1,250	4,820	2,400	1,600
Mar	104,000	180,000	1,390	4,920	2,370	1,610
Apr	126,000	224,000	1,280	5,140	2,340	1,540
May	164,000	285,000	880	5,800	2,500	1,590
Jun	187,000	295,000	402	4,460	1,920	1,300
Jul	148,000	202,000	52	1,760	1,190	919
Aug	111,000	148,000	23	1,560	846	723
Sep	75,300	105,000	43	1,850	749	636
Oct	78,100	109,000	71	2,170	792	652
Nov	93,100	128,000	308	3,020	1,040	868
Dec	110,000	153,000	771	3,530	1,450	1,180
Annual	**118,292**	**180,667**	**633**	**3,602**	**1,641**	**1,177**
MPH	0.5 mph	1.0mph		3.5 mph		

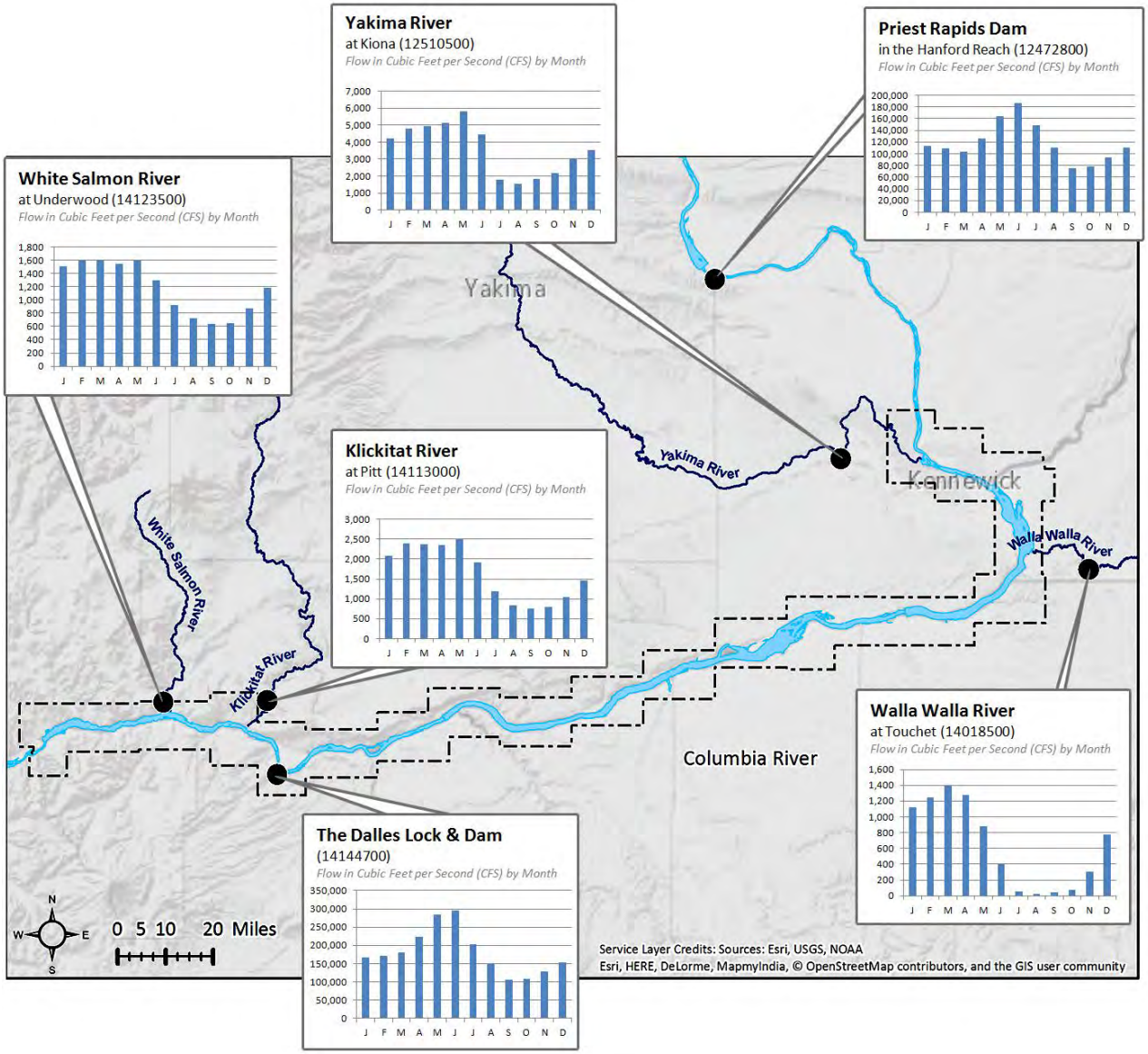


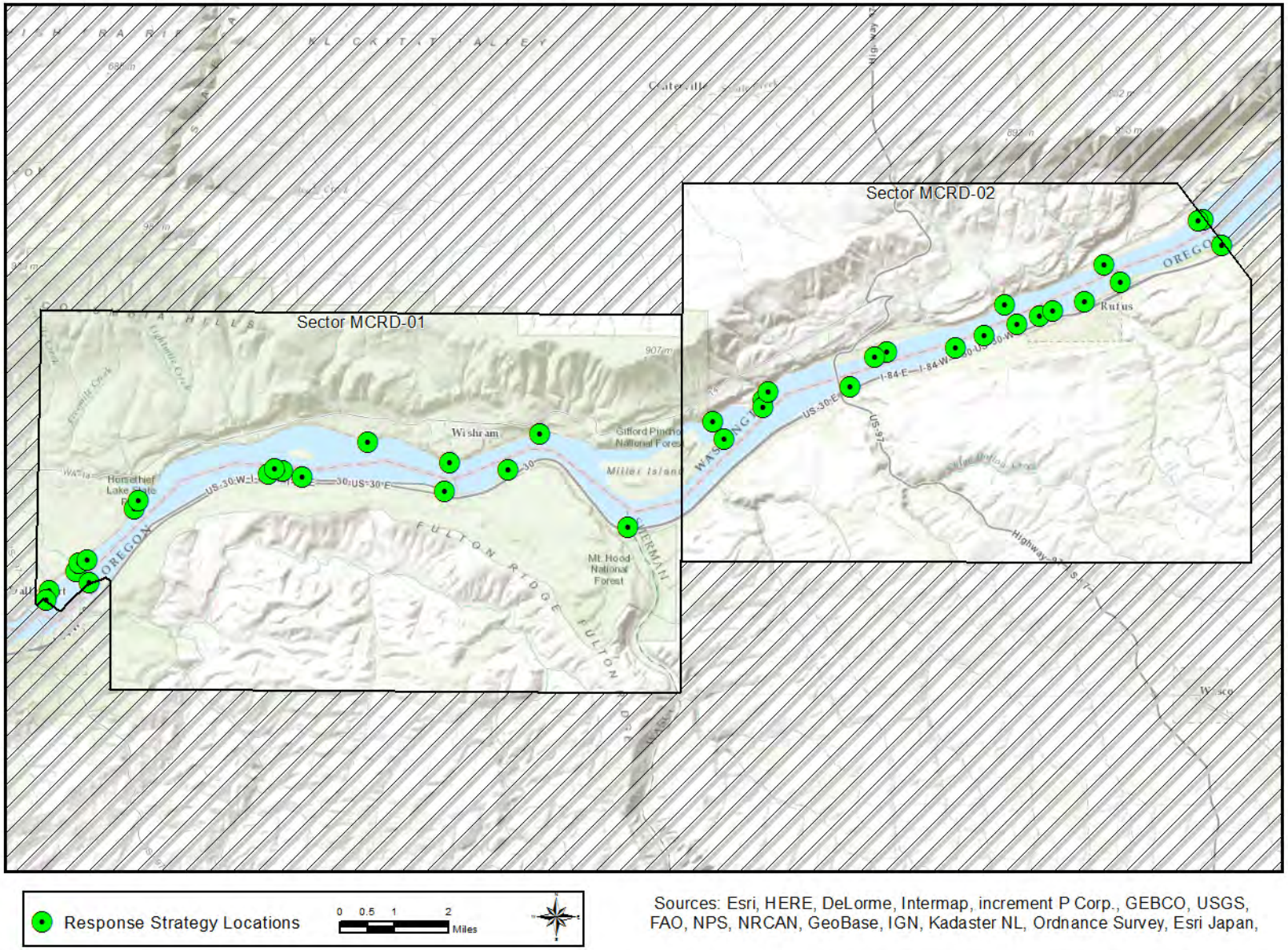
Figure 4-1: USGS Mean Monthly Discharge Measurements for Columbia River and Tributaries

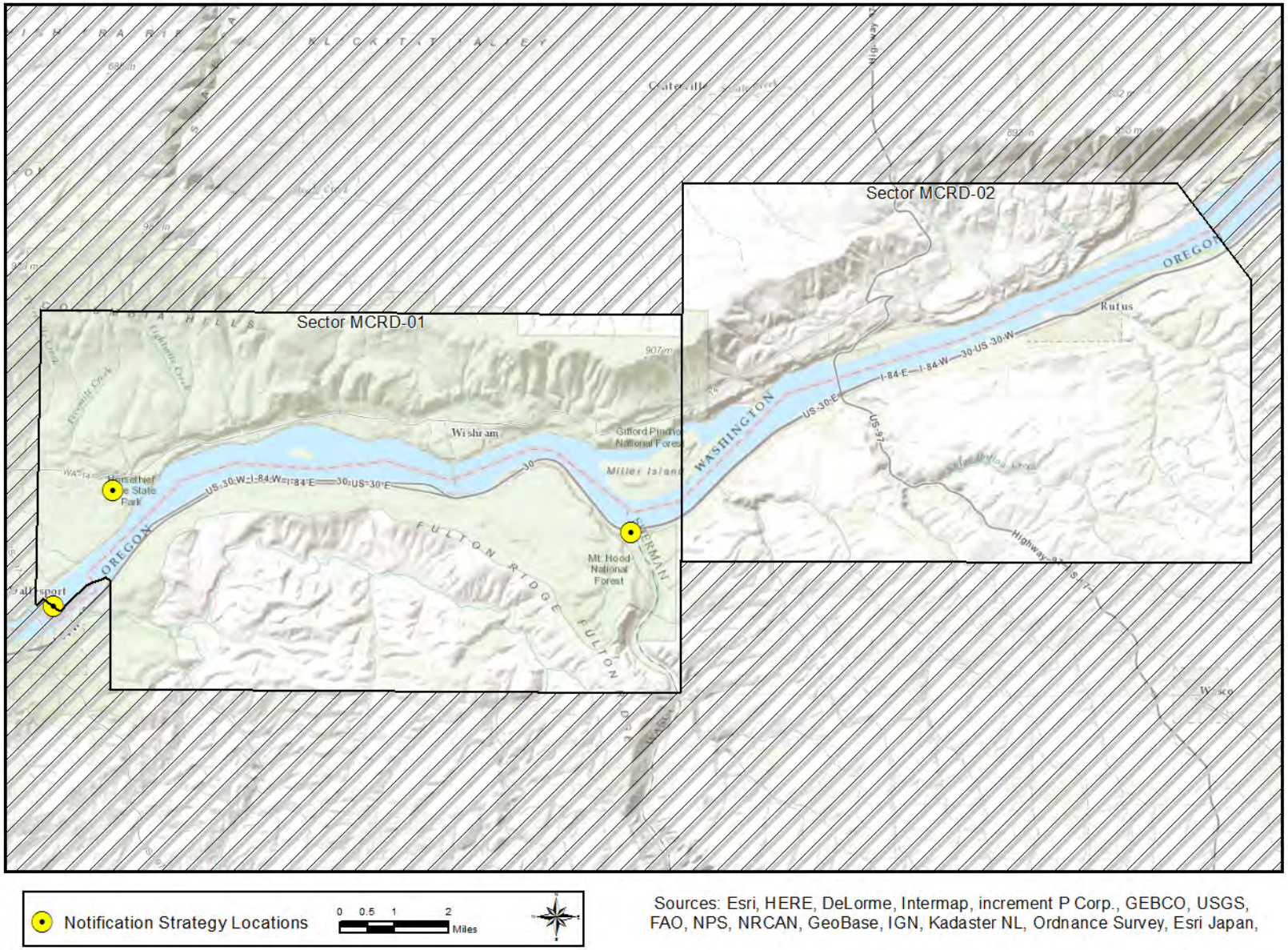
4.2 AREA OVERVIEW MAPS

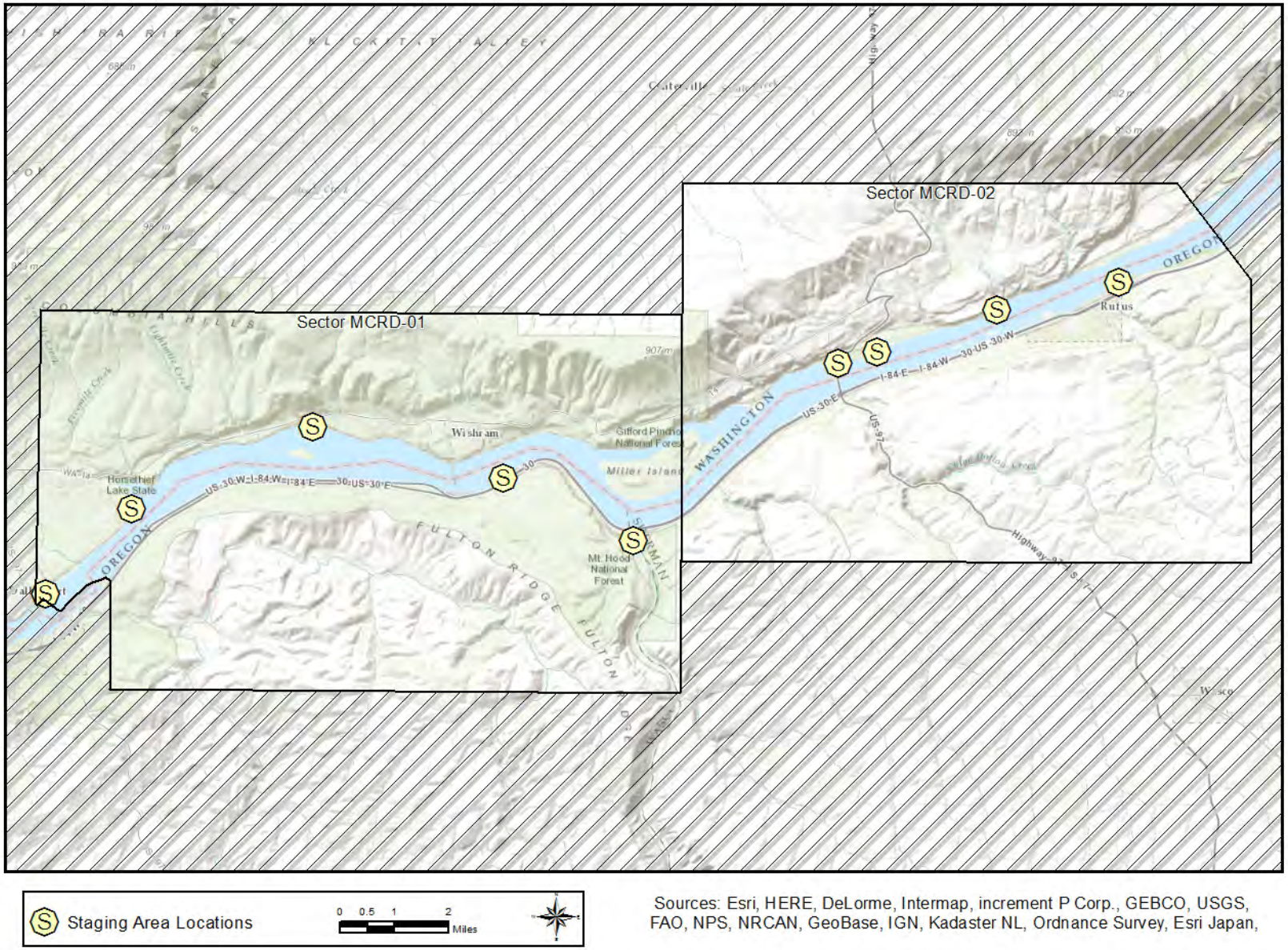
The following maps provide a geographic overview of the Middle Columbia River GRP area by pool. Sector maps in Section 4.4 of this chapter provide more detail on the location of response strategies, notification strategies, staging areas, boat launch locations, and potential oil spill origin points. 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.

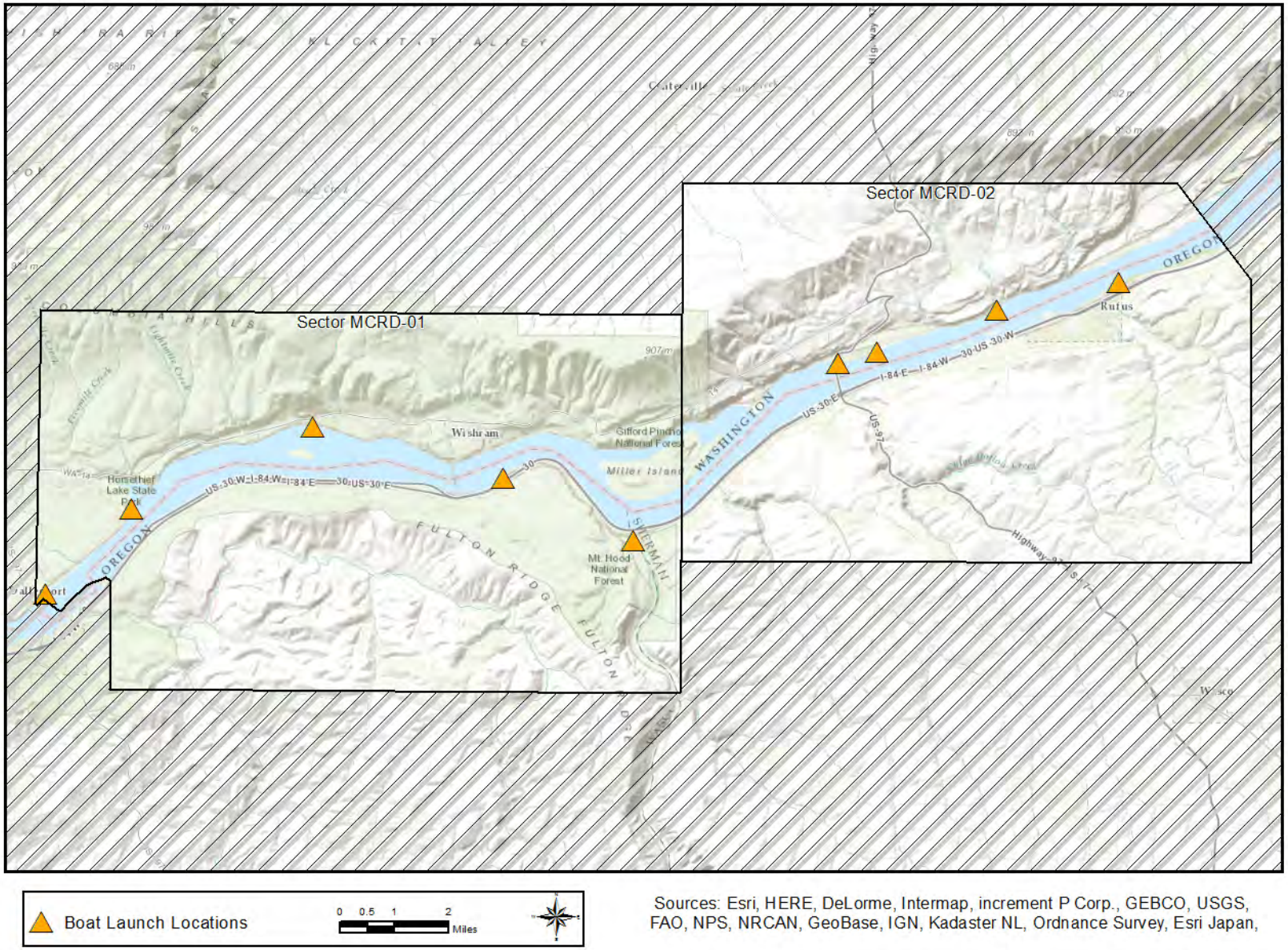
The following area maps are provided, by pool, for reference:

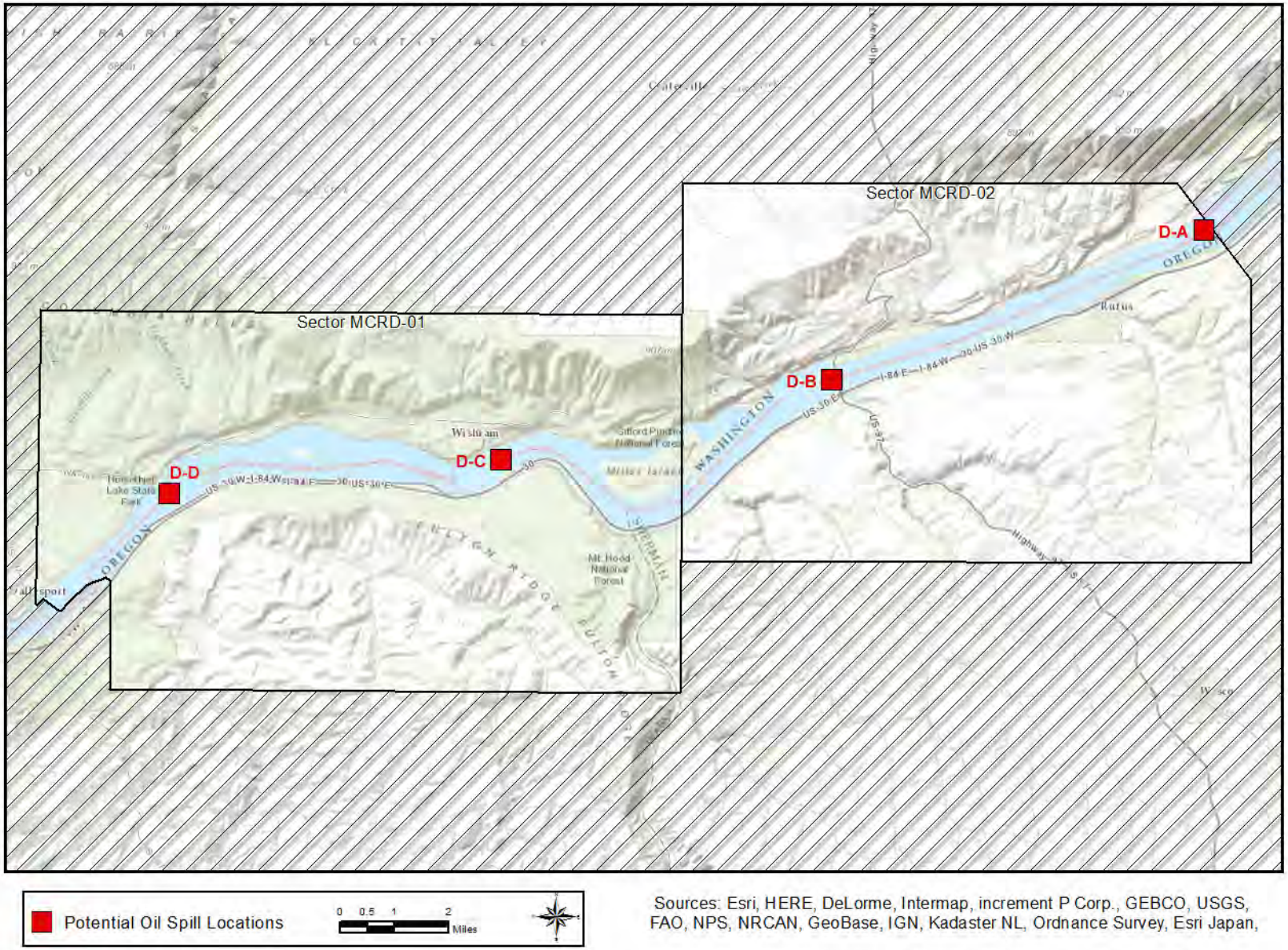
- Response Strategy Locations
- Notification Strategy Locations
- Staging Areas
- Boat Launch Locations
- Potential Oil Spill Origin Points


Sector MCRD-01
Sector MCRD-02
Wishram
Rufus
Mt. Hood National Forest
Response Strategy Locations
0 0.5 1 2 Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector MCRD-01
Sector MCRD-02
Wishram
Rufus
Mt. Hood National Forest
Miller Island
WASHINGTON
OREGON
FULTON RIDGE
Notification Strategy Locations
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector MCRD-01
Sector MCRD-02
Wishram
Horsethief Lake State
Gifford Pinchot National Forest
Miller Island
Mt. Hood National Forest
Rufus
OREGON
WASHINGTON
FULTON RIDGE
US-30-W
I-84-W
I-84-E
US-30-E
US-97
Staging Area Locations
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector MCRD-01
Sector MCRD-02
Wishram
Horsethief Lake State Park
Gifford Pinchot National Forest
Miller Island
Mt. Hood National Forest
Rufus
OREGON
WASHINGTON
FULTON RIDGE
Boat Launch Locations
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector MCRD-01
Sector MCRD-02
D-A
D-B
D-C
D-D
OREGON
WASHINGTON
Wishram
Rufus
Mt Hood National Forest
Potential Oil Spill Locations
0 0.5 1 2
Miles
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 in The Dalles Pool.

- Safety is always the number one priority. Do not implement GRP strategies or take actions that will unduly jeopardize public, worker, or personal safety.
- Notify local public health and safety personnel.
- 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.
- Determine the priority or order GRP strategies should be implemented based on the location of the spill or affected area. Priorities based on Potential Oil Spill Origin Points (POSOPs) are included in this chapter and should be used unless the situation or circumstances dictate otherwise (see Section 4.3.2).
- As response resources become available, implement the GRP Strategies in order of priority.
- 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).

4.3.2 Strategy Priorities based on Potential Oil Spill Origin Points

POSOPs are geographic locations that have a defined list of response strategy implementation priorities are provided in a table within Section 4.3. The placement of each POSOP is often based on spill risks in the area, including oil pipelines, railways, highways/roadways, tributaries, and vessel movements. Intersections of two or more of these risk locations typically represent a higher spill risk than any one individually, increasing the probability of an oil spill. Occasionally POSOPs are generalized to ensure implementation priorities are developed throughout an entire planning area.

These points are displayed on area overview and sector maps as red boxes. In establishing response priorities during a response, or selecting an appropriate POSOP, the downstream and/or tidal 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

<< Go Back

extent of the spill, with deployments continuing upstream towards the spill source and in some cases slightly beyond. PSOPs are alphabetically designated.

The following tables provide the strategy implementation order for Potential Oil Spill Origin Points in The Dalles Pool-GRP; example include, points D-A, D-B, D-C and D-D. These priority tables were determined using a combination of variables, including: notification time, travel time for responders and equipment, average and seasonal flow rates, average winds, tides or currents, deployment time, proximity to the spill source, and other considerations.

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

<< Go Back

Table 4-3: D-A (John Day Lock and Dam ~D-216.5)

D-A (John Day Lock and Dam~D-216.5)				
Implementation Priority	**Strategy Number**	**Sector Map (Page #)**	**Strategy Matrix (Page #)**	**Strategy Details (Page #)**
1	D-212.6R	55	64	133
2	D-213L	55	65	137
3	D-212.7M	55	64	135
4	D-213.3L	55	65	139
5	D-213.8L	55	65	141
6	D-214.5R	55	66	143
7	D-214.6L	55	66	145

<< Go Back

Table 4-4: D-B (I-84 Bridge Maryhill Area ~D-209)

D-B (I-84 Bridge Maryhill Area ~D-209)				
Implementation Priority	**Strategy Number**	**Sector Map (Page #)**	**Strategy Matrix (Page #)**	**Strategy Details (Page #)**
1	D-206.5R	55	61	113
2	D-206.6M	55	61	115
3	D-207.5M	55	62	117
4	D-207.6M	55	62	119
5	D-207.8R	55	62	121

<< Go Back

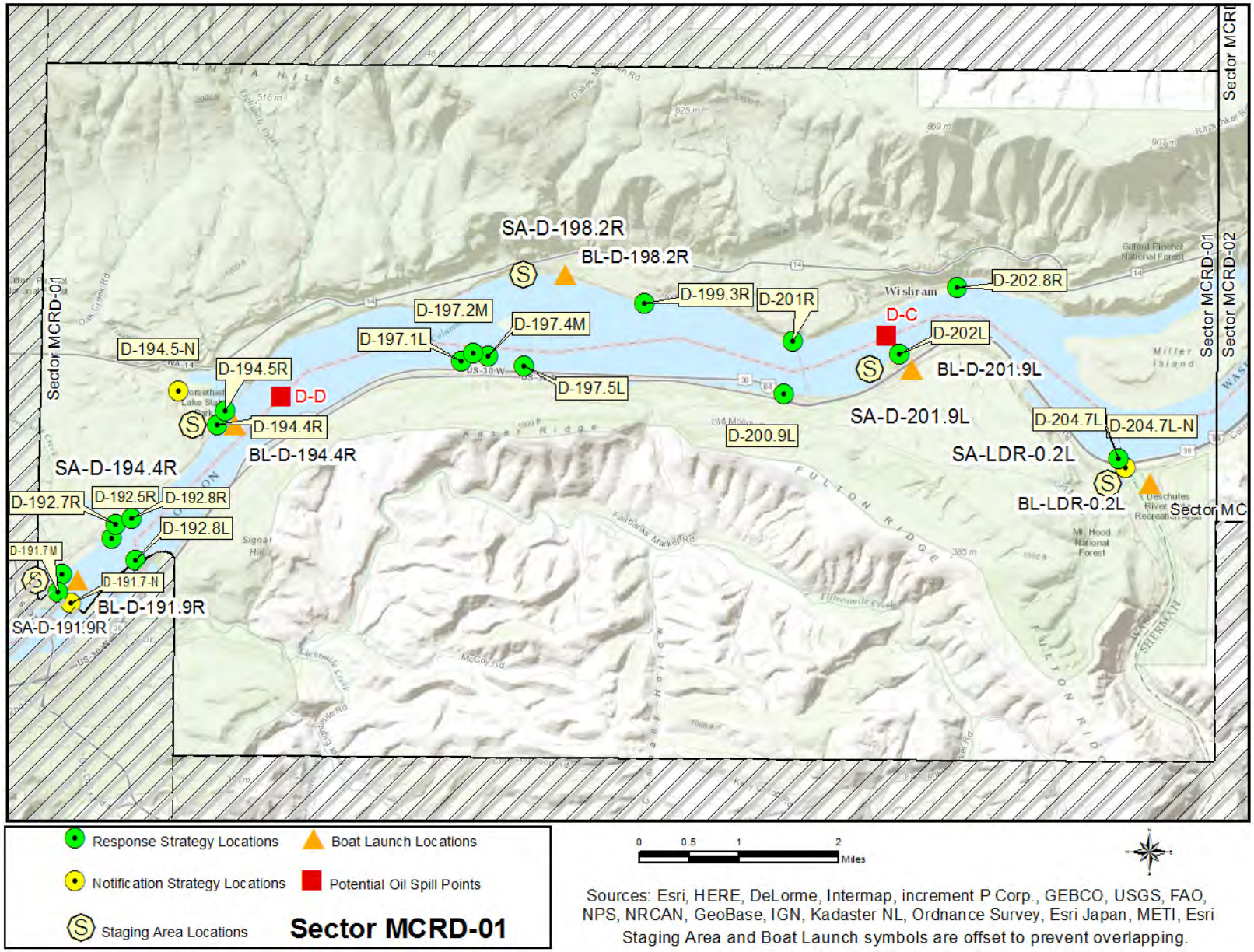
Table 4-5: D-C (Railroad Bridge/Wishram ~D-202)

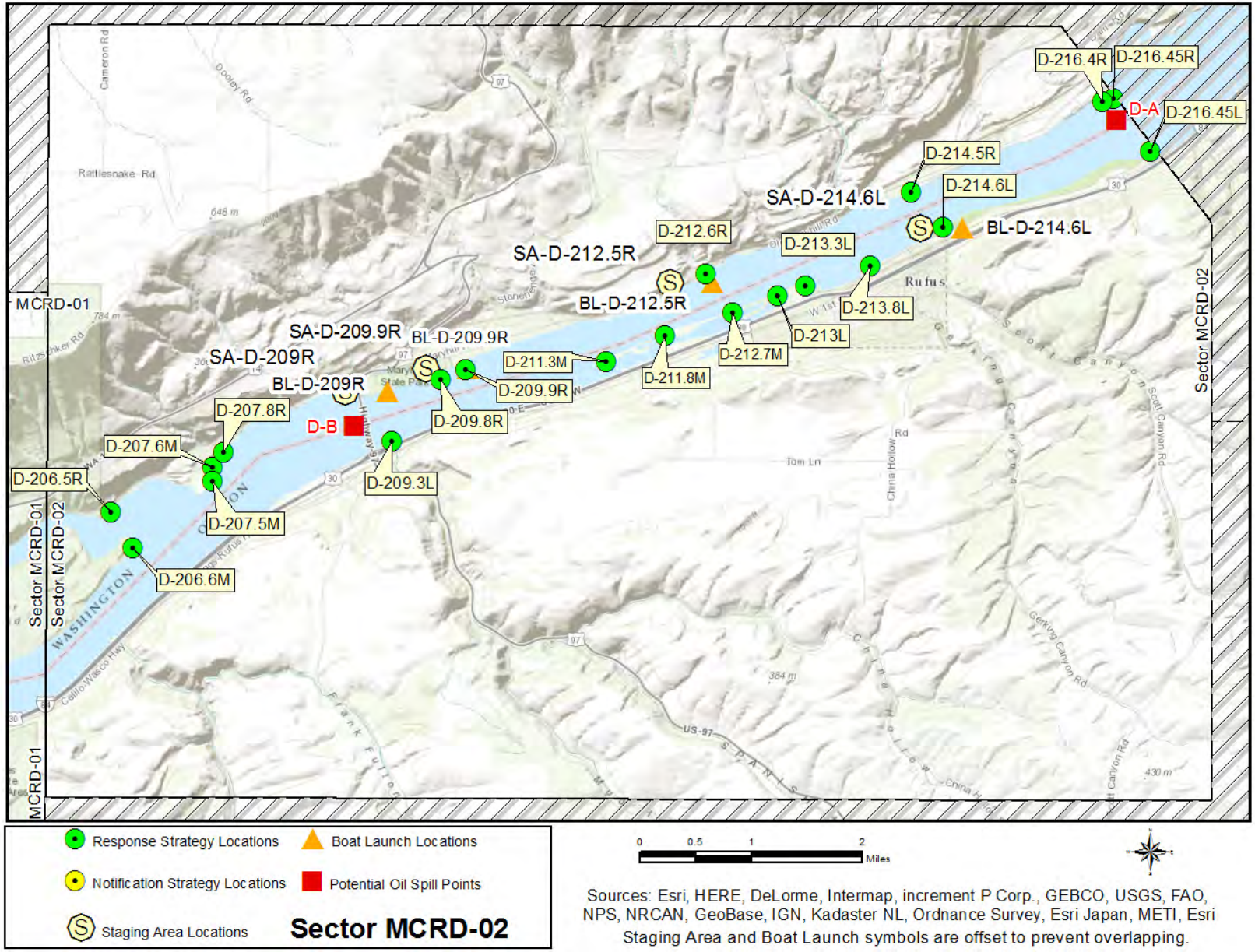
D-C (Railroad Bridge/Wishram ~D-202)				
Implementation Priority	**Strategy Number**	**Sector Map (Page #)**	**Strategy Matrix (Page #)**	**Strategy Details (Page #)**
1	D-199.3R	54	59	101
2	D-200.9L	54	60	103
3	D-201R	54	60	105
4	D-202L	54	60	107

<< Go Back

Table 4-6: D-D (Horsethief Lake Area ~D-195)

D-D (Horsethief Lake Area ~D-195)				
Implementation Priority	**Strategy Number**	**Sector Map (Page #)**	**Strategy Matrix (Page #)**	**Strategy Details (Page #)**
1	D-191.7M	54	57	77
2	D-191.9R	54	57	79
3	D-192.5R	54	57	81
4	D-192.7R	54	57	83
5	D-192.8L	54	58	85
6	D-192.8R	54	58	87

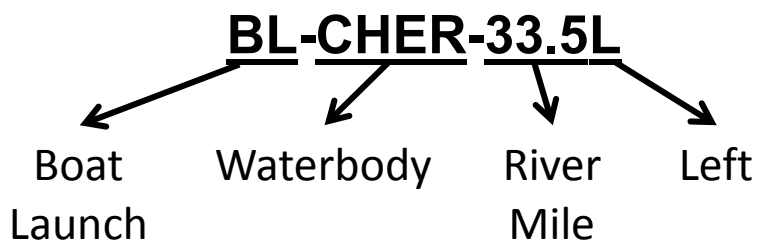

SA-D-198.2R
BL-D-198.2R
D-199.3R
D-201R
D-202.8R
D-197.2M
D-197.4M
D-197.1L
D-197.5L
D-C
D-202L
BL-D-201.9L
SA-D-201.9L
D-200.9L
D-194.5-N
D-194.5R
D-D
D-194.4R
BL-D-194.4R
SA-D-194.4R
D-204.7L
D-204.7L-N
SA-LDR-0.2L
BL-LDR-0.2L
D-192.7R
D-192.5R
D-192.8R
D-192.8L
D-191.7M
D-191.7-N
BL-D-191.9R
SA-D-191.9R
Sector MCRD-01
Sector MCRD-02
Sector MCR
Sector MC
Response Strategy Locations
Boat Launch Locations
Notification Strategy Locations
Potential Oil Spill Points
Staging Area Locations
Sector MCRD-01
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri
Staging Area and Boat Launch symbols are offset to prevent overlapping.


D-216.4R
D-216.45R
D-A
D-216.45L
D-214.5R
D-214.6L
SA-D-214.6L
BL-D-214.6L
D-212.6R
D-213.3L
SA-D-212.5R
BL-D-212.5R
D-213.8L
D-213L
D-212.7M
D-211.8M
D-211.3M
SA-D-209.9R
BL-D-209.9R
SA-D-209R
BL-D-209R
D-209.9R
D-209.8R
D-209.3L
D-B
D-207.8R
D-207.6M
D-207.5M
D-206.5R
D-206.6M
MCRD-01
Sector MCRD-01
Sector MCRD-02
Rufus
WASHINGTON
Response Strategy Locations
Boat Launch Locations
Notification Strategy Locations
Potential Oil Spill Points
Staging Area Locations
Sector MCRD-02
0 0.5 1 2 Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri
Staging Area and Boat Launch symbols are offset to prevent overlapping.

4.5 MATRICES

4.5.1 Naming Conventions (Short Names)

Each strategy, staging area, and boat launch location in this document has been given a unique "Short Name" which includes one to six letters denoting the associated waterbody. Following the letters are numbers that specify the location. On rivers or other linear waterbodies, the location is named by river mile: the distance from the mouth of the river or creek upstream to the site location. Some short names indicate whether the site is located on river right, river left, or mid-river by an "R", "L" or "M" after the river mile. On lakes, the numbers indicate the location by shoreline mile, typically starting at the northernmost point and increasing clockwise around the lake. In marine areas, the numbers do not have a geographic meaning. Notification strategies are indicated by an "-N" at the end of the name. Staging Areas and Boat Launches are indicated by the prefix "SA" or "BL".



Associated river body short name designations used within the Middle Columbia include:

B=Bonneville Pool	SIH=Snake River/Ice Harbor Pool	WWR=Walla Walla River	L = River Left
D=The Dalles Pool	WIND=Wind River	YAK=Yakima River	R = River Right
J=John Day Pool	LDR=Lower Deschutes River	N = Notification Strategy	M = River Middle
M=McNary Pool	JDR=John Day River	SA = Staging Area	
MSN=McNary Pool/Snake River	RC=Rock Creek	BL = Boat Launch	

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#)
D-191.7M	The Dalles North Fish Ladder 45.61552 -121.13647	Exclusion	Boom 100ft	Yes	Onsite Stage at SA-D-191.9R/ The Dalles Dam N Shore	Fish Ladder(s)	Contact The Dalles control room for access (541) 298-7505. Launch at BL-D-191.9R/ The Dalles Dam N Shore	54	77
D-191.9R	The Dalles Lock 45.61807 -121.13557	Collection	Boom 600ft	Yes	Onsite Stage at SA-D-191.9R/The Dalles Dam N Shore	Downstream Resources, Lock and Dam	Launch at BL-D-191.9R/ The Dalles Dam N Shore	54	79
D-192.5R	Just downriver from Spearfish Lake (FBS MP-97) 45.62332 -121.12540	Collection	Boom 1000ft	Yes	Onsite Staging onsite, must pass through locked gate and Port of Klickitat land to reach location of strategy on USACE land	Downstream Resources, Economic Resource, Sensitive Resources Nearby, Waterfowl and Shorebird Concentrations	Launch from BL-D-194.4R/ Horsethief SP	54	81
D-192.7R	Little Spearfish Lake 45.62550 -121.12449	Exclusion	Boom 100ft	Yes	Remote Stage from SA-D-194.4R/ Horsethief SP	Turtles, Waterfowl Concentrations	Launch from BL-D-194.4R/ Horsethief SP	54	83

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-192.8L	The Dalles S Fish Ladder 45.62018 -121.12023	Exclusion	Boom 200ft	Yes	Onsite Stage at Patterson Park beside fish ladder	Fish Ladder(s)	Launch from BL-D-191.9R/The Dalles Dam N Shore. Call The Dalles Dam control room at (541) 298-7505 prior to implementing strategy	54	85
D-192.8R	Little Spearfish Lake 45.62626 -121.12121	Deflection	Boom 700ft	Yes	Remote Stage at SA-D-194.4R/ Horsethief SP	Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations	Launch at BL-D-194.4R/ Horsethief SP	54	87
D-194.4R	Horsethief State Park (FBS MP-98.5) 45.64006 -121.10344	Collection	Boom 1000ft	Yes	Onsite Stage on site at SA-D-194.4R/ Horsethief SP	State Park, Waterfowl and Shorebird Concentrations	Launch on site at BL-D-194.4R/ Horsethief SP	54	89
D-194.5R	Horsethief Lake culvert 45.64216 -121.10189	Exclusion	Boom 100ft	Yes	Onsite Stage on site at the boat launch on the lake	Recreational Use Area, State Park, Waterfowl Concentrations	Launch on site at Horsethief Lake boat launch on the lake	54	91

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-197.1L	Left bank SW of Browns Island 45.64967 -121.05270	Deflection	Boom 500ft	Yes	Remote Avery Recreation Area (SA-D-198.2R)	Bald Eagle, Herons, Waterfowl and Salmonid Concentrations and Habitat	Launch boat from Avery Recreation Area (BL-D-198.2R)	54	93
D-197.2M	W end of island SW of Browns Island 45.65091 -121.05036	Deflection	Boom 500ft	Yes	Remote Avery Recreation Area (SA-D-198.2R)	Bald Eagle, Herons, Sensitive Resources Nearby, Waterfowl and Shorebird Concentrations	Launch boat from Avery Recreation Area (BL-D-198.2R)	54	95
D-197.4M	E end of island SW of Browns Island 45.65044 -121.04717	Deflection	Boom 500ft	Yes	Remote Avery Recreation Area (SA-D-198.2R)	Bald Eagle, Herons, Waterfowl and Shorebird Concentrations	Launch boat from Avery Recreation Area (BL-D-198.2R)	54	97
D-197.5L	Impounded pond shoreline South of Browns Island 45.64894 -121.03968	Deflection	Boom 500ft	Yes	Remote Avery Recreation Area (SA-D-198.2R)	Bald Eagle, Herons, Waterfowl and Shorebird Concentrations	Launch boat from Avery Recreation Area (BL-D-198.2R)	54	99
D-199.3R	Avery Road (FBS MP-103.6) 45.65832 -121.01470	Collection	Boom 1000ft	Yes	Onsite Stage on site	Downstream Resources, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-D-198.2R/ Avery	54	101

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-200.9L	I-84 Railroad Overpass 45.64523 -120.98562	Collection	Boom 500ft	Yes	Onsite Can stage small amount of equipment on the gravel road.	Downstream Resources	Launch boat from Celilo Park (BL-D-201.9L)	54	103
D-201R	Railroad Bridge 45.65284 -120.98374	Deflection	Boom 500ft	Yes	Remote Stage equipment at Celilo Park	Sensitive Resources, Waterfowl and Shorebird Concentrations	Launch boat from Celilo Park (BL-D-201.9L)	54	105
D-202L	Celilo Park 45.65109 -120.96150	Deflection	Boom 1000ft	Yes	Onsite Plenty of staging available onsite at Celilo Park	Public Recreation Site/Area, Salmonid Concentrations and Habitat	Launch boat onsite at Celilo Park (BL-D-201.9L)	54	107
D-202.8R	Wishram (FBS MP-106.9) 45.66084 -120.94945	Collection	Boom 1000ft	Yes	Onsite Staging at train yard, call BNSF at (800) 832-5452 for access (must have appropriate PPE), or SA-D-201.9L/ Celilo Park	Downstream Resources, Raptors, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-D-201.9L/ Celilo Park	54	109

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-204.7L	Mouth of the Deschutes River 45.63597 -120.91569	Deflection	Boom 600ft	Yes	Remote Stage at SA-LDR-0.2L/ Heritage Landing	Public Recreation Site/Area, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations	Launch from BL-LDR-0.2L/ Heritage Landing	54	111
D-206.5R	WA shore across from Miller Island 45.66429 -120.88339	Collection	Boom 1000ft	Yes	Onsite Stage on site, gravel road but lots of room for parking and gravel ramp to water's edge.	Downstream Resources, Sensitive Resources Nearby, Waterfowl Concentrations	Launch upstream at BL-D-209R/ Maryhill West (In-lieu site call BIA to notify)	55	113
D-206.6M	Miller Island 45.65955 -120.87925	Deflection	Boom 1000ft	Yes	Remote Stage at SA-LDR-0.2L/ Heritage Landing	Bald Eagle Nesting, Fish and Wildlife Resources, Great Blue Heron Rookeries, Sensitive Resources Nearby, Waterfowl Concentrations	Launch from BL-LDR-0.2L Heritage Landing	55	115

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-207.5M	Bob's Point 45.66826 -120.86450	Deflection	Boom 1000ft	Yes	Remote Staging is at SA-D-209R/ Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission)	Riparian Habitat, Sensitive Resources	Launch upstream at BL-D-209R/ Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission enforcement to notify)	55	117
D-207.6M	Bob's Point channel 45.67010 -120.86457	Exclusion	Boom 500ft	Yes	Remote Staging is 900' upriver at site for D-207.8R	Waterfowl and Shorebird Concentrations	Launch upstream at BL-D-209R/ Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission enforcement to notify)	55	119
D-207.8R	Just upstream of Bob's Point (FBS MP-111.5) 45.67213 -120.86253	Collection	Boom 1000ft	Yes	Onsite Stage on site	Downstream Resources, Riparian Habitat	Launch upstream at BL-D-209R Maryhill West (In-lieu site call BIA to notify)	55	121
D-209.3L	Spanish Hollow Creek 45.67359 -120.83122	Exclusion	Sorbent 120ft	Yes	Remote Stage at SA-D-209.9R/ Maryhill State Park	Riparian Habitat, Salmonid Concentrations and Habitat	Launch at BL-D-209.9R/ Maryhill State Park	55	123

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-209.8R	Maryhill State Park 45.68168 -120.82204	Deflection	Boom 600ft	Yes	Onsite Stage on site at SA-D-209.9R/ Maryhill State Park. Contact park staff in case they need to close to the public	Recreational Use Area, Riparian Habitat, Sensitive Resources Nearby, State Park	Launch on site at BL-D-209.9R/ Maryhill State Park	55	125
D-209.9R	Maryhill State Park boat launch 45.68308 -120.81749	Collection	Boom 1000ft	Yes	Onsite Stage on site at SA-D-209.9R/ Maryhill State Park	Boat Launch/Ramp, Downstream Resources, Recreational Use Area, Riparian Habitat, Sensitive Resources Nearby, State Park	Launch on site at BL-D-209.9R/ Maryhill State Park	55	127
D-211.3M	Downstream SW of Rufus 4 45.68412 -120.79139	Diversion	Boom 1000ft	Yes	Remote Stage at SA-D-209.9R/ Maryhill State Park	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)	Launch boat from Maryhill State Park (BL-D-209.9R)	55	129

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-211.8M	Downstream SW of Rufus 3 45.68748 -120.78045	Exclusion	Boom 700ft	Yes	Remote Stage at SA-D-209.9R/ Maryhill State Park	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)	Launch boat from BL-D-209.9R/ Maryhill State Park	55	131
D-212.6R	Old Maryhill Road 45.69569 -120.77276	Collection	Boom 1000ft	Yes	Onsite Staging for a small vac truck on site	Downstream Resources	Primitive boat launch on site (BL-D-212.5R) or Maryhill State Park (BL-D-209.9R)	55	133
D-212.7M	Downstream SW of Rufus 2 45.69057 -120.76783	Exclusion	Boom 300ft	Yes	Remote Stage at Giles French Park SA-D-214.6L	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)	Launch boat from Giles French Park BL-D-214.6L	55	135

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-213L	Downstream SW of Rufus 1 45.69275 -120.75942	Exclusion	Boom 500ft	Yes	Onsite Large gravel parking lots onsite.	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)	Launch boat from Giles French Park (BL-D-214.6L)	55	137
D-213.3L	Rufus Landing 45.69405 -120.75423	Collection	Boom 1000ft	Yes	Onsite Lots of area for staging on site, large gravel parking areas.	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)	Boat Launch from Giles French (BL-D-214.6L)	55	139
D-213.8L	Rufus 45.69673 -120.74221	Deflection	Boom 1000ft	Yes	Remote Giles French Park (SA-D-214.6L) Lots of staging just downstream at gravel parking lots.	Resident Warmwater Fish, Salmonid Concentrations and Habitat, Sensitive Resources Nearby, Waterfowl (Wintering and Production)	Launch boat from Giles French Park (BL-D-214.6L)	55	141

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-214.5R	Impounded pond SW of the John Day Lock and Dam 45.70635 -120.73467	Collection	Boom 1000ft	Yes	Onsite Stage equipment in large gravel area near collection point	Downstream Resources, Waterfowl and Shorebird Concentrations	Launch boat from Giles French Ramp (BL-D-214.6L)	55	143
D-214.6L	Giles French Boat Launch 45.70181 -120.72873	Collection	Boom 1000ft	Yes	Onsite Stage on site at SA-D-214.6L/Giles French	Boat Launch/Ramp, Downstream Resources	Launch on site at BL-D-214.6L/Giles French	55	145
D-216.4R	John Day Dam downstream lock 45.71825 -120.69906	Collection	Boom 800ft	Yes	Onsite Call the John Day Dam Control Room at (541) 298-9712 to have someone meet you at the gate to access the site.	Downstream Resources, Lock and Dam	Pre-notify the Dam Control Room at (541) 298-9712 for dam access. Launch at BL-D-214.6L/Giles French on the OR side unless you can get through the locks then launch at BL-J-216.5/ Railroad Island above the dam on the WA side	55	147

<< Go Back

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-216.45L	John Day Dam downstream S fish ladder in/out take 45.71177 -120.69005	Exclusion	Boom 100ft	Yes	Onsite Call the Dam Control room to get access to the dam (541) 298-9712. Parking is available close to strategy location	Fish Ladder(s)	Pre-notify the John Day Dam Control Room at (541) 298-9712 for dam access. Launch at BL-D-214.6L/ Giles French	55	149
D-216.45R	John Day Dam downstream N Fish Ladder 45.71865 -120.69703	Exclusion	Boom 100ft	Yes	Onsite Call the John Day Dam Control Room at (541) 298-9712 to have someone meet you at the gate to access the site.	Fish Ladder(s)	Pre-notify the Dam Control Room at (541) 298-9712 for dam access. Launch at BL-D-214.6L/Giles French on the OR side unless you can get through the locks then launch at BL-J-216.5/ Railroad Island above the dam on the WA side	55	151

<< Go Back

4.5.3 Notification Strategy Matrices

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-191.7-N	The Dalles Lock and Dam Notification 45.61389 -121.13377	Notification	Lock and Dam	Notify Project management and take action to protect USACE property and resources, including the deployment, by USACE staff or response contractors, of GRP strategies. Strategies in The Dalles pool include: D-191.7M and D-192.8L, both exclusion strategies to protect the fish ladders on the upstream side of the dam, and D-191.9R a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the Bonneville pool, include: B-192.7M and B-192R to protect the fish ladders on the downstream side of the dam, as well as B-191.7R collection strategies at the lock.	Protection of fish ladders, closure of lock/spillway, deployment of GRP strategies	54	155
D-194.5-N	Horsethief Lake State Park 45.64501 -121.11163	Notification	Public Recreation Site/Area, State Park, Waterfowl Concentrations	Call Klickitat County Emergency Dispatch at (509) 773-4545 (24/7). Upon receipt of this call they will notify the Horsethief Lake State Park Manager who will direct personnel to deploy D-194.5R, an exclusion strategy at Horsethief Lake State Park. Once deployed, or if unable to deploy for any reason, a State Park representative will contact the WA ECY PREP Pager Duty Officer at (360) 923-6020. Implementation of D-194.5R by contractors is an alternative option.	Deploy exclusion strategy on Horsethief Lake	54	157

<< Go Back

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
D-204.7L-N	Heritage Landing Water Intake/Well 45.63466 -120.91431	Notification	Public Health and Safety, Water Intakes	Determine need to shut down water intake/well	Alert to need to monitor and potentially shut off transient, non-community well located less than 500 feet from river bank.	54	159
J-216.5-N	John Day Lock and Dam 45.71546 -120.69252	Notification	Lock and Dam	Notify Project management and take action to protect USACE property and resources, including the deployment, by USACE staff or response contractors, of GRP strategies. Strategies in The John Day pool include two exclusion strategies to protect the fish ladders on the upstream side of the dam, and a collection strategy for the E end of the lock. Strategies on the downstream side of the dam include D-216.4R on the W end of the lock, D-216.45L and D-216.45R for the fish ladders.	Protection of fish ladders, lock and/or spillway closure, deployment of GRP strategies	See the John Day Pool GRP	161

<< Go Back

4.5.4 Staging Area Matrices

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-D-191.9R	The Dalles Dam North Shore boat launch	45.61724 -121.13663	Dock Rd Dallesport, WA 98617	USACE The Dalles pool Natural Resource Manager The Dalles Dam, OR (541) 506-7819	D-191.7M, D-192.8L, D-191.9R	Lighted staging area with very large parking lot and a single concrete ramp, 5 degree grade and floating dock	54	165
SA-D-194.4R	Horsethief State Park	45.64014 -121.10407	8485 Highway 14 Lyle, WA 98635	Horsethief State Park Property Manager WA (509) 767-1159	D-192.8R, D-192.7R, D-194.4R	Large staging area with parking lots, grassy areas, restrooms, camping facilities.	54	167
SA-D-198.2R	Avery Recreation Area	45.66237 -121.03549	Avery Road Lyle, WA 98635	Columbia River Inter-Tribal Fish Commission Fishing Treaty In-lieu Site - Law Enforcement (800) 487-3474 Bureau of Indian Affairs Oversees Tribal In-Lieu Fishing Sites (503) 231-6702	D-197.1L, D-197.2M, D-197.4M, D-197.5L	Small gravel area for staging- reserved for tribal fishing at times throughout the year.	54	169
SA-D-201.9L	Celilo Park	45.64892 -120.96308	Celilo Park Road Dalles, OR 97058	Celilo State Park Property Manager OR (541) 506-7819	D-202.8R, D-201R, D-202L, D-200.9L	Good staging area with restrooms, grassy area and plenty of parking for vehicles and trailers.	54	171

<< Go Back

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-D-209R	Maryhill State Park West	45.68006 -120.83574	50 U.S. 97 Goldendale, WA 98620	Maryhill State Park Property manager (509) 773-5007	D-207.5M	Lighted, paved staging area with a single concrete ramp	55	173
SA-D-209.9R	Maryhill State Park	45.68311 -120.82076	50 SR 97 Goldendale, WA 98620	Maryhill State Park Property manager WA (509) 773-5007	D-209.3L, D-211.8M, D-209.8R, D-211.3M, D-209.9R	Paved and Grassed Areas	55	175
SA-D-212.5R	Maryhill East primitive boat launch	45.69441 -120.77543	Maryhill Hwy Goldendale, WA 98620	Bureau of Indian Affairs Oversees Tribal In-Lieu Fishing Sites (503) 231-6702 Columbia River Inter-Tribal Fish Commission Fishing Treaty In-lieu Site - Law Enforcement (800) 487-3474	D-212.6R	Primitive gravel boat launch and staging area	55	177
SA-D-214.6L	Giles French Park	45.70176 -120.72880	John Day Dam Road Rufus, OR 97065	USACE The Dalles pool Natural Resource Manager The Dalles Dam, OR (541) 506-7819	D-213L, D-213.3L, D-214.6L, D-212.7M, D-213.8L, D-214.5R	Park facilities including two parking lots and several grassy areas.	55	179
SA-LDR-0.2L	Deschutes River State Rec Area	45.63230 -120.91336	Celilo-Wasco Highway and Moody Road The Dalles, OR 97058	Deschutes River State Rec Area land manager OR (541) 739-2322	D-206.6M, D-204.7L	Gravel parking area that can be used for staging	54	181

<< Go Back

4.5.5 Boat Launch Matrices

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-D-191.9R	The Dalles Dam North Shore boat launch	45.61724 -121.13663	Dock Rd Dallesport, WA 98617	USACE The Dalles pool Natural Resource Manager The Dalles Dam, OR (541) 506-7819	D-191.7M, D-192.8L, D-191.9R	Lighted staging area with very large parking lot and a single concrete ramp, 5 degree grade and floating dock	54	185
BL-D-194.4R	Horsethief State Park	45.64014 -121.10407	8485 Highway 14 Lyle, WA 98635	Horsethief State Park Property Manager WA (509) 767-1159	D-192.8R, D-192.7R, D-194.4R, D-192.5R	Small boat launch to River. Tight access and very close to active train tracks with no controlled crossing. BE VERY CAREFUL WHEN ACCESSING BOAT LAUNCH. There is also a second boat launch that accesses Horsethief Lake in the same general area. Make sure you are accessing the river, not the lake.	54	187

<< Go Back

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-D-198.2R	Avery Recreation Area	45.66237 -121.03549	Avery Road Lyle, WA 98635	Columbia River Inter-Tribal Fish Commission Fishing Treaty In-lieu Site - Law Enforcement (800) 487-3474 Bureau of Indian Affairs Oversees Tribal In-Lieu Fishing Sites (503) 231-6702	D-197.1L, D-197.2M, D-197.4M, D-197.5L, D-199.3R	Concrete boat launch. Reserved for tribal fishing at times throughout the year.	54	189
BL-D-201.9L	Celilo Park	45.64892 -120.96308	Celilo Park Road Dalles, OR 97058	Celilo State Park Property Manager OR (541) 506-7819	D-202.8R, D-201R, D-202L, D-200.9L	Good boat launch on west side of the park.	54	191
BL-D-209R	Maryhill State Park West	45.68006 -120.83574	50 U.S. 97 Goldendale, WA 98620	Maryhill State Park Property manager (509) 773-5007	D-206.5R, D-207.6M, D-207.5M, D-207.8R	Lighted, paved staging area with a single concrete ramp	55	193
BL-D-209.9R	Maryhill State Park	45.68311 -120.82076	50 SR 97 Goldendale, WA 98620	Maryhill State Park Property manager WA (509) 773-5007	D-209.3L, D-211.8M, D-209.8R, D-211.3M, D-209.9R	concrete boat launch	55	195

<< Go Back

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-D-212.5R	Maryhill East primitive boat launch	45.69441 -120.77543	Maryhill Hwy Goldendale, WA 98620	Bureau of Indian Affairs Oversees Tribal In-Lieu Fishing Sites (503) 231-6702 Columbia River Inter-Tribal Fish Commission Fishing Treaty In-lieu Site - Law Enforcement (800) 487-3474	D-212.6R	Primitive gravel boat launch and staging area	55	197
BL-D-214.6L	Giles French Park	45.70176 -120.72880	John Day Dam Road Rufus, OR 97065	USACE The Dalles pool Natural Resource Manager The Dalles Dam, OR (541) 506-7819	D-213L, D-213.3L, D-214.6L, D-216.45L, D-216.45R, D-212.7M, D-213.8L, D-216.4R, D-214.5R	Two concrete ramps, 7 degree grade with floating docks (different parking areas)	55	199
BL-LDR-0.2L	Deschutes River State Rec Area	45.63230 -120.91336	Celilo-Wasco Highway and Moody Road The Dalles, OR 97058	Deschutes River State Rec Area land manager OR (541) 739-2322	D-206.6M, D-204.7L	Small boat launch that can be used to access the Columbia River (@ river mile D-204.8) and the lower Deschutes River.	54	201

<< Go Back

APPENDIX 4A

Response Strategy 2-Pagers

<< Go Back

RESPONSE STRATEGIES – LIST

D-191.7M	D-191.9R	D-192.5R	D-192.7R	D-192.8L
D-192.8R	D-194.4R	D-194.5R	D-197.1L	D-197.2M
D-197.4M	D-197.5L	D-199.3R	D-200.9L	D-201R
D-202.8R	D-202L	D-204.7L	D-206.5R	D-206.6M
D-207.5M	D-207.6M	D-207.8R	D-209.3L	D-209.8R
D-209.9R	D-211.3M	D-211.8M	D-212.6R	D-212.7M
D-213L	D-213.3L	D-213.8L	D-214.5R	D-214.6L
D-216.4R	D-216.45L	D-216.45R		

<< Go Back

The Dalles North Fish Ladder D-191.7M

Position - Location:	45° 36.931', -121° 8.188'	45° 36' 55.9", -121° 8' 11.3"	45.61552, -121.13647	Dallesport

Strategy Objective: Exclusion : Keep oil out of fish ladder

Implementation: Anchor 100' of boom in a chevron formation across the corner of the dam where the opening is for the N fish ladder. Contact The Dalles control room for access 541-298-7505

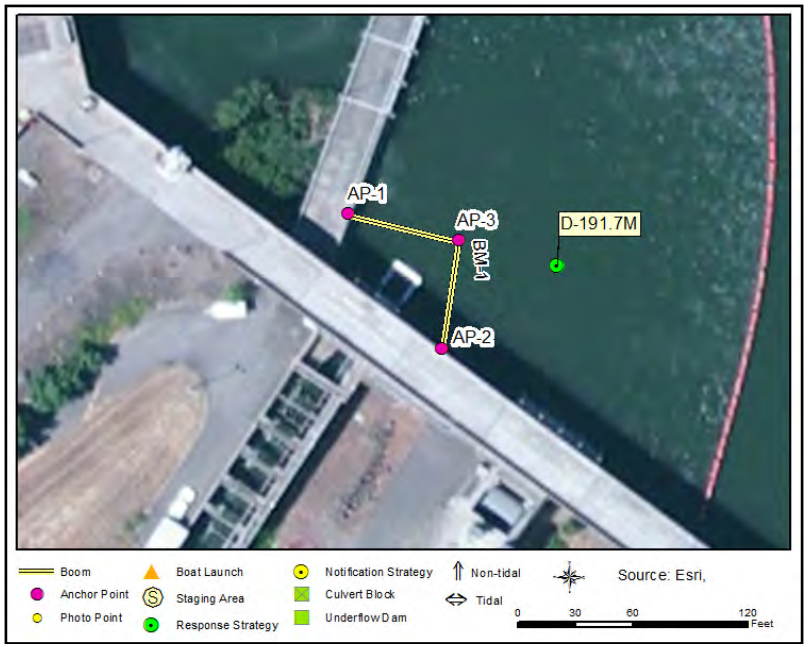
Staging Area: Onsite: Stage at SA-D-191.9R/The Dalles Dam N Shore

Site Safety: Dam, water hazard, slips, trips & falls.

Field Notes: Contact The Dalles control room for access 541-298-7505. Launch at BL-D-191.9R/The Dalles Dam N Shore

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Fish Ladder(s)



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

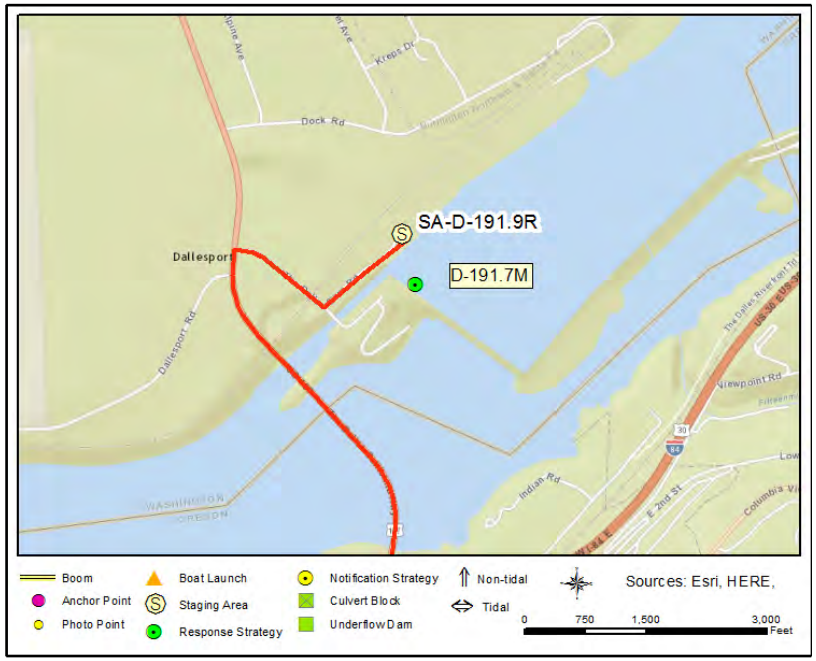
Recommended Personnel

1	Boat Operator
2	Laborer

<< Go Back

The Dalles North Fish Ladder D-191.7M

D-191.7M Photo: Aerial view of The Dalles N Fish Ladder



Site Contact

USACE The Dalles Dam Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-7505

Nearest Address

100 E Dock Rd
Dallesport, WA 98617

Driving Directions

1. Directions to SA-D-191.9R/The Dalles N Shore Boatl Launch, starting from I-84 take exit 87 for U.S. 30/U.S. 197towardDufur/Bend(0.2 mi)
2. Turn right onto US-197 N Entering Washington (1.1 mi)
3. Take the first right (0.25 mi) to the four way intersection
4. Turn left and stay to the right at the fork (0.3 mi)
5. Finish at The Dalles Dam North Shore boat launch

<< Go Back

The Dalles Lock D-191.9R

Position - Location:	45° 37.084', -121° 8.134'	45° 37' 5.1", -121° 8' 8.1"	45.61807, -121.13557	Dallesport

Strategy Objective:	Collection : Divert oil toward lock for collection
Implementation:	Deploy a total of 600' of boom, 300'(BM-1) from the end of the N arm of the lock toward the SSW and anchor it where a vac truck can access for collection. If oil is coming from upstream, anchor another 300' (BM-2) of boom upstream on the N shore to divert oil toward the collection point. Anchor it on the N shore, NE of the small bay beside the boat launch, and tow it out toward the SW to (keep the boat launch open). Adjust angles on both boom, quantity and placement of anchors, depending on conditions of the day.
Staging Area:	Onsite: Stage at SA-D-191.9R/The Dalles Dam N Shore
Site Safety:	Working lock, water hazard, dam, slips, trips, & falls
Field Notes:	Launch at BL-D-191.9R/The Dalles Dam N Shore
Watercourse:	River - Above a Dam - The Dalles pool
Resources at Risk:	Downstream Resources, Lock and Dam

Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
3	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
2	Each	Machete(s) - (or other vegetation cutting tool)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

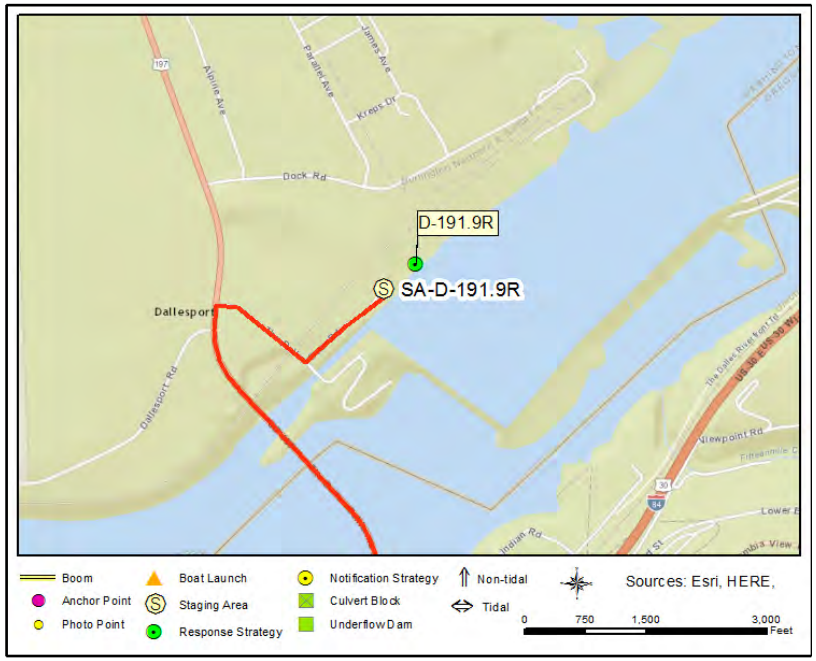
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

The Dalles Lock D-191.9R

D-191.9R Photo: Aerial view of The Dalles Lock & boat launch



Site Contact

USACE The Dalles Dam Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-7505

Nearest Address

Dock Road
Dallesport, WA 98617

Driving Directions

1. Directions to SA-D-191.9R/The Dalles N Shore Boatl Launch, starting from I-84 take exit 87 for U.S. 30/U.S. 197towardDufur/Bend(0.2 mi)
2. Turn right onto US-197 N Entering Washington (1.1 mi)
3. Take the first right (0.25 mi) to the four way intersection
4. Turn left and stay to the right at the fork (0.3 mi)
5. Finish at The Dalles Dam North Shore boat launch

<< Go Back

Just downriver from Spearfish Lake (FBS MP-97) D-192.5R

Position - Location:	45° 37.399', -121° 7.524'	45° 37' 24.0", -121° 7' 31.4"	45.62332, -121.12540	Dallesport

Strategy Objective: Collection : Divert oil that is moving downriver to a collection point.

Implementation: Use 1000' of boom, anchored where the a truck can reach it. Tow boom out to the E and anchor so that the angle diverts oil to the collection point. Vac Truck should access peninsula through Tidewater property. Bring machetes in case vegetation needs to be removed. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Staging onsite, must pass through locked gate & Port of Klickitat land to reach location of strategy on USACE land

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Steep terrain.

Field Notes: Launch from BL-D-194.4R/Horsethief SP

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Downstream Resources, Economic Resource, Sensitive Resources Nearby, Waterfowl and Shorebird Concentrations

Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1000	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

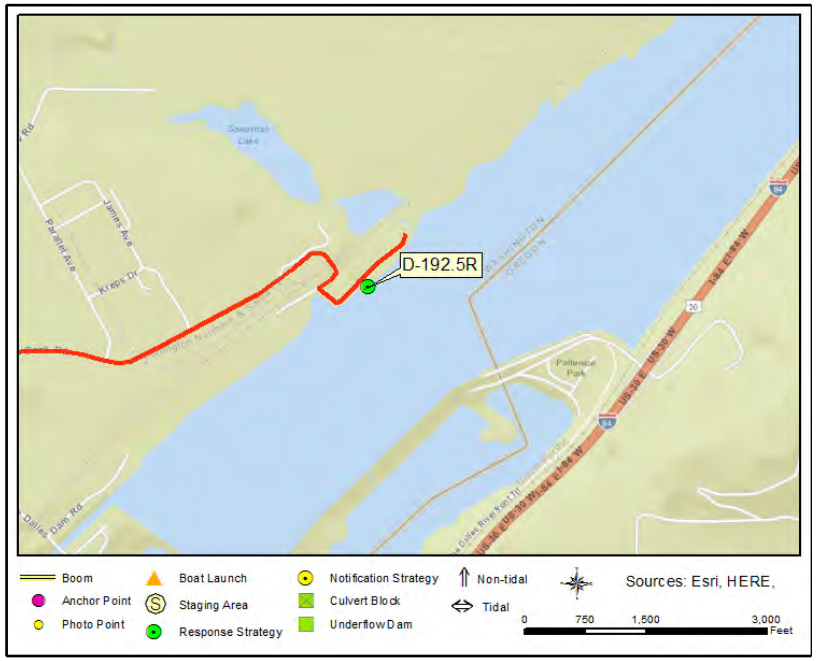
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Just downriver from Spearfish Lake (FBS MP-97) D-192.5R

D-192.5R Photo: Aerial photo of Little Spearfish Lake and strategy location.



Site Contact

Port of Klickitat
Land/Property Contact : Manages Port of Klickitat Property
509-493-1655

Nearest Address

Dock Road
Dallesport, WA 98617

Driving Directions

1. Directions to D-192.7R at Tidewater facility on WA shore, starting at 3545 Bret Clodfelter Way, The Dalles, Oregon 97058
2. Go west on Bret Clodfelter Way toward Lone Pine Dr/US-197 (0.43 miles)
3. Make sharp right on US-197 (The Dalles-California Hwy) (1.32 miles)
4. Turn right on E Dock Rd (1.1 miles)
5. After going around a 180 degree bend, turn left into Tidewater yard and left again to follow gravel road to the end of the penninsula.

<< Go Back

Little Spearfish Lake D-192.7R

Position - Location:	45° 37.530', -121° 7.470'	45° 37' 31.8", -121° 7' 28.2"	45.62550, -121.12449	Lyle

Strategy Objective: Exclusion : Block the culvert to try and keep oil from passing under railroad trestle at Little Spearfish Lake

Implementation: Deploy 100' of boom in a chevron configuration across the culvert that allows water to flow into Little Spearfish Lake. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage from SA-D-194.4R/Horsethief SP

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: Launch from BL-D-194.4R/Horsethief SP

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Turtles, Waterfowl Concentrations

Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring Post(s) - (shoreside)
100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

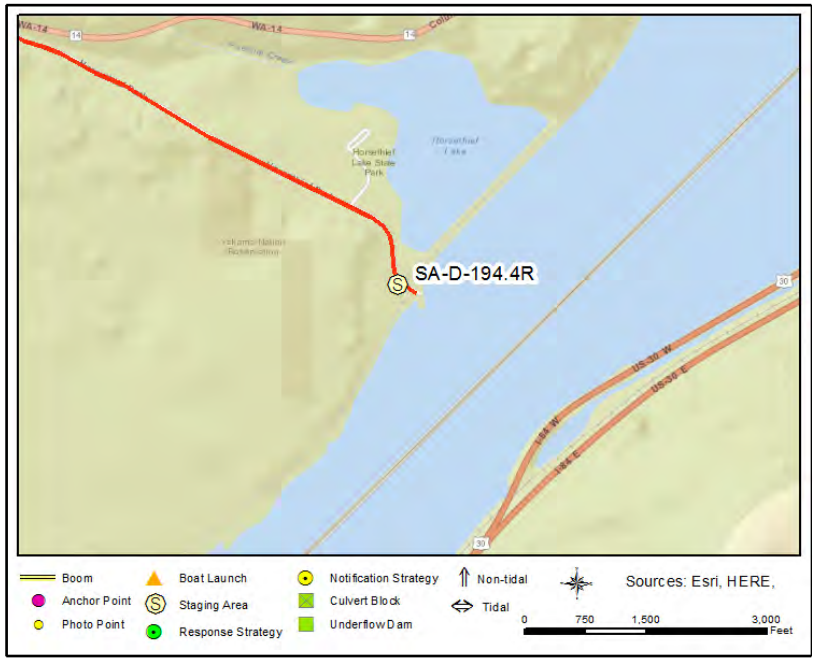
Recommended Personnel

1	Boat Operator
1	Laborer

<< Go Back

Little Spearfish Lake D-192.7R

D-192.7R Photo: Aerial view of Little Spearfish Lake



Site Contact

USACE The Dalles pool
Land/Property Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

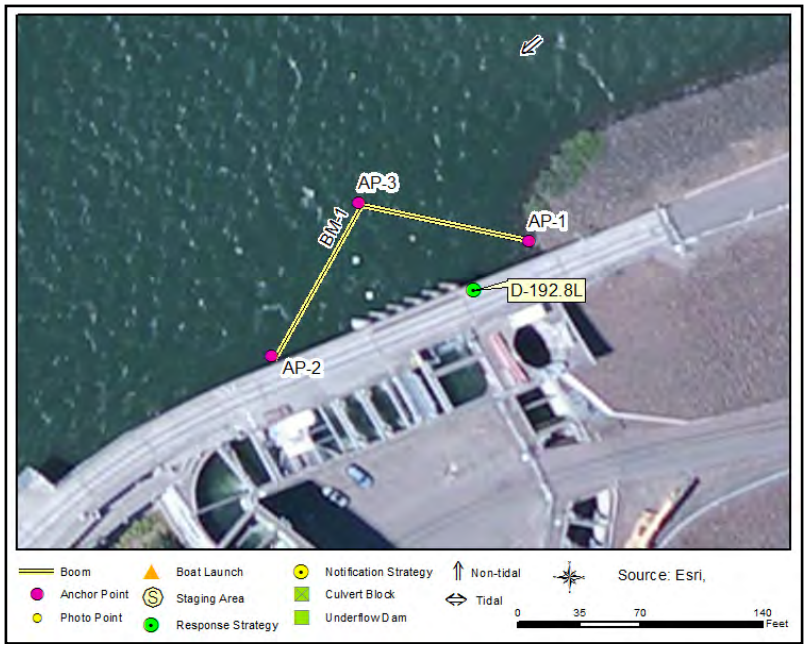
1. Directions to BL-D-194.4R/Horsethief State Park boat launch, from the intersection of WA Hwy197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you cross the railroad track and come to the boat launch

<< Go Back

The Dalles S Fish Ladder D-192.8L

Position - Location:	45° 37.211', -121° 7.214'	45° 37' 12.7", -121° 7' 12.8"	45.62018, -121.12023	The Dalles

Strategy Objective:	Exclusion : Keep oil out of the fish ladder
Implementation:	Deploy 200' of boom in a chevron formation, anchor upstream end to shore and downstream end to the dam. Adjust angle of boom, placement & quantity of anchors depending on conditions of the day. Pre-notify The Dalles control room prior to implementing strategy.
Staging Area:	Onsite: Stage at Patterson Park beside fish ladder
Site Safety:	Dam, water hazard, slips, trips & falls.
Field Notes:	Launch from BL-D-191.9R/The Dalles Dam N Shore. Call The Dalles Dam control room at 541-298-7505 prior to implementing strategy
Watercourse:	River - Above a Dam - The Dalles pool
Resources at Risk:	Fish Ladder(s)



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

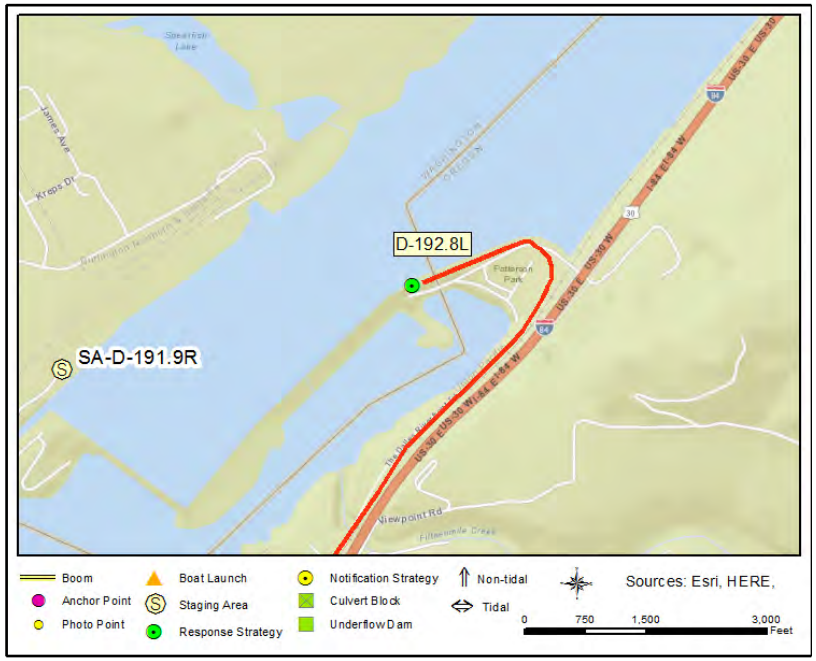
Recommended Personnel

1	Boat Operator
2	Laborer

<< Go Back

The Dalles S Fish Ladder D-192.8L

D-192.8L Photo: Aerial view of The Dalles S Shore Fish Ladder



Site Contact

USACE The Dalles Dam Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-7505

Nearest Address

3313 Bret Clodfelter Way
The Dalles, OR 97058

Driving Directions

1. Directions to D-192.8L beside The Dalles S shore fish ladder, starting from Dallesport, WA, head south on US-197 S toward Dallesport Rd Entering Oregon (1.4 mi)
2. Turn left to merge onto I-84E/U.S. 30 E toward US-97S/Arlington(1.7 mi)
3. Take exit 88 toward The Dalles Dam (0.2 mi)
4. Turn left onto Td Dam Dr (220 ft)
5. Continue straight, entering Washington, destination will be on at the end of the road (0.5 mi)

<< Go Back

Little Spearfish Lake D-192.8R

Position - Location:	45° 37.576', -121° 7.272'	45° 37' 34.5", -121° 7' 16.3"	45.62626, -121.12121	Lyle

Strategy Objective: Deflection : keep oil out of lakes

Implementation: Anchor 700' of boom to the main shore just north of the island E of Little Spearfish Lake, put an anchor at the SE side of the island, and a another anchor to the SW of the island. Divert oil toward collection strategy downstream if it is deployed. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Remote: Stage at SA-D-194.4R/Horsethief SP

Site Safety: Rocky shoreline, water hazard, slips, trips & falls.

Field Notes: Launch at BL-D-194.4R/Horsethief SP

Watercourse: River - Above a Dam - The Dalles Pool

Resources at Risk: Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations

Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

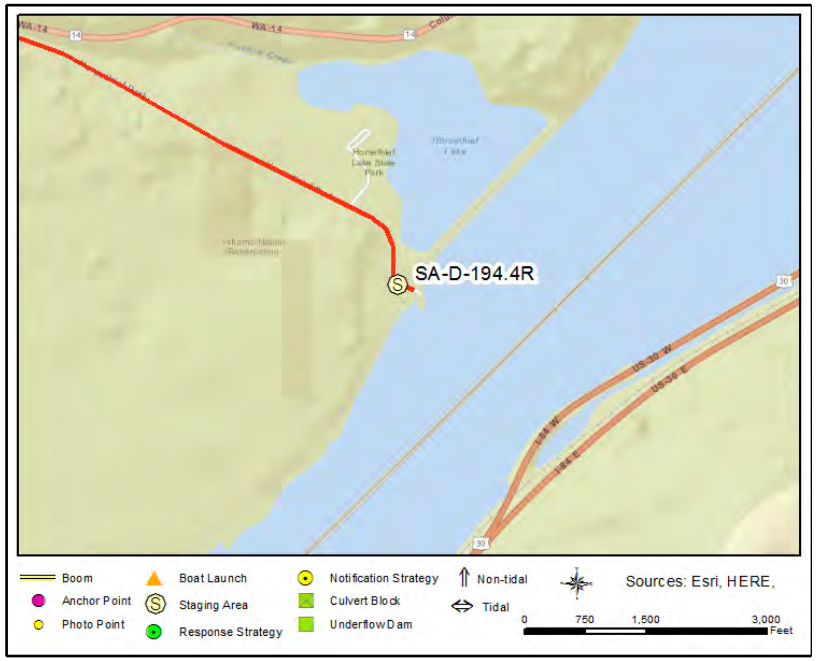
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

Little Spearfish Lake D-192.8R

D-192.8R Photo: Aerial view of the shoreline near Little Spearfish Island



Site Contact

USACE Bonneville pool
Primary Contact : Natural Resources Manager

Bonneville Dam, OR
541-374-8344

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to BL-D-194.4R/Horsethief State Park boat launch, from the intersection of WA Hwy197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you cross the railroad track and come to the boat launch

<< Go Back

Horesethief State Park (FBS MP-98.5) D-194.4R

Position - Location:	45° 38.403', -121° 6.207'	45° 38' 24.2", -121° 6' 12.4"	45.64006, -121.10344	Lyle

Strategy Objective: Collection : Collect oil that is moving downriver.

Implementation: Use 1000' of boom to direct oil to the collection point on shore. Easy access but very close to an active train line. Adjust angle of boom, placement & number of anchors according to conditions of the day.

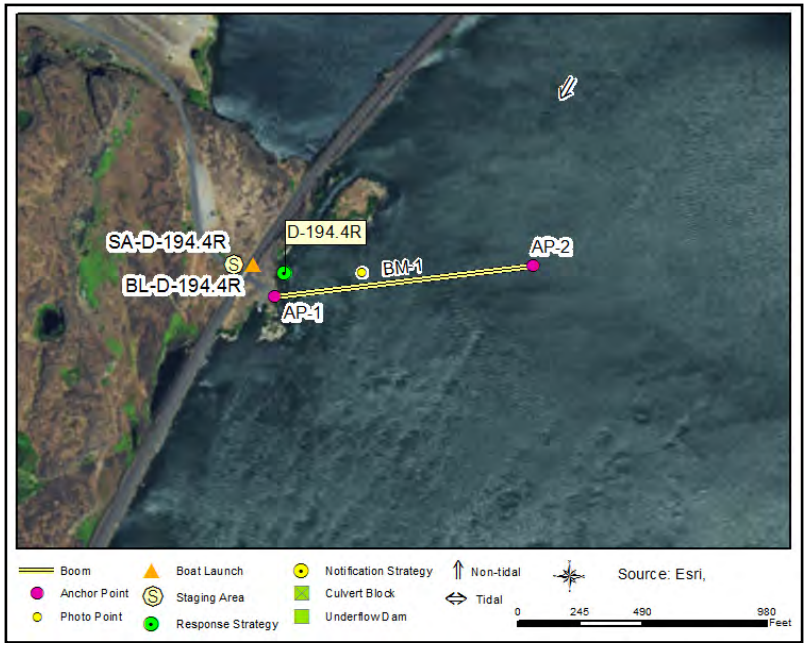
Staging Area: Onsite: Stage on site at SA-D-194.4R/Horsethief SP

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Active Train Tracks.

Field Notes: Launch on site at BL-D-194.4R/Horsethief SP

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: State Park, Waterfowl and Shorebird Concentrations



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

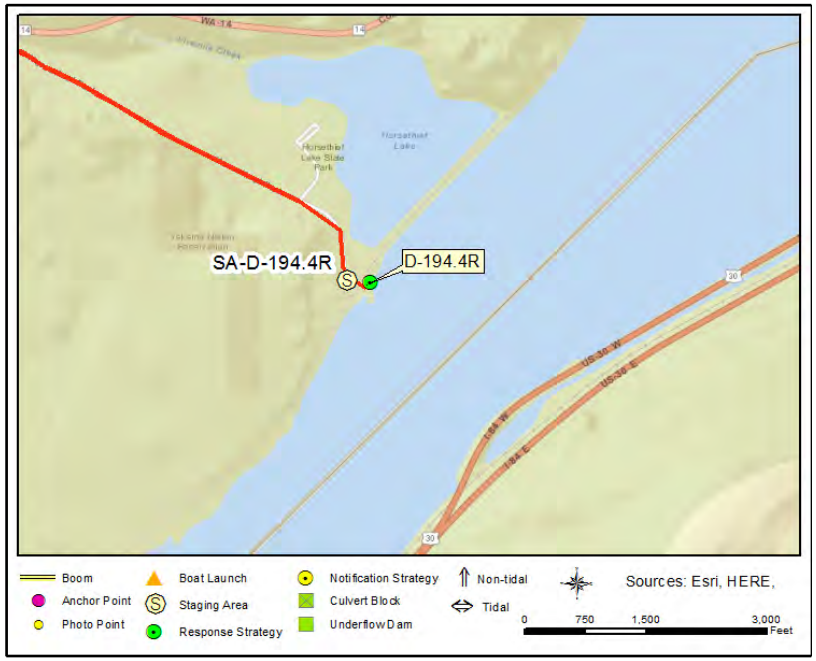
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Horesethief State Park (FBS MP-98.5) D-194.4R

D-194.4R Photo: Aerial overview of strategy area.



Site Contact

Horsethief State Park
Land/Property Contact : Property Manager

WA
509-767-1159

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to BL-D-194.4R/Horsethief State Park boat launch, from the intersection of WA Hwy197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you cross the railroad track and come to the boat launch

<< Go Back

Horsethief Lake culvert D-194.5R

Position - Location:	45° 38.529', -121° 6.114'	45° 38' 31.8", -121° 6' 6.8"	45.64216, -121.10189	Lyle

Strategy Objective: Exclusion : Keep oil out of Horsethief Lake

Implementation: Deploy 100' of boom across culvert inside the lake (Horsethief Lake State Park has a boom kit on a trailer & a boat, may be able to deploy if notified). Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage on site at the boat launch on the lake

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: Launch on site at Horsethief Lake boat launch on the lake

Watercourse: River - Above a Dam - The Dalles Pool

Resources at Risk: Recreational Use Area, State Park, Waterfowl Concentrations

Recommended Equipment

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

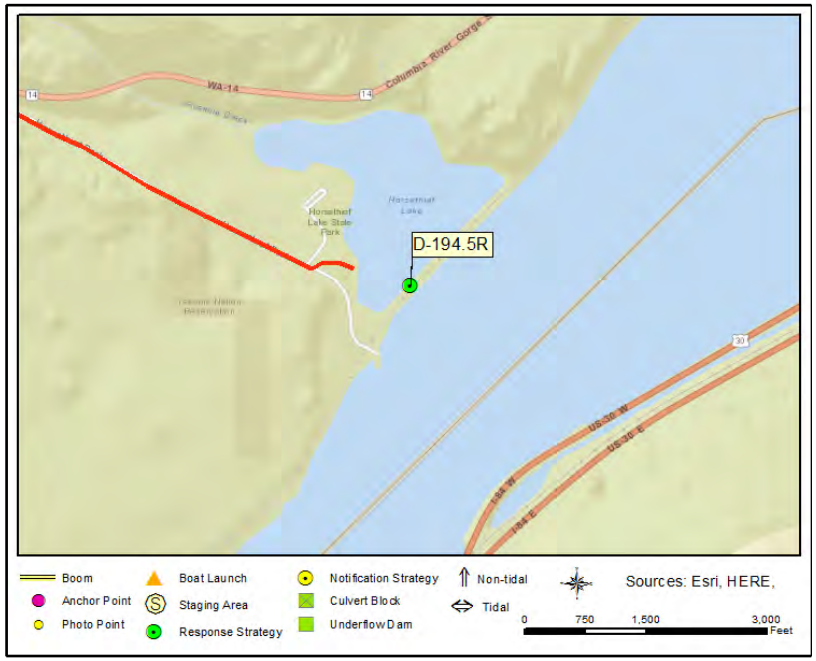
Recommended Personnel

1	Boat Operator
1	Laborer

<< Go Back

Horsethief Lake culvert D-194.5R

D-194.5R Photo: View of Horsethief Lake boat launch and culvert on opposite shore



Site Contact

Horsethief State Park
Land/Property Contact : Property Manager

WA
509-767-1159

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to D-194.5R Horsethief Lake boat launch on the lake, starting from the intersection of WA Hwy 197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you come to the third left hand turn, it is BEFORE the railroad tracks, the boat launch is on the right.

<< Go Back

Left bank SW of Browns Island D-197.1L

Position - Location:	45° 38.980', -121° 3.162'	45° 38' 58.8", -121° 3' 9.7"	45.64967, -121.05270	Lyle

Strategy Objective: Deflection : Deflect oil away from downstream shoreline/shallow water habitat.

Implementation: Use 500' of boom attached to shore at an angle out into the channel. This strategy may not be needed if others in the area are effective. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Avery Recreation Area (SA-D-198.2R)

Site Safety: Slips, Trips, Falls, Water hazard, Shallow water.

Field Notes: Launch boat from Avery Recreation Area (BL-D-198.2R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Bald Eagle, Herons, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

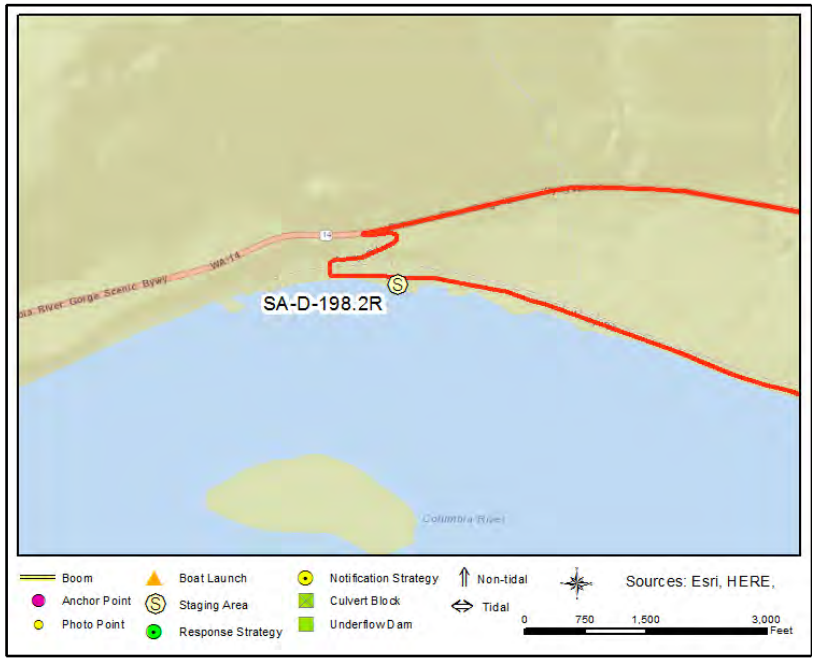
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

Left bank SW of Browns Island D-197.1L

D-197.1L Photo: View from the water



Site Contact

No Information
Not Determined :

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

Directions to Avery Recreation Boat Launch (BL-D-198.2R) from Westbound Highway 14.
1. Start at 9220 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) (2.39 miles)
3. Make sharp left on Avery Rd
4. You will see the Recreation area on your right at the river.

<< Go Back

W end of island SW of Browns Island D-197.2M

Position - Location:	45° 39.055', -121° 3.022'	45° 39' 3.3", -121° 3' 1.3"	45.65091, -121.05036	Lyle

Strategy Objective: Deflection : Keep oil from impacting downstream shoreline and shallow water habitat.

Implementation: Use 500' of boom anchored to the shore and deployed at an angle out into the channel. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Avery Recreation Area (SA-D-198.2R)

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water.

Field Notes: Launch boat from Avery Recreation Area (BL-D-198.2R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Bald Eagle, Herons, Sensitive Resources Nearby, Waterfowl and Shorebird Concentrations

Recommended Equipment

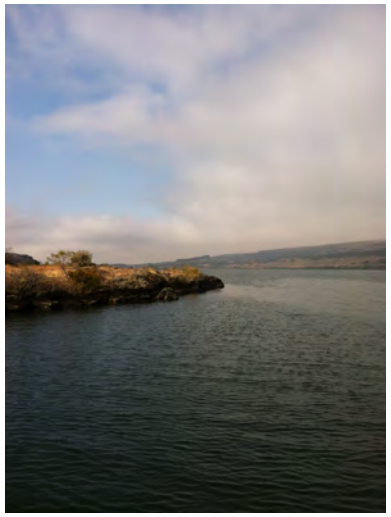
3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

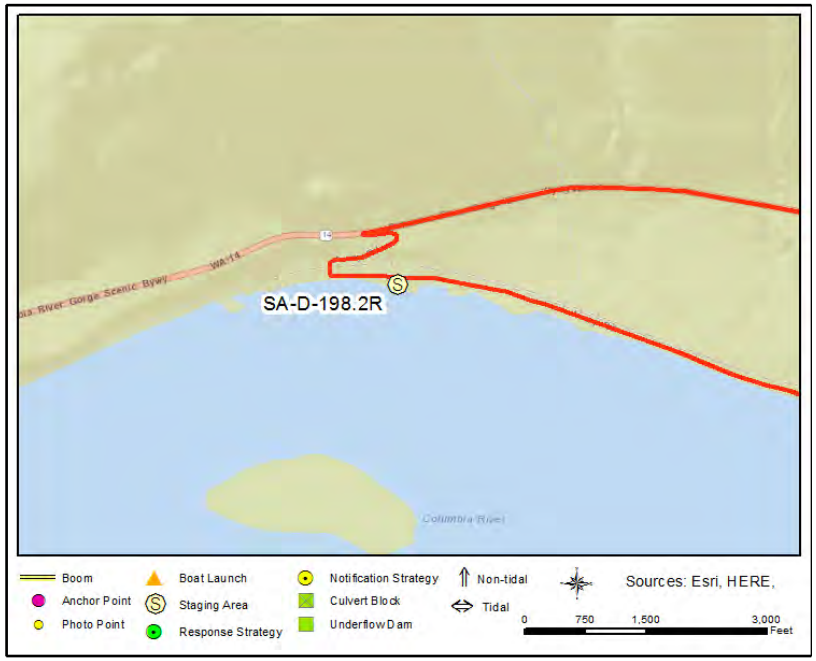
1	Boat Operator
3	Laborer

<< Go Back

W end of island SW of Browns Island D-197.2M



D-197.2M Photo: Shoreline anchor area.



Site Contact

No Information
Not Determined :

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

Directions to Avery Recreation Boat Launch (BL-D-198.2R) from Westbound Highway 14.
1. Start at 9220 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) (2.39 miles)
3. Make sharp left on Avery Rd
4. You will see the Recreation area on your right at the river.

<< Go Back

E end of island SW of Browns Island D-197.4M

Position - Location:	45° 39.026', -121° 2.830'	45° 39' 1.6", -121° 2' 49.8"	45.65044, -121.04717	Lyle

Strategy Objective: Deflection : Deflect oil away from downstream shoreline and shallow water habitat.

Implementation: Use 500' of boom anchored to shore and angled out into the channel. Adjust angle of boom, placement & number of anchors according to conditions of the day.

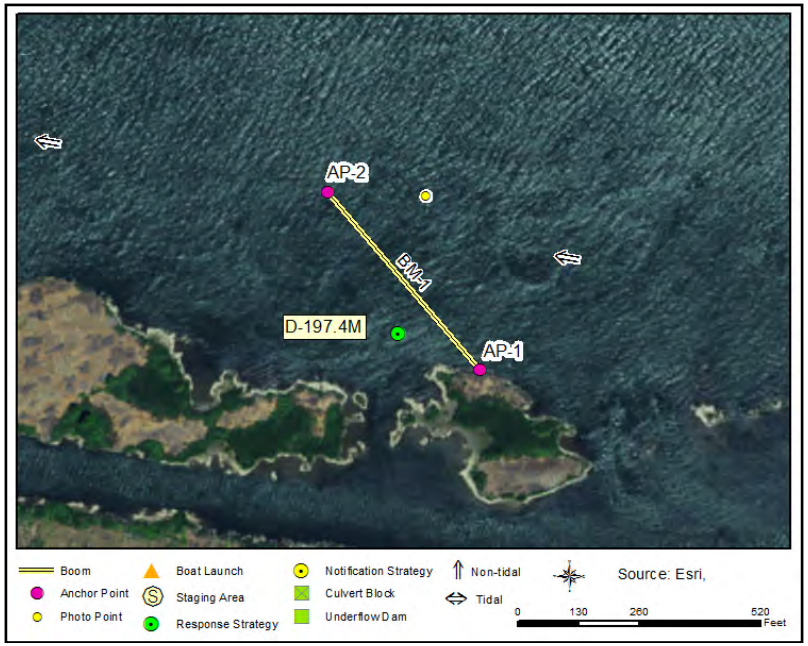
Staging Area: Remote: Avery Recreation Area (SA-D-198.2R)

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

Field Notes: Launch boat from Avery Recreation Area (BL-D-198.2R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Bald Eagle, Herons, Waterfowl and Shorebird Concentrations



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
500	Each	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

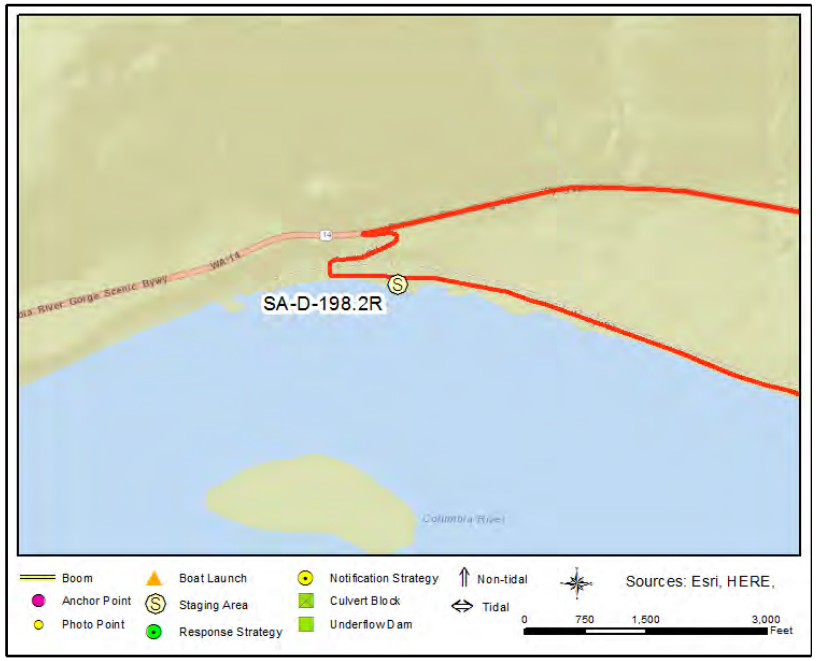
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

E end of island SW of Browns Island D-197.4M

D-197.4M Photo: Shoreline anchor area.



Site Contact

No Information
Not Determined :

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

Directions to Avery Recreation Boat Launch (BL-D-198.2R) from Westbound Highway 14.
1. Start at 9220 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) (2.39 miles)
3. Make sharp left on Avery Rd
4. You will see the Recreation area on your right at the river.

<< Go Back

Impounded pond shoreline South of Browns Island D-197.5L

Position - Location:	45° 38.936', -121° 2.380'	45° 38' 56.2", -121° 2' 22.8"	45.64894, -121.03967	Lyle

Strategy Objective: Deflection : Prevent oil from hitting small islands and shallow water habitat downstream.

Implementation: Use 500' of boom anchored to the shoreline and deployed at an angle out into the channel. May need more boom depending on conditions. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Avery Recreation Area (SA-D-198.2R)

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

Field Notes: Launch boat from Avery Recreation Area (BL-D-198.2R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Bald Eagle, Herons, Waterfowl and Shorebird Concentrations

Recommended Equipment

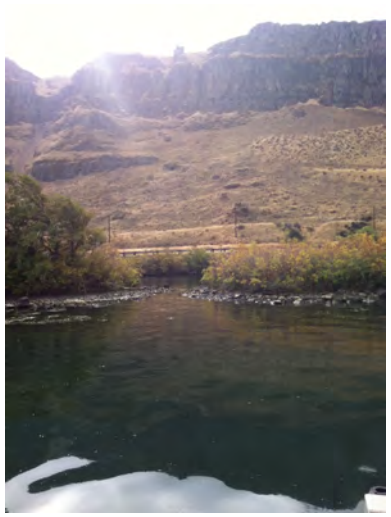
3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

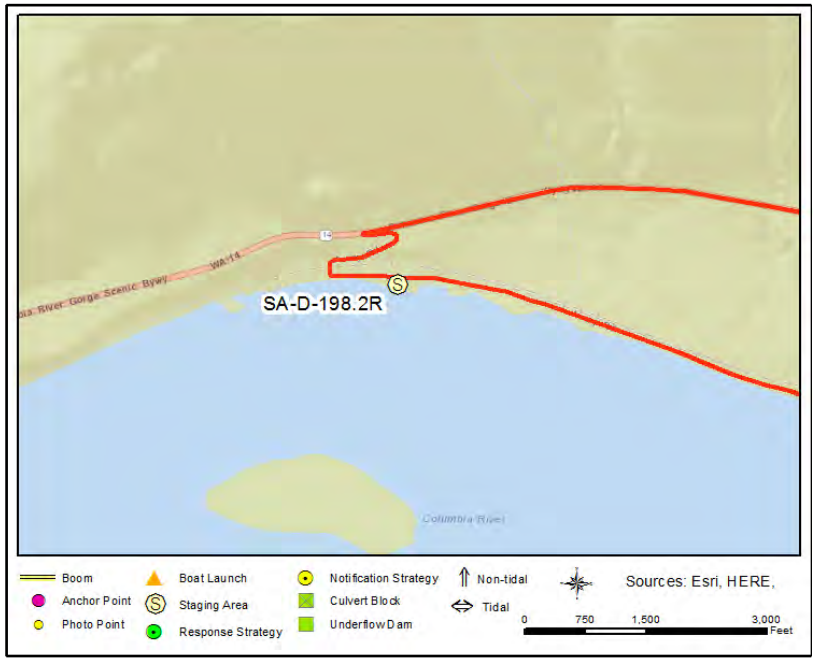
1	Boat Operator
3	Laborer

<< Go Back

Impounded pond shoreline South of Browns Island D-197.5L



D-197.5L Photo: Gap in shoreline behind defliction boom.



Site Contact

No Information
Not Determined :

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

Directions to Avery Recreation Boat Launch (BL-D-198.2R) from Westbound Highway 14.
1. Start at 9220 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) (2.39 miles)
3. Make sharp left on Avery Rd
4. You will see the Recreation area on your right at the river.

<< Go Back

Avery Road (FBS MP-103.6) D-199.3R

Position - Location:	45° 39.499', -121° .882'	45° 39' 29.9", -121° 0' 52.9"	45.65832, -121.01470	Lyle

Strategy Objective: Collection : Divert oil to shore for collection

Implementation: Anchor 1000' of boom to shore where a vac truck can access the water (45.661104 N ,-121.027368 W), tow boom offshore to the SE anc anchor. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. May need waders to access shoreline.

Staging Area: Onsite: Stage on site

Site Safety: ASlips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not allow

Field Notes: Launch at BL-D-198.2R/Avery

Watercourse: River - Above a Dam - The Dalles Pool

Resources at Risk: Downstream Resources, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

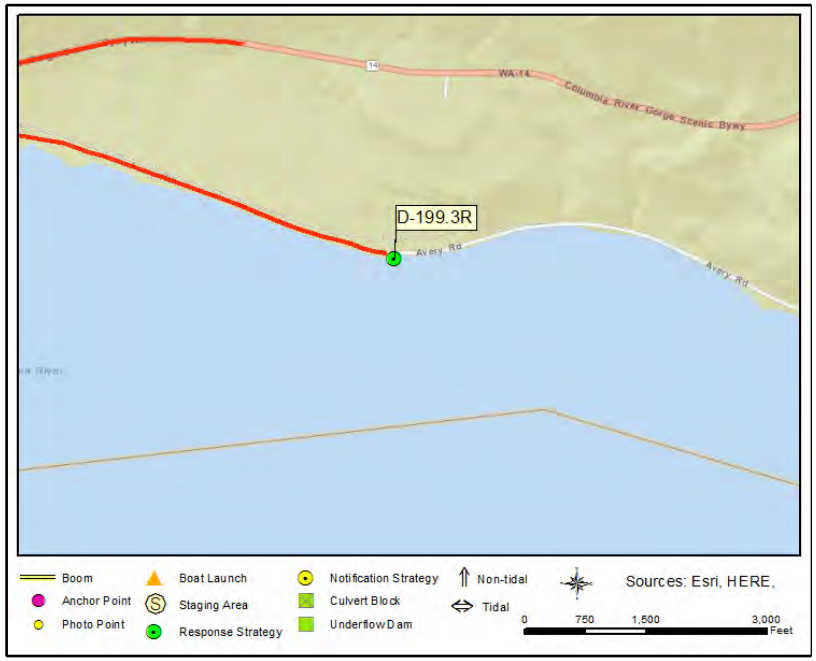
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Avery Road (FBS MP-103.6) D-199.3R

D-199.3R Photo: View of shoreside anchor point & collection area where vac truck can park for D-199.3R



Site Contact

Burlington Northern Santa Fe Railroad
Land/Property Contact :
800-832-5452

USACE The Dalles pool
Secondary Contact : Natural Resource Manager
541-506-7819

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

Directions to Collection Location, D-199.3R
1. Start at 8989 Highway 14 Lyle, WA 98635
2. Go west on WA-14 (Highway 14) toward Avery Rd (0.77 miles)
3. Make sharp left on Avery Rd (1 mile)
4. Finish at Avery Road, 98635, on the right

<< Go Back

I-84 Railroad Overpass D-200.9L

Position - Location:	45° 38.714', -120° 59.137'	45° 38' 42.8", -120° 59' 8.2"	45.64523, -120.98562	The Dalles

Strategy Objective: Collection : Collect oil that is moving downstream.

Implementation: Use 500' of boom to direct oil to collection spot. Need to verify that small access road can handle a vacuum truck. Adjust angle of boom, placement & number of anchors according to conditions of the day.

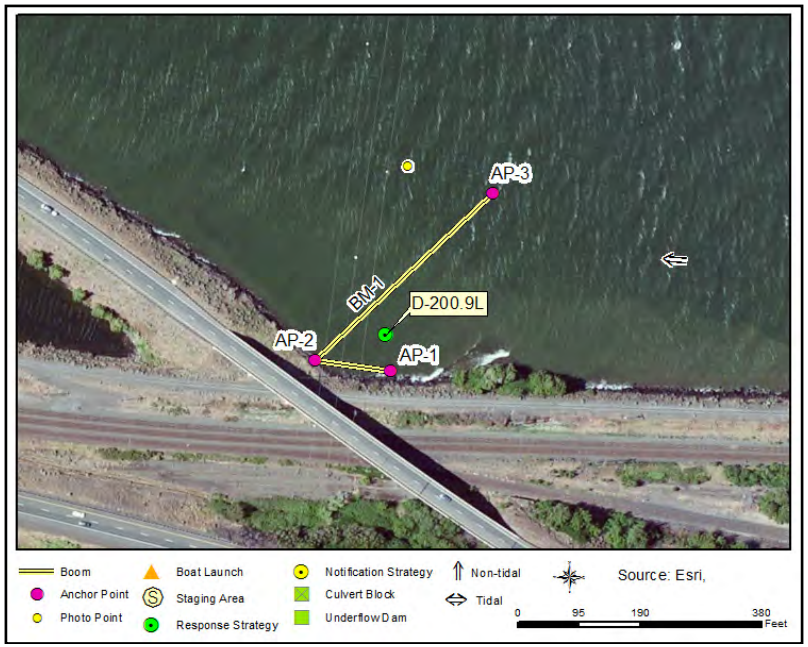
Staging Area: Onsite: Can stage small amount of equipment on the gravel road.

Site Safety: Shallow Water, Slips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not

Field Notes: Launch boat from Celilo Park (BL-D-201.9L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Downstream Resources



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
500	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

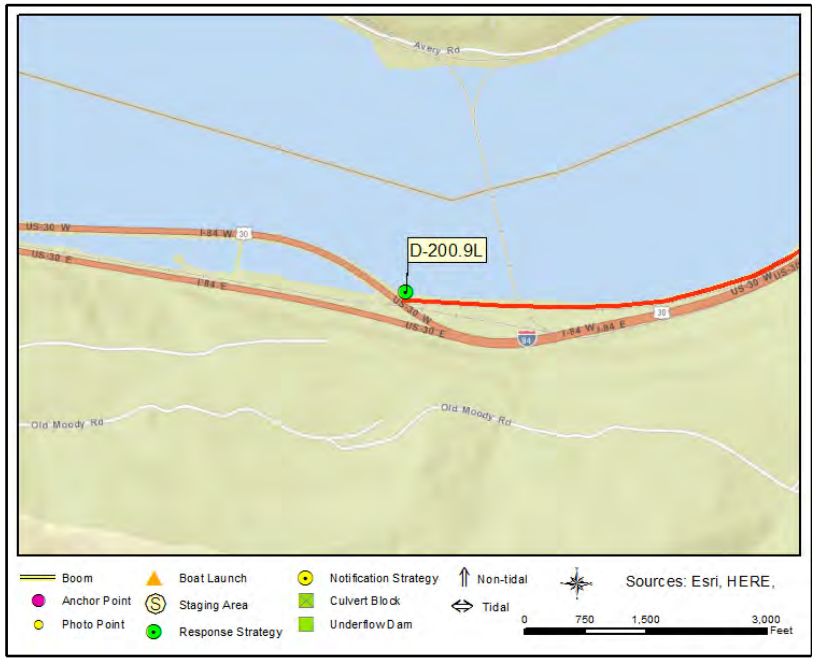
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

I-84 Railroad Overpass D-200.9L

D-200.9L Photo: Collection area with highway in background.



Site Contact

Celilo State Park
Primary Contact : Property Manager

OR
541-506-7819

Nearest Address

Celilo Park Road
The Dalles, OR 97058

Driving Directions

Directions to Celilo Park (BL-D-201.9L) from Westbound I-84.
1. Start at I 84 Westbound, Wasco, OR
2. Go west on I-84
3. At exit 97 take ramp on the right to OR-206
4. Turn right on OR-206 (0.03 miles)
5. Bear left on Celilo Park Rd (0.09 miles)
6. Finish at Celilo Park Road, 97058, on the left

To collection site:
Follow the gravel road west out of parking lot at Celilo Park and continue to collection site located near Highway 84 overpass.

<< Go Back

Railroad Bridge D-201R

Position - Location:	45° 39.170', -120° 59.024'	45° 39' 10.2", -120° 59' 1.5"	45.65284, -120.98374	The Dalles

Strategy Objective: Deflection : Prevent oil from hitting shoreline and shallow water habitat.

Implementation: Use 500' of boom anchored to the bridge and angled out into the channel. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Remote: Stage equipment at Celilo Park

Site Safety: Shallow Water, Slips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not

Field Notes: Launch boat from Celilo Park (BL-D-201.9L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Sensitive Resources, Waterfowl and Shorebird Concentrations

Recommended Equipment

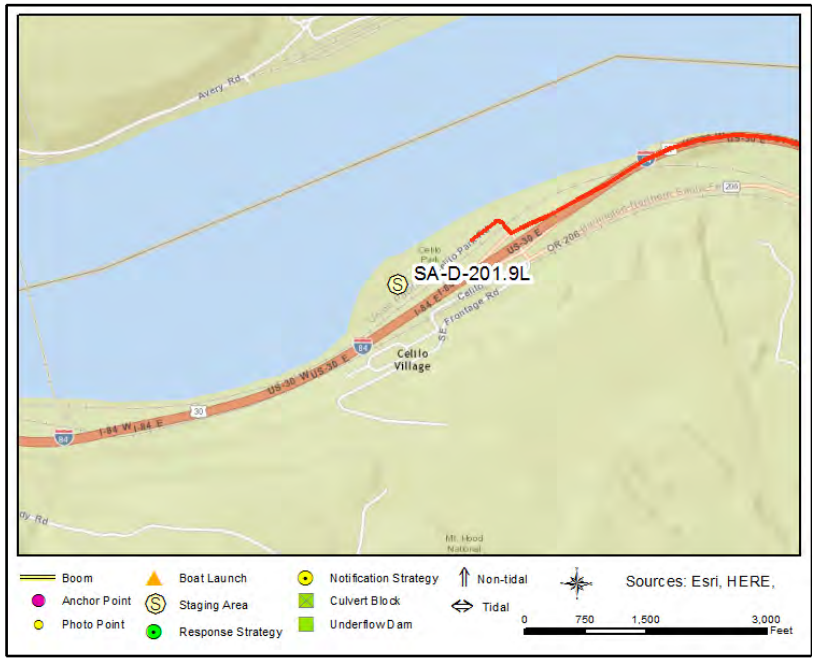
3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer

Railroad Bridge D-201R

D-201R Photo: Aerial overview of area to be protected.



Site Contact

Union Pacific Railroad
Land/Property Contact :

WA
888-877-7267

Nearest Address

Celilo Park Road
The Dalles, OR 97058

Driving Directions

Directions to Celilo Park (BL-D-201.9L) from Westbound I-84.
1. Start at I 84 Westbound, Wasco, OR
2. Go west on I-84
3. At exit 97 take ramp on the right to OR-206
4. Turn right on OR-206 (0.03 miles)
5. Bear left on Celilo Park Rd (0.09 miles)
6. Finish at Celilo Park Road, 97058, on the left

<< Go Back

Celilo Park D-202L

Position - Location:	45° 39.066', -120° 57.690'	45° 39' 3.9", -120° 57' 41.4"	45.65109, -120.96150	Dalles

Strategy Objective: Deflection : Keep oil away from the park and two boat ramps.

Implementation: Use 2, 500' sections of boom. The first BM-1 should be attached to the shore near the east boat ramp and angled out into the channel. The second should be deployed in a similar manner from near the western boat ramp. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Plenty of staging available onsite at Celilo Park

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water.

Field Notes: Launch boat onsite at Celilo Park (BL-D-201.9L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Public Recreation Site/Area, Salmonid Concentrations and Habitat

Recommended Equipment

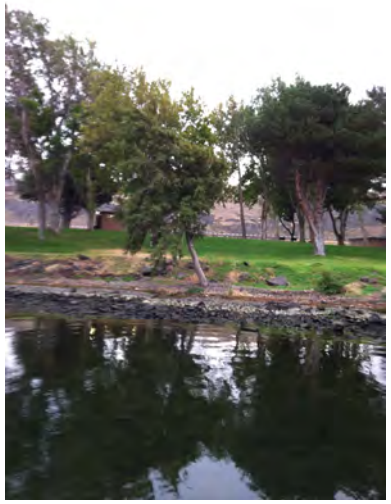
6	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

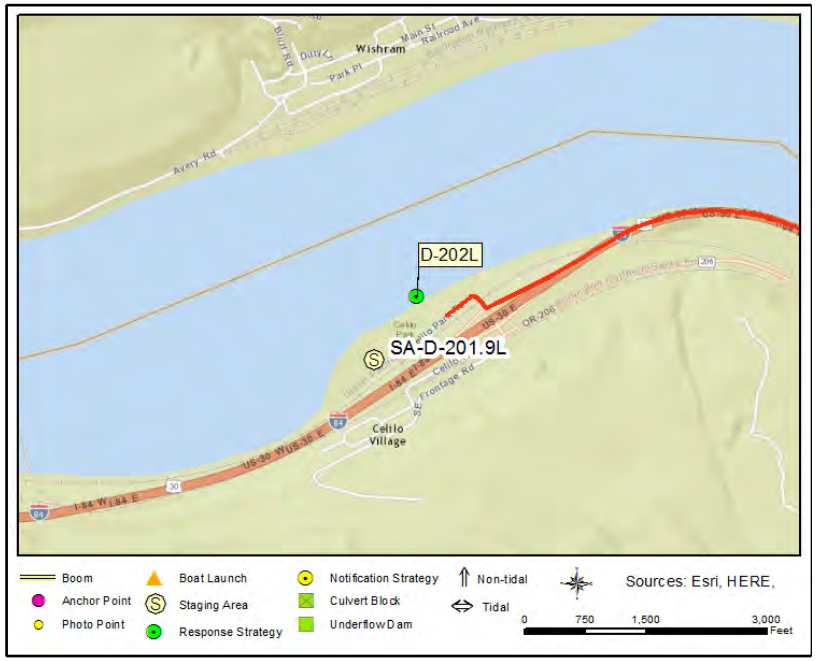
1	Boat Operator
3	Laborer

<< Go Back

Celilo Park D-202L



D-202L Photo: Celilo Park shoreline



Site Contact

Celilo State Park
Land/Property Contact : Property Manager

OR
541-506-7819

Nearest Address

Celilo Park Road
Dalles, OR 97058

Driving Directions

Directions to Celilo Park (BL-D-201.9L) from Westbound I-84.
1. Start at I 84 Westbound, Wasco, OR
2. Go west on I-84
3. At exit 97 take ramp on the right to OR-206
4. Turn right on OR-206 (0.03 miles)
5. Bear left on Celilo Park Rd (0.09 miles)
6. Finish at Celilo Park Road, 97058, on the left

<< Go Back

Wishram (FBS MP-106.9) D-202.8R

Position - Location:	45° 39.650', -120° 56.967'	45° 39' 39.0", -120° 56' 58.0"	45.66084, -120.94945	Wishram

Strategy Objective: Collection : Collect oil that is moving down the river

Implementation: Call BNSF Railroad 800-832-5452 for access to area. Use 1000' of boom, anchor 100' along the shore at the far E end of the train yard where a vac truck can access the water (45.660625 N, -120.949777 W); tow the remaining 900' of boom out to the SE towards the center of the channel, angled to divert oil to the collection point, and anchor. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Onsite: Staging at train yard, call BNSF at 800-832-5452 for access (must have appropriate PPE), or SA-D-201.9L/Celilo Park

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: Launch at BL-D-201.9L/Celilo Park

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Downstream Resources, Raptors, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

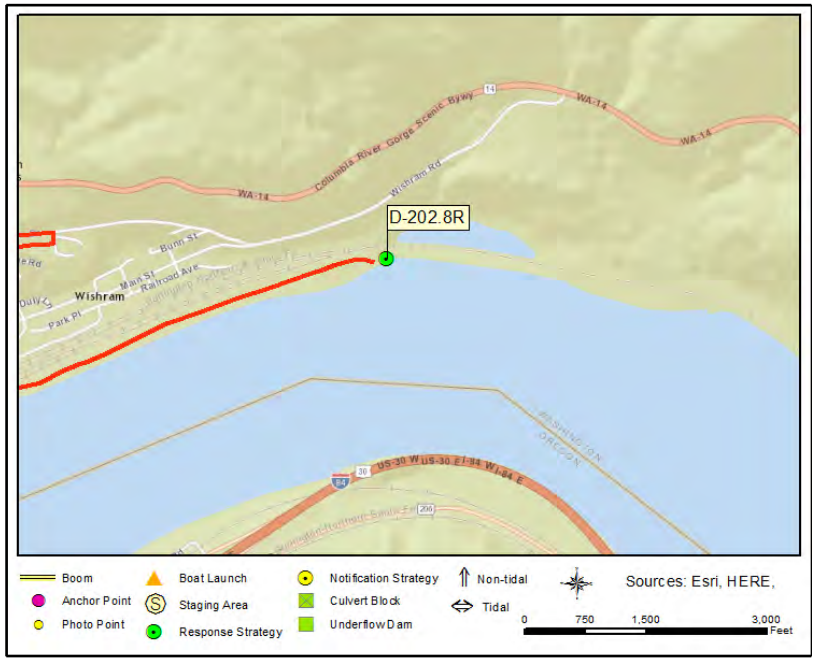
5	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer

Wishram (FBS MP-106.9) D-202.8R

D-202.8R Photo: Aerial overview of collection area.



Site Contact

Burlington Northern Santa Fe Railroad
Land/Property Contact :

WA
800-832-5452

Nearest Address

415 Main Street
Wishram, WA 98673

Driving Directions

1. Directions to D-202.8R, Wishram Train Yard, starting at8989 Highway 14 Lyle, WA 98635. Call ahead for access 800-832-5452
2. Head east on WA-14 E toward Coffield Ln (2.6 mi)
3. Turn right onto Boulder Dr (0.5 mi)
4. Turn right onto Ross St (138 ft)
5. Turn right onto Bluff Rd (0.5 mi)
6. Turn left onto Coffield Canyon Rd (.1 mi)
7. Turn right onto Main Street (375 ft)
8. Turn left to cross the railroad tracks - meet BNSF staff for escort
9. Follow gravel drive as it runs along the shoreline until you reach the strategy location (1 mi) at 45.66074 N, -120.94877 W

<< Go Back

Mouth of the Deschutes River D-204.7L

Position - Location:	45° 38.158', -120° 54.942'	45° 38' 9.5", -120° 54' 56.5"	45.63597, -120.91569	The Dalles

Strategy Objective: Deflection : Prevent oil from entering (or leaving) the Deschutes River.

Implementation: Use 600' of boom to deflect oil downstream away from the mouth of the Deschutes River while keeping boat launch open. Anchor to E bank and run boom out to the NW (close entrance by attaching boom to both banks only if necessary) Very shallow approach, larger boat will only be able to get about 1000' from bridge. Bring waders to access shore.

Staging Area: Remote: Stage at SA-LDR-0.2L/Heritage Landing

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water.

Field Notes: Launch from BL-LDR-0.2L/Heritage Landing

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Public Recreation Site/Area, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations

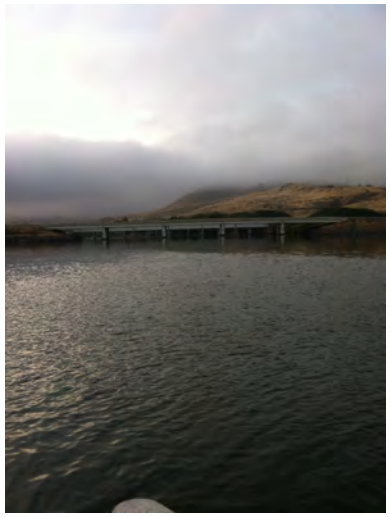
Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

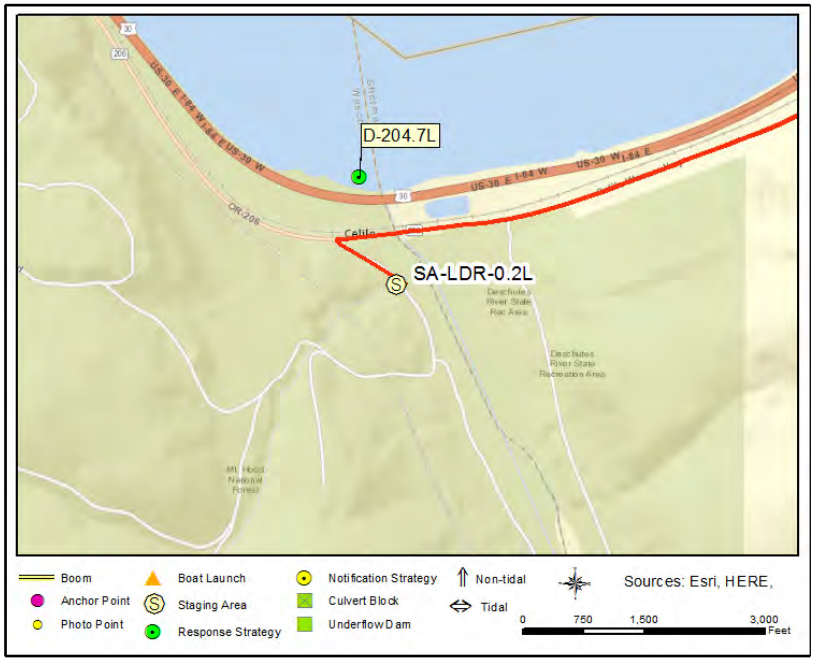
Recommended Personnel

1	Boat Operator
3	Laborer

Mouth of the Deschutes River D-204.7L



D-204.7L Photo: Mouth of Deschutes River.



Site Contact

Deschutes River State Rec Area
Land/Property Contact : land manager

OR
541-739-2322

Nearest Address

Celilo-Wasco Highway and Moody Road
The Dalles, OR 97058

Driving Directions

1. Directions to BL-LDR-0.2L/Heritage Landing on the Lower Deschutes River, starting from Sam Hill Memorial Bridge, Biggs Junction OR 97065
2. Go southeast on US-97 (Sam Hill Memorial Brg) toward 104 (0.32 miles)
3. Make sharp right on OR-206-SPUR (Biggs-Rufus Hwy) (2.81 miles)
4. Continue on OR-206 (Biggs-Rufus Hwy) (2.06 miles)
5. Cross the Deschutes River and turn left into Heritage Landing boat launch

<< Go Back

WA shore across from Miller Island D-206.5R

Position - Location:	45° 39.857', -120° 53.004'	45° 39' 51.4", -120° 53' .2"	45.66429, -120.88339	Goldendale

Strategy Objective: Collection : Divert oil to shore for collection

Implementation: Anchor 1000' of boom to shore and tow out to the E; adjust angle of boom, quantity & placement of anchors based on conditions of the day.

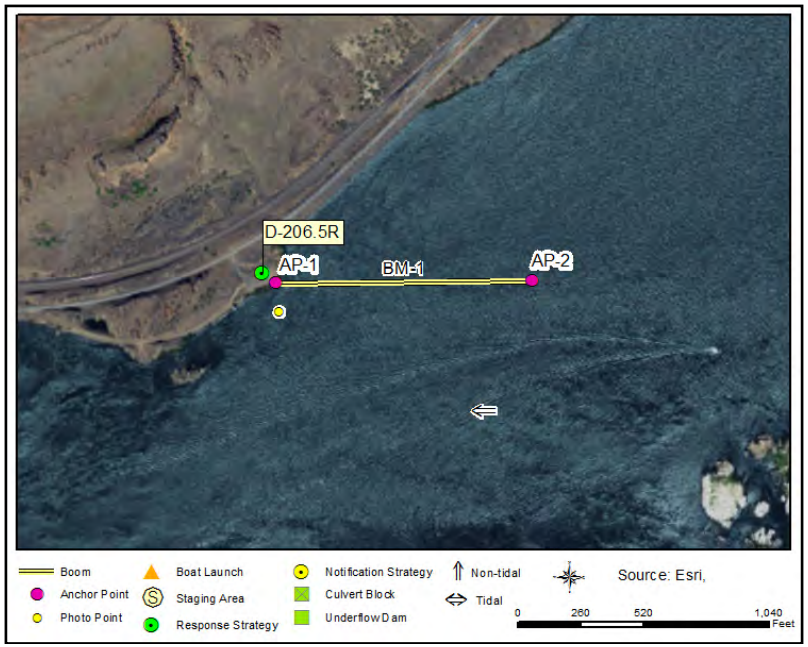
Staging Area: Onsite: Stage on site, gravel road but lots of room for parking and gravel ramp to waters edge.

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: Launch upstream at BL-D-209R/Maryhill West (In-lieu site call BIA to notify)

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Downstream Resources, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

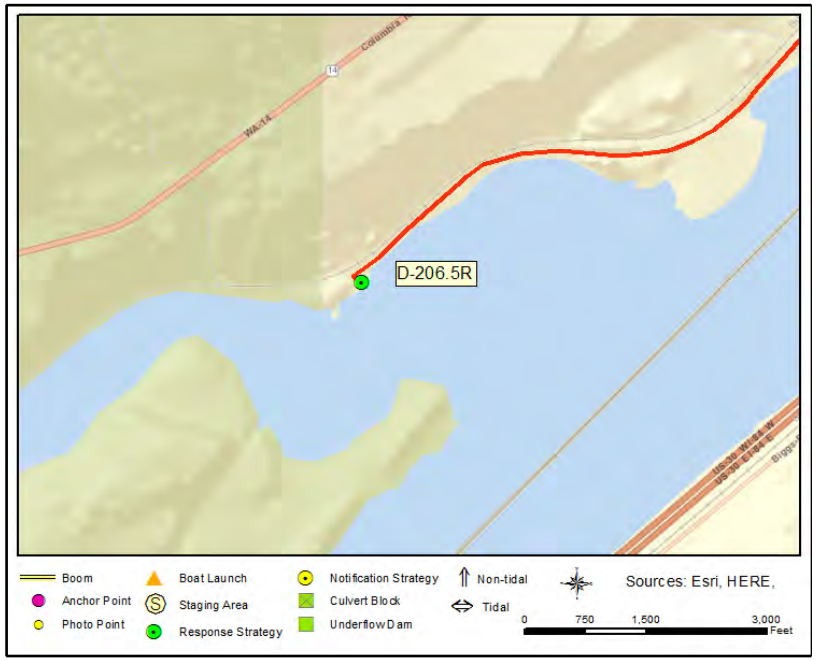
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

WA shore across from Miller Island D-206.5R

D-206.5R Photo: Aerial view of WA shoreline across from Miller Island, site of D-20.5R collection strategy



Site Contact

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Burlington Northern Santa Fe Railroad
Land/Property Contact :
800-832-5452

Nearest Address

50 U.S. 97
Goldendale, WA 98620

Driving Directions

1. Directions for staging for D-206.5R, starting at Sam Hill Memorial Bridge, Biggs Junction, OR 97065
2. Go north on US-97 (Sam Hill Memorial Brg) toward Maryhill Hwy (0.5 miles)
3. Take the first left after the bridge,50 U.S. 97, 98620, follow the gravel road until you see the third pull off on the left (2.5 mi)

<< Go Back

Miller Island D-206.6M

Position - Location:	45° 39.573', -120° 52.755'	45° 39' 34.4", -120° 52' 45.3"	45.65955, -120.87925	The Dalles

Strategy Objective: Deflection : Move oil away from Miller Island

Implementation: Deploy 1000' of boom from a rocky outcrop at the upstream tip of Miller Island out to the SW. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Bring waders to access shallow water near rocky outcrop.

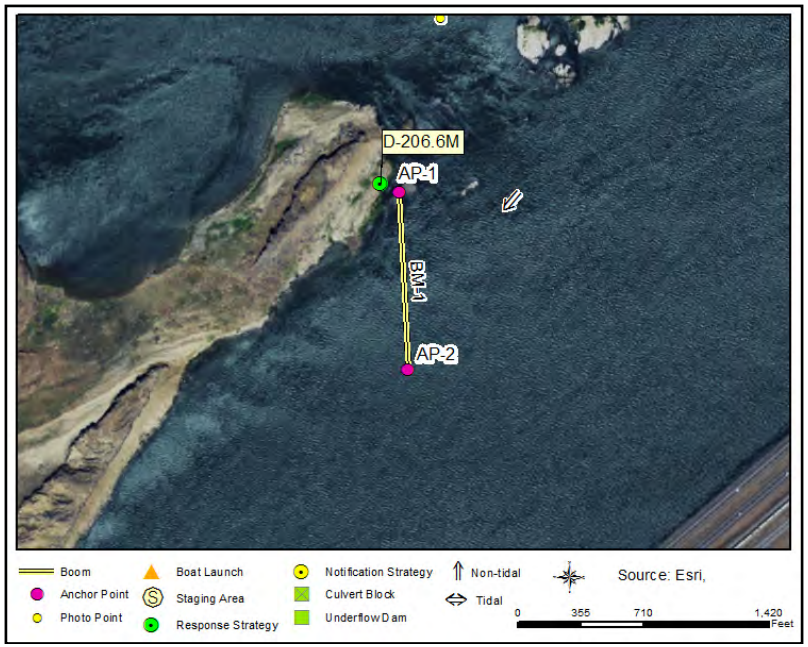
Staging Area: Remote: Stage at SA-LDR-0.2L/Heritage Landing

Site Safety: Water hazard, slips, trips & falls.

Field Notes: Launch from BL-LDR-0.2L/Heritage Landing

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Bald Eagle Nesting, Fish and Wildlife Resources, Great Blue Heron Rookeries, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

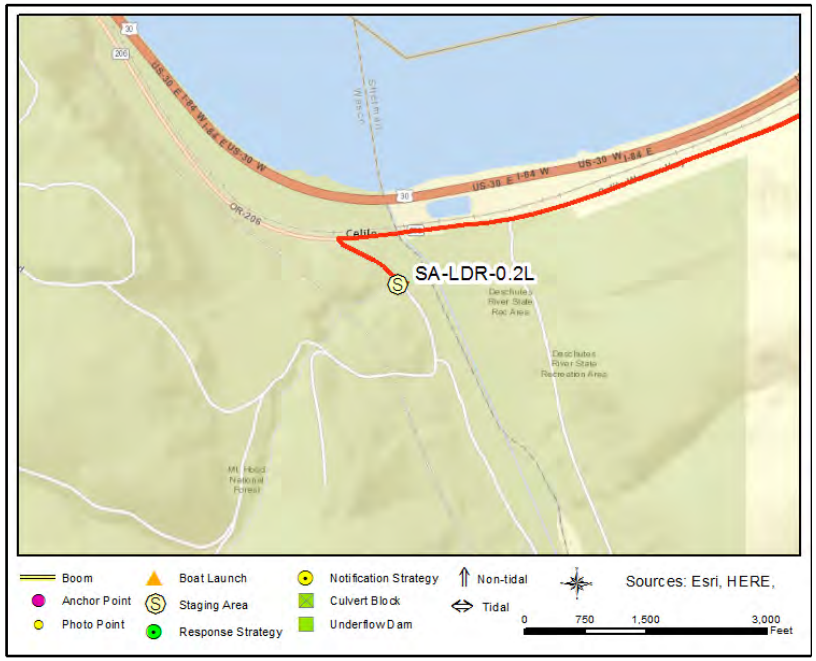
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Miller Island D-206.6M

D-206.6M Photo: Aerial view of the upstream tip of Miller Island



Site Contact

Deschutes River State Rec Area
Land/Property Contact : land manager

OR
541-739-2322

Nearest Address

Celilo-Wasco Highway and Moody Road
The Dalles, OR 97058

Driving Directions

1. Directions to SA-LDR-0.2L/Heritage Landing on the Lower Deschutes River, starting from I-84 take exit 104 for US-97 toward Yakima Bend (0.2 mi)
2. Turn left onto US-97 S (0.2 mi)
3. Turn right at the 2nd cross street onto Biggs-Rufus Hwy (4.6 mi)
4. Continue onto OR-206 W (0.2 mi)
5.TurnleftontoMoodyRd/OldMoodyRd(0.9 mi)
6. Turn left into Deschutes River State Recreation Area (0.7 mi)

<< Go Back

Bob's Point D-207.5M

Position - Location:	45° 40.096', -120° 51.870'	45° 40' 5.7", -120° 51' 52.2"	45.66826, -120.86450	Goldendale

Strategy Objective: Deflection : Keep oil away from WA shoreline

Implementation: Anchor 1000' of boom on the E side of Bob's Point and run it out to the SW. Adjust angle of boom, quantity & placement of anchors, depending on conditions of the day.

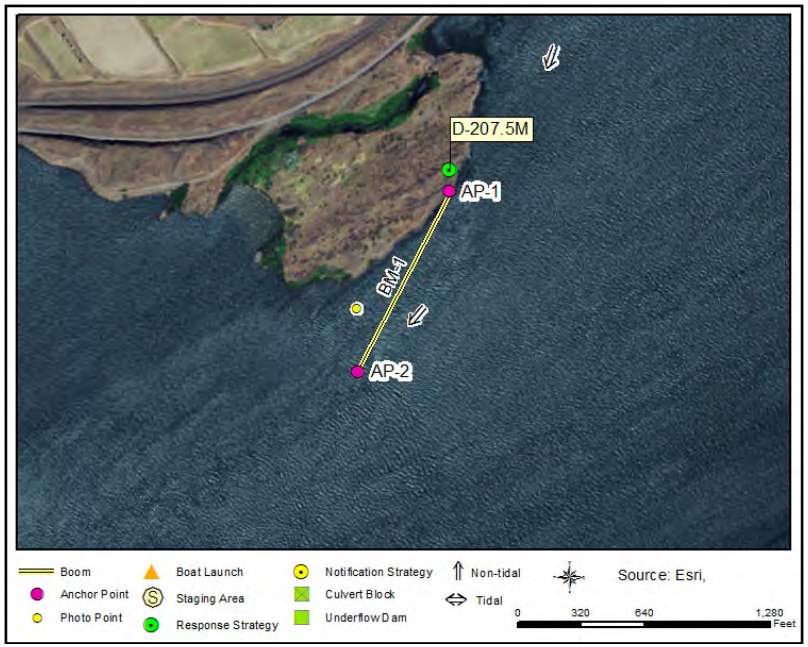
Staging Area: Remote: Staging is at SA-D-209R/Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission)

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch upstream at BL-D-209R/Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission enforcement to notify)

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Riparian Habitat, Sensitive Resources



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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
4	Laborer

Bob's Point D-207.5M

D-207.5M Photo: Aerial view of Bob's Point

Site Contact

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

USACE The Dalles pool
Land/Property Contact : Natural Resource Manager
541-506-7819

Nearest Address

50 U.S. 97
Goldendale, WA 98620

Driving Directions

1. Directions to SA-D-209R, starting from the Sam Hill Memorial Bridge US-97/Biggs Rufus Hwy (0.8 miles)
3. Turn right toward Maryhill State Park Dr (148 ft)
4. Slight right onto Maryhill State Park Dr (108 ft)
5. Turn right (0.2 mi)

<< Go Back

Bob's Point channel D-207.6M

Position - Location:	45° 40.206', -120° 51.874'	45° 40' 12.4", -120° 51' 52.5"	45.67010, -120.86457	Goldendale

Strategy Objective: Exclusion : Keep oil out of small cove.

Implementation: Use 500' of boom. Securing boom to shoreline may be difficult due to rocky substrate. Adjust angle of boom, placement & number of anchors according to conditions of the day.

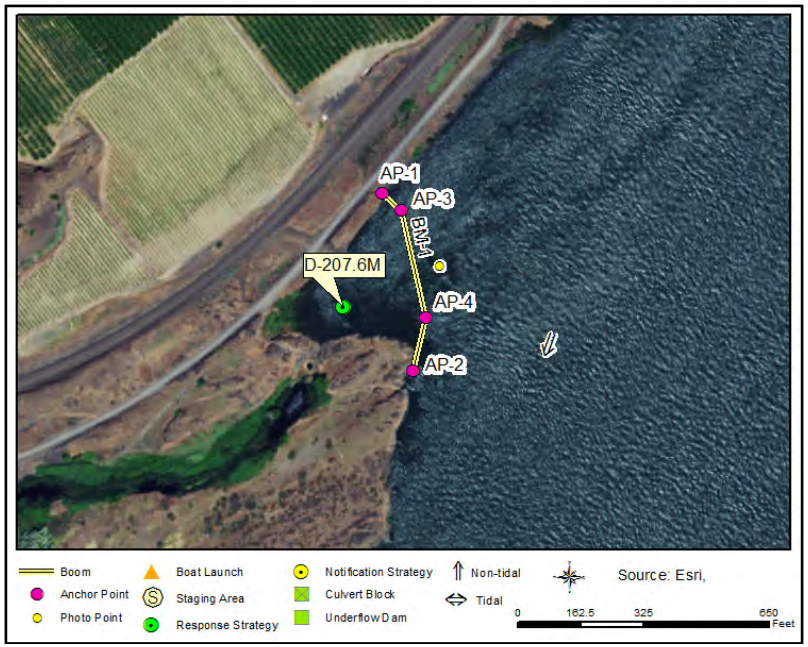
Staging Area: Remote: Staging is 900' upriver at site for D-207.8R

Site Safety: Shallow Water, Slips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not

Field Notes: Launch upstream at BL-D-209R/Maryhill West (In-lieu site call Columbia River Intertribal Fish Commission enforcement to notify)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Waterfowl and Shorebird Concentrations



Recommended Equipment

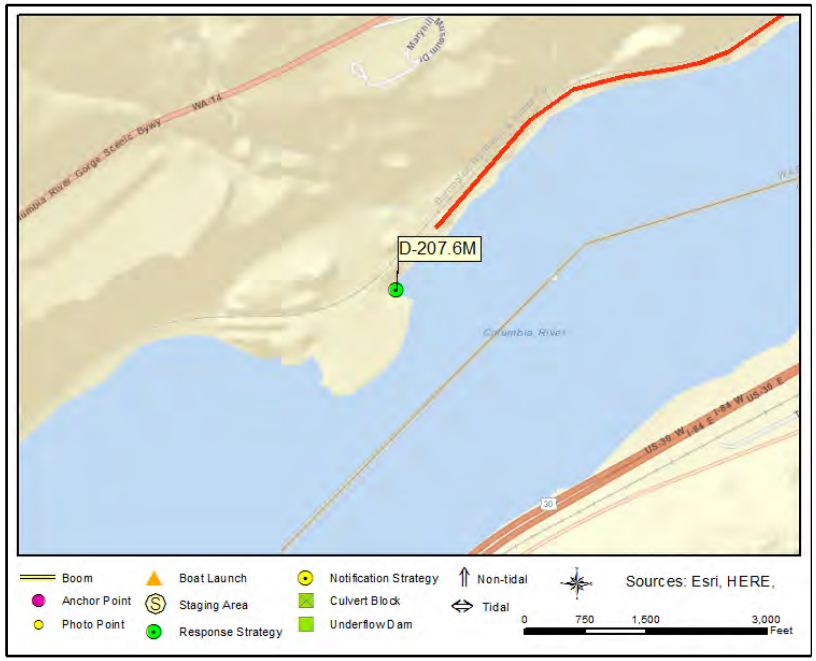
2	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
500	Each	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer

Bob's Point channel D-207.6M

D-207.6M Photo: View of exclusion area.



Site Contact

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Burlington Northern Santa Fe Railroad
Land/Property Contact :
800-832-5452

Nearest Address

Goldendale, WA 98620

Driving Directions

1. Directions for staging point for D-207.4M & D-207.8R, starting at Sam Hill Memorial Bridge, Biggs Junction, OR 97065
2. Go north on US-97 (Sam Hill Memorial Brg) toward Maryhill Hwy (0.5 miles)
3. Take the first left after the bridge,50 U.S. 97, 98620, follow the gravel road until you see the pull off on the left (1.45 mi)

<< Go Back

Just upstream of Bob's Point (FBS MP-111.5) D-207.8R

Position - Location:	45° 40.328', -120° 51.752'	45° 40' 19.7", -120° 51' 45.1"	45.67213, -120.86253	Goldendale

Strategy Objective: Collection : Divert oil to shore for collection.

Implementation: Deploy 1000' of boom from shore out to the NNE. Adjust angle of boom, quantity & placement of anchors based on conditions of the day.

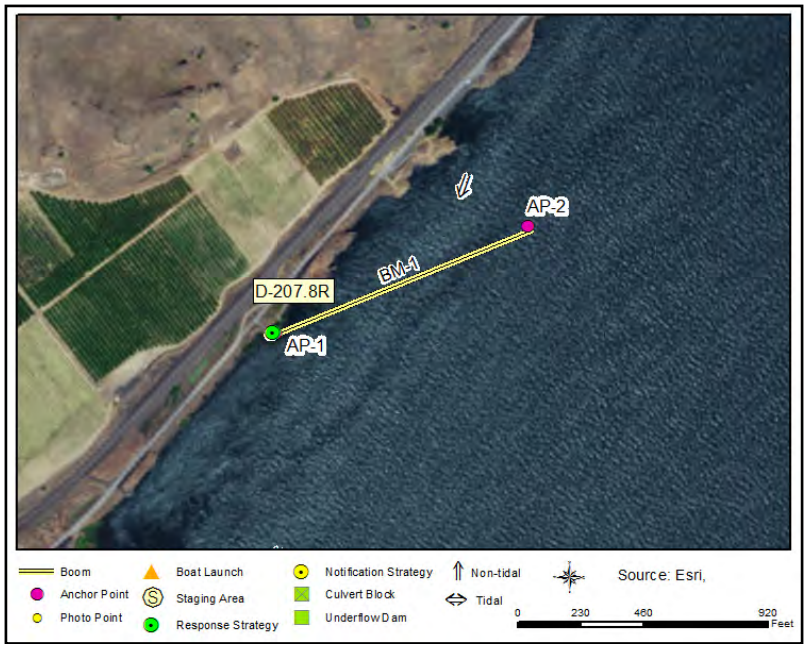
Staging Area: Onsite: Stage on site

Site Safety: Gravel Road, Slips, Trips, Falls, Water Hazard, & Active Railroad, expect trains on the track at any time/from either direction. Do not

Field Notes: Launch upstream at BL-D-209R/Maryhill West (In-lieu site call BIA to notify)

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Downstream Resources, Riparian Habitat



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

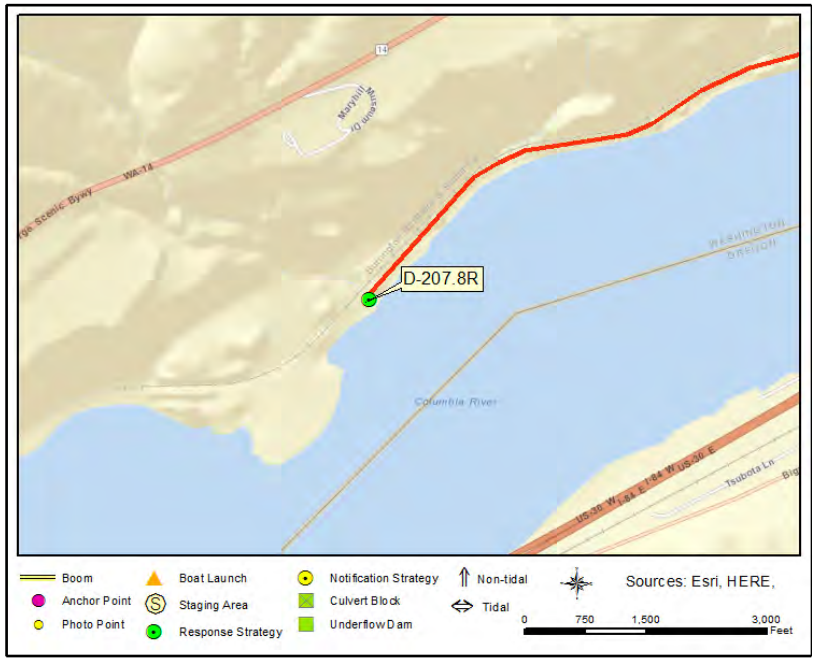
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Just upstream of Bob's Point (FBS MP-111.5) D-207.8R

D-207.8R Photo: Shoreside view of staging area & anchor point



Site Contact

Columbia River Inter-Tribal Fish Commission
Land/Property Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Nearest Address

50 U.S. 97
Goldendale, WA 98620

Driving Directions

1. Directions for staging point for D-207.4M & D-207.8R, starting at Sam Hill Memorial Bridge, Biggs Junction, OR 97065
2. Go north on US-97 (Sam Hill Memorial Brg) toward Maryhill Hwy (0.5 miles)
3. Take the first left after the bridge,50 U.S. 97, 98620, follow the gravel road until you see the pull off on the left (1.45 mi)

<< Go Back

Spanish Hollow Creek D-209.3L

Position - Location:	45° 40.415', -120° 49.873'	45° 40' 24.9", -120° 49' 52.4"	45.67359, -120.83122	Goldendale

Strategy Objective: Exclusion : Keep oil out of creek.

Implementation: Deploy 120' of sorbent boom in 3, 40' sections.

Staging Area: Remote: Stage at SA-D-209.9R/Maryhill State Park

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

Field Notes: Launch at BL-D-209.9R/Maryhill State Park

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Riparian Habitat, Salmonid Concentrations and Habitat

Recommended Equipment

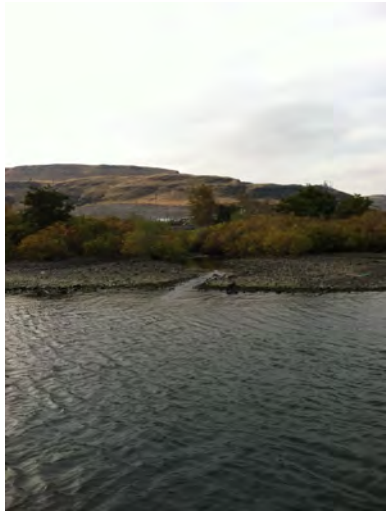
6	Each	Anchoring Post(s) - (shoreside)
120	Feet	Boom - Sorbent

Recommended Personnel

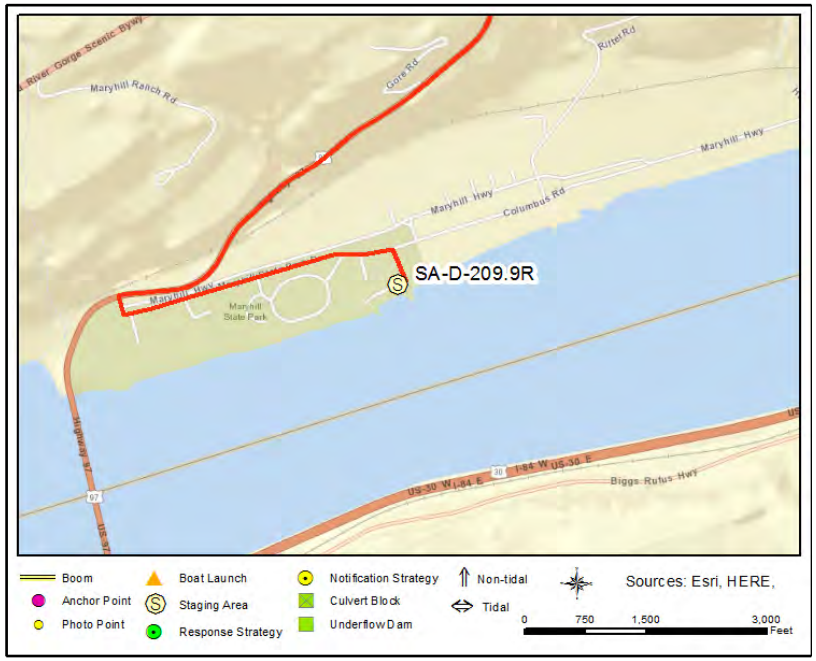
1	Boat Operator
2	Laborer

<< Go Back

Spanish Hollow Creek D-209.3L



D-209.3L Photo: Mouth of Spanish Hollow Creek



Site Contact

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

Directions to BL-D-209.9R/Maryhill State Park Boat Launch from South Bound US 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.22 miles)
5. Follow signs to State Park, Boat launch is at the east end of the park.

<< Go Back

Maryhill State Park D-209.8R

Position - Location:	45° 40.901', -120° 49.323'	45° 40' 54.0", -120° 49' 19.4"	45.68168, -120.82204	Goldendale

Strategy Objective: Deflection : Keep oil off the park shoreline

Implementation: Deploy 600' of boom out to the SW from the jetty on the W side of the boat launch. Adjust angle of boom, quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Stage on site at SA-D-209.9R/Maryhill State Park. Contact park staff in case they need to close to the public

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch on site at BL-D-209.9R/Maryhill State Park

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Recreational Use Area, Riparian Habitat, Sensitive Resources Nearby, State Park

Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

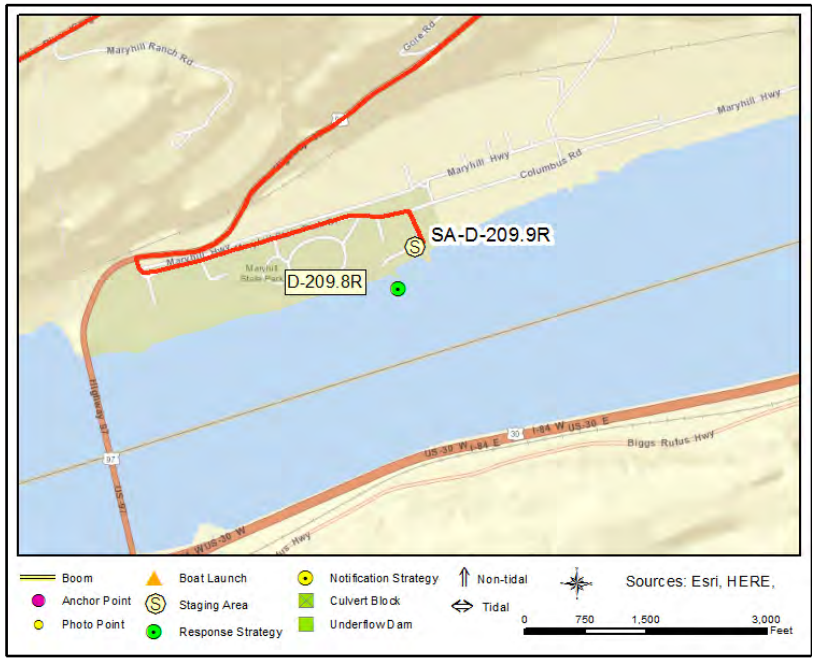
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

Maryhill State Park D-209.8R

D-209.8R Photo: View of Maryhill State Park shoreline



Site Contact

Maryhill State Park
Primary Contact : Property manager

WA
509-773-5007

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

1. Directions to SA-D-209.9R/Maryhill State Park, starting at 9780 Highway 14 Goldendale
2. Go east on WA-14 (Highway 14) toward Maryhill Ranch Rd
3. Turn right on US-97 (Highway 97)
4. Finish at 50 SR 97, 98620, on the left
5. Follow signs for Maryhill State Park. Boat launch is at the East Side of the Park.

<< Go Back

Maryhill State Park boat launch D-209.9R

Position - Location:	45° 40.985', -120° 49.049'	45° 40' 59.1", -120° 49' 3.0"	45.68308, -120.81749	Goldendale

Strategy Objective: Collection : Divert oil to a collection point at the boat launch for removal

Implementation: Deploy 1000' of boom. 800' (BM-1) should be anchored from the outside upstream NE corner of the boat launch and towed out toward the E to deeper water to divert oil moving downstream to the collection point for removal by vac truck or skimmer with portable storage. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. The other 200'(BM-2) should be used to exclude oil from entering small bay just upstream, anchor on shore on both sides of the opening.

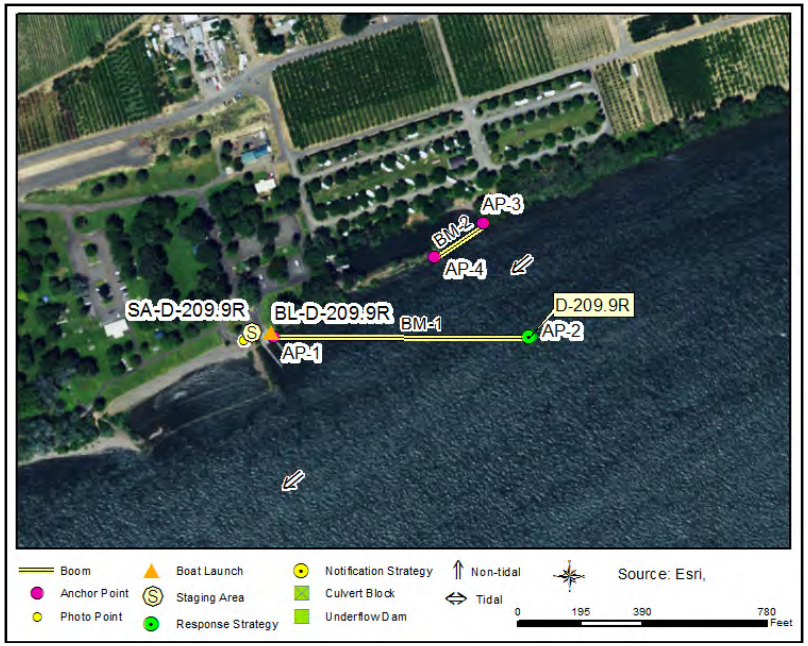
Staging Area: Onsite: Stage on site at SA-D-209.9R/Maryhill State Park

Site Safety: Water hazard, slips trips & falls, working boat launch.

Field Notes: Launch on site at BL-D-209.9R/Maryhill State Park

Watercourse: River - Above a Dam - The Dalles pool

Resources at Risk: Boat Launch/Ramp, Downstream Resources, Recreational Use Area, Riparian Habitat, Sensitive Resources Nearby, State Park



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
3	Each	Anchoring System(s)- Shoreside
1000	Each	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

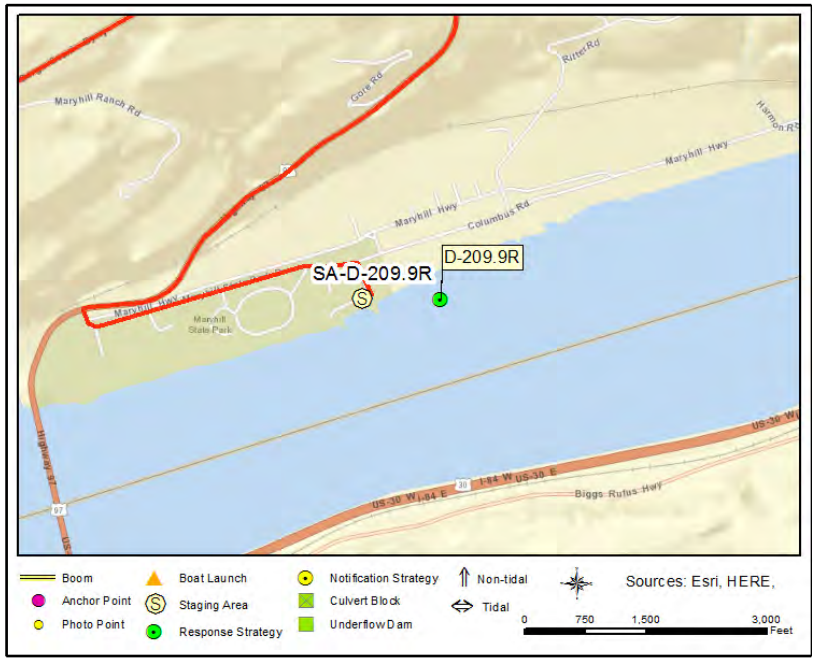
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Maryhill State Park boat launch D-209.9R

D-209.9R Photo: View of Maryhill State Park from boat launch



Site Contact

Maryhill State Park
Primary Contact : Property manager

WA
509-773-5007

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

1. Directions to SA-D-209.9R/Maryhill State Park, starting at 9780 Highway 14 Goldendale
2. Go east on WA-14 (Highway 14) toward Maryhill Ranch Rd
3. Turn right on US-97 (Highway 97)
4. Finish at 50 SR 97, 98620, on the left
5. Follow signs for Maryhill State Park. Boat launch is at the East Side of the Park.

<< Go Back

Downstream SW of Rufus 4 D-211.3M

Position - Location:	45° 41.047', -120° 47.483'	45° 41' 2.8", -120° 47' 29.0"	45.68412, -120.79139	Goldendale

Strategy Objective: Diversion : Protect shallow water habitat and shoreline at the SW end of island.

Implementation: Anchor 1000' of boom on the shoreline adjacent to a pond on the interior of the island, angle boom to the NW and anchor off shore (if possible angle so that oil is diverted to downstream collection point on opposite bank). Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage at SA-D-209.9R/Maryhill State Park

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

Field Notes: Launch boat from Maryhill State Park (BL-D-209.9R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)

Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

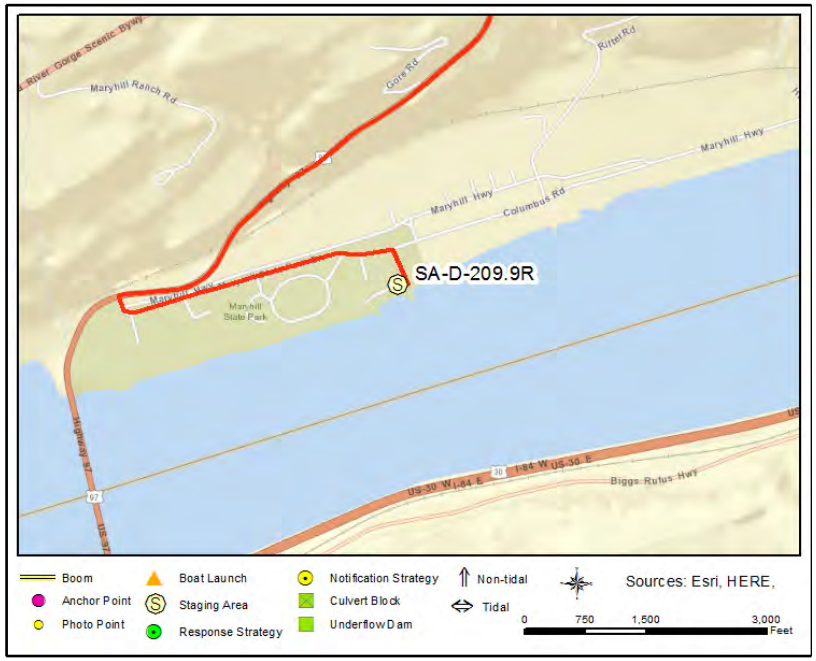
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Downstream SW of Rufus 4 D-211.3M

D-211.3M Photo: Downstream anchor point is small island in photo.



Site Contact

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

Directions to BL-D-209.9R/Maryhill State Park Boat Launch from South Bound US 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.22 miles)
5. Follow signs to State Park, Boat launch is at the east end of the park.

<< Go Back

Downstream SW of Rufus 3 D-211.8M

Position - Location:	45° 41.249', -120° 46.827'	45° 41' 14.9", -120° 46' 49.6"	45.68748, -120.78045	Goldendale

Strategy Objective: Exclusion : Protect shallow water habitat.

Implementation: Use 700' of boom and attach to shoreline on both ends. Under water rock on approach to site. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage at SA-D-209.9R/Maryhill State Park

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Underwater Rocks.

Field Notes: Launch boat from BL-D-209.9R/Maryhill State Park

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)

Recommended Equipment

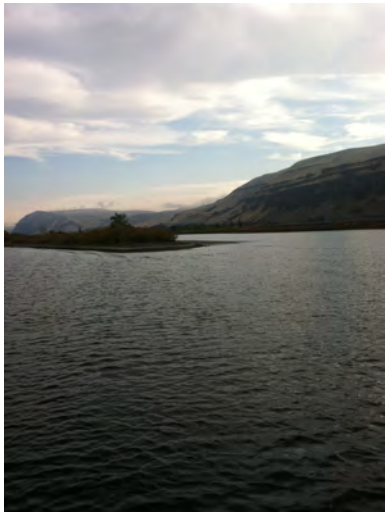
3	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

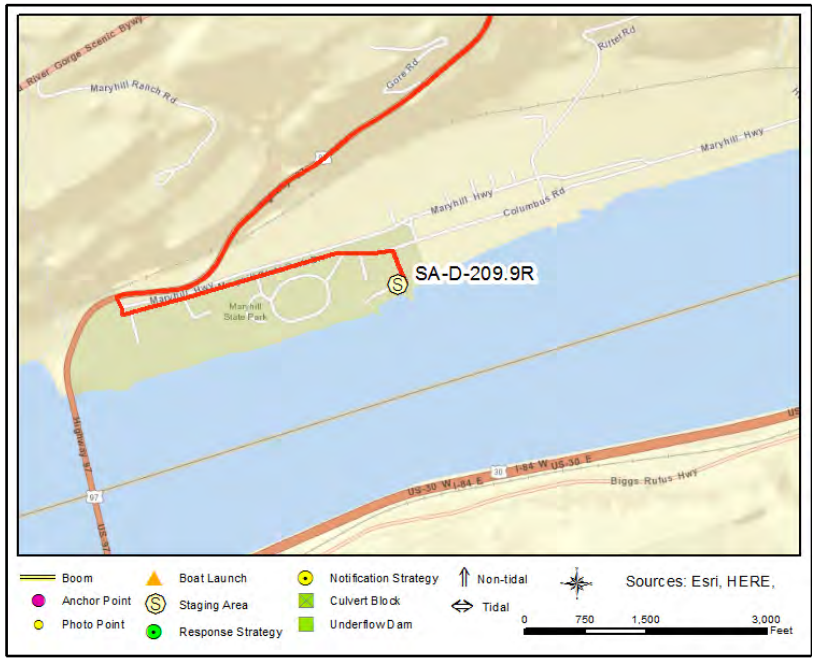
1	Boat Operator
4	Laborer

<< Go Back

Downstream SW of Rufus 3 D-211.8M



D-211.8M Photo: Upriver anchor area



Site Contact

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

Directions to BL-D-209.9R/Maryhill State Park Boat Launch from South Bound US 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.22 miles)
5. Follow signs to State Park, Boat launch is at the east end of the park.

<< Go Back

Old Maryhill Road D-212.6R

Position - Location:	45° 41.741', -120° 46.366'	45° 41' 44.5", -120° 46' 21.9"	45.69569, -120.77276	Goldendale

Strategy Objective: Collection : Collect oil that is moving down river.

Implementation: Use 1000' of boom that is anchored to shore and deployed at an angle up river. Good access off of Maryhill Highway. Adjust angle of boom, placement & number of anchors according to conditions of the day.

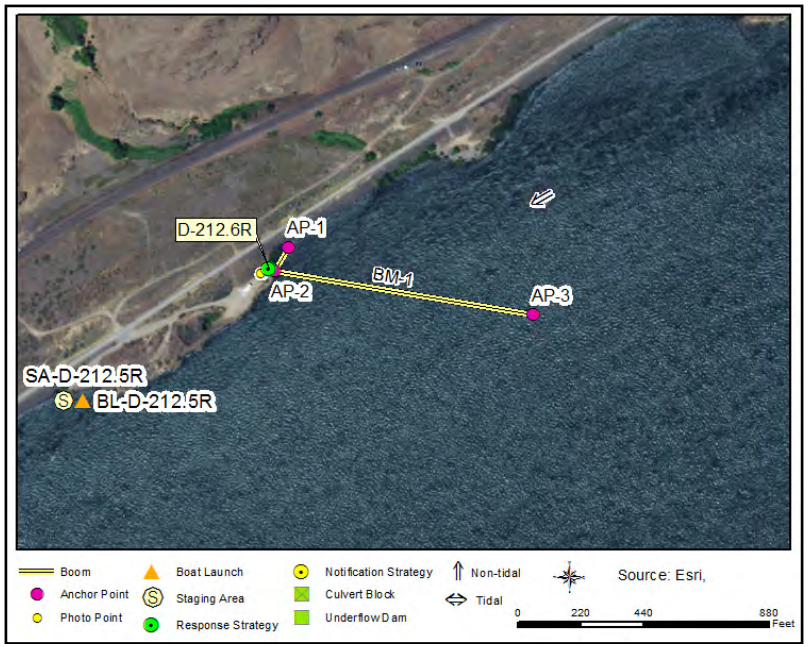
Staging Area: Onsite: Staging for a small vac truck on site

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

Field Notes: Primitive boat launch on site (BL-D-212.5R) or Maryhill State Park (BL-D-209.9R)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1000	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

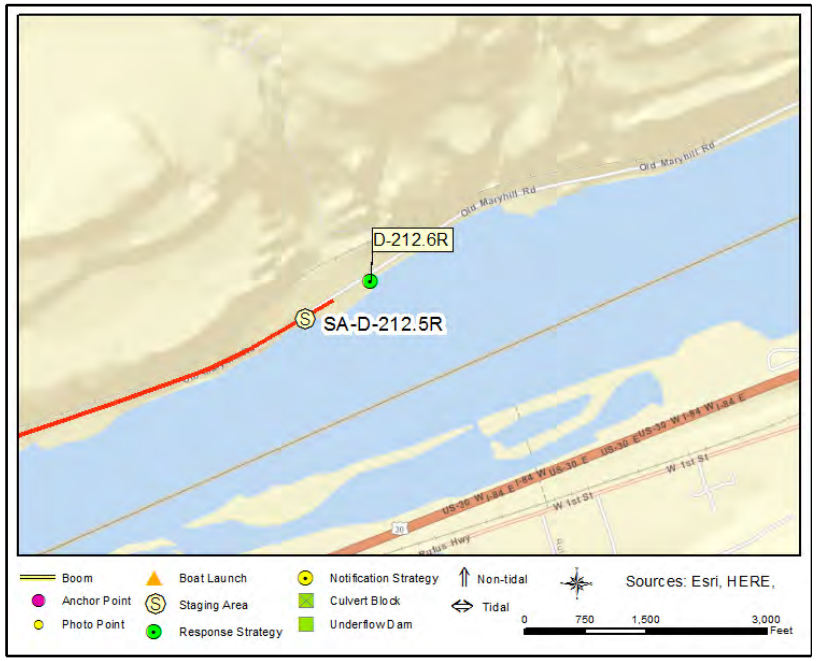
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

Old Maryhill Road D-212.6R

D-212.6R Photo: Aerial overview of collection area.



Site Contact

Nearest Address

Maryhill Highway
Goldendale, WA 98620

Driving Directions

Directions to collection site.
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.06 miles)
5. Make sharp left on Maryhill Hwy (0.03 miles)
6. Turn left at Maryhill State Park Dr to stay on Maryhill Hwy
7. Continue on road along the river until you reach the boat launch/collection site.

<< Go Back

Downstream SW of Rufus 2 D-212.7M

Position - Location:	45° 41.434', -120° 46.070'	45° 41' 26.0", -120° 46' 4.2"	45.69057, -120.76783	Wasco

Strategy Objective: Exclusion : Protect shallow water habitat and restoration project.

Implementation: Use 300' of boom and attach to shoreline on both sides of gap. Large underwater rocks in approach, very shallow will need crew with waders. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage at Giles French Park SA-D-214.6L

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Underwater Rocks.

Field Notes: Launch boat from Giles French Park BL-D-214.6L

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)

Recommended Equipment

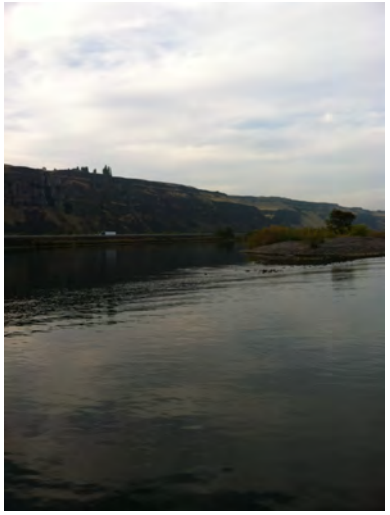
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

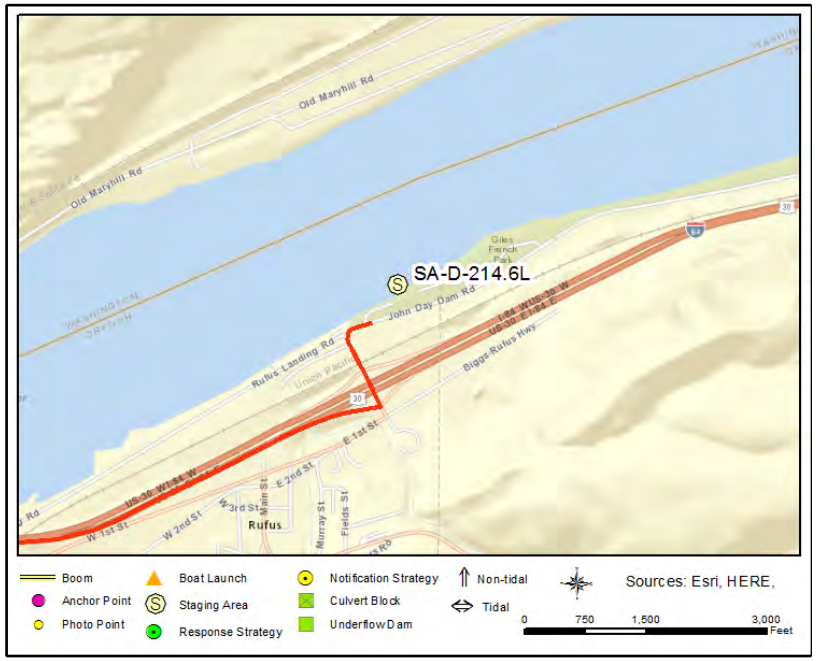
1	Boat Operator
2	Laborer

<< Go Back

Downstream SW of Rufus 2 D-212.7M



D-212.7M Photo: Channel to be closed off with boom including down river anchor point.



Site Contact

Nearest Address

John Day Dam Road
Wasco, OR 97065

Driving Directions

Directions to Giles French Park Boat Launch BL-D-214.6L starting from SB US Highway 97.
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.91 miles)
5. Turn left onto ramp and go on I-84 E/US-30 E toward Pendleton (5.29 miles)
6. At exit 109 take ramp to John Day Dam toward Rufus (0.2 miles)
7. Make sharp left (0.18 miles)
8. Bear right on John Day Dm (John Day Dam Ln) (0.07 miles)
9. Finish at Giles French Park

<< Go Back

Downstream SW of Rufus 1 D-213L

Position - Location:	45° 41.565', -120° 45.565'	45° 41' 33.9", -120° 45' 33.9"	45.69275, -120.75942	Wasco

Strategy Objective: Exclusion : Protect shallow water habitat.

Implementation: Deploy 500' of boom across the inlet opening. Large underwater rocks on approach. Crew will need waders to deploy. Adjust angle of boom, placement & number of anchors according to conditions of the day.

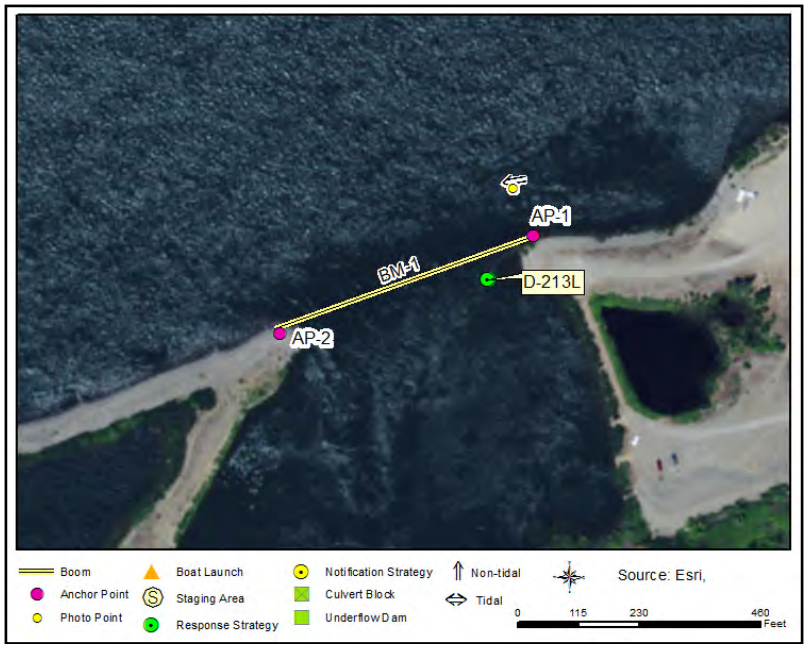
Staging Area: Onsite: Large gravel parking lots onsite.

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Underwater Rocks.

Field Notes: Launch boat from Giles French Park (BL-D-214.6L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)



Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

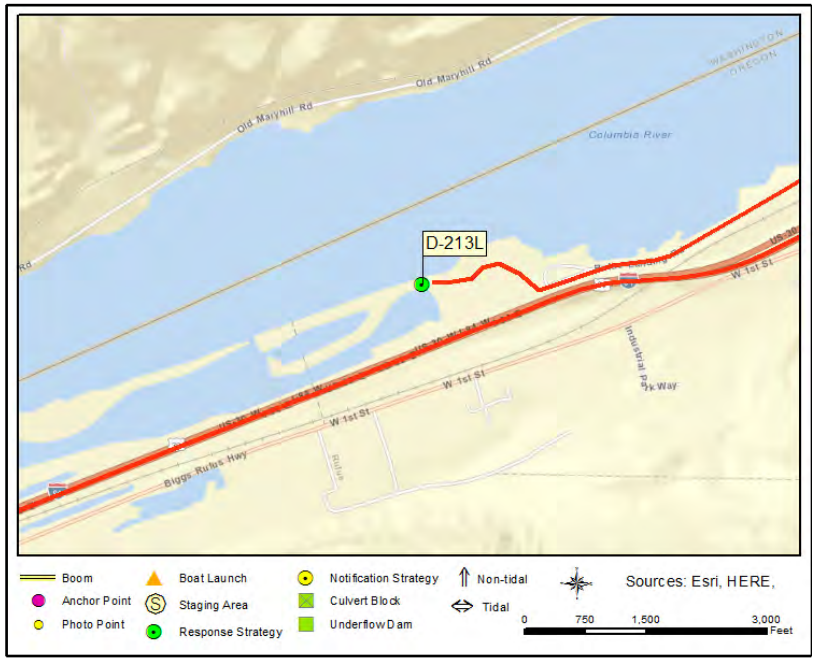
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

Downstream SW of Rufus 1 D-213L

D-213L Photo: Upriver anchor location



Site Contact

Nearest Address

John Day Dam Road
Wasco, OR 97065

Driving Directions

Directions to D-213L starting from US Highway 97.
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.91 miles)
5. Turn left onto ramp and go on I-84 E/US-30 E toward Pendleton (5.29 miles)
6. At exit 109 take ramp to John Day Dam toward Rufus (0.2 miles)
7. Make sharp left (0.18 miles)
8. Bear left on John Day Dm (John Day Dam Ln) (1.2 miles)
9. Turn right into large gravel parking area, destination on the NW corner.

<< Go Back

Rufus Landing D-213.3L

Position - Location:	45° 41.643', -120° 45.254'	45° 41' 38.6", -120° 45' 15.2"	45.69405, -120.75423	Wasco

Strategy Objective: Collection : Divert oil to shoreline for collection.

Implementation: Deploy 1000' of boom at an angle to the shoreline. Easy access for vehicles. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Lots of area for staging on site, large gravel parking areas.

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

Field Notes: Boat Launch from Giles French (BL-D-214.6L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Waterfowl (Wintering and Production)

Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

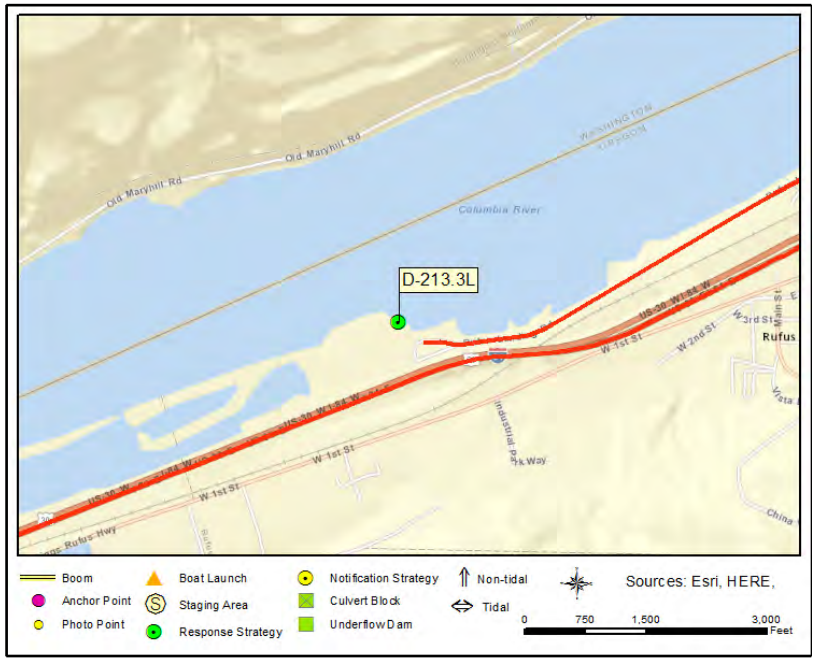
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Rufus Landing D-213.3L

D-213.3L Photo: Collection area



Site Contact

Nearest Address

Rufus Landing Road
Wasco, OR 97065

Driving Directions

Directions to D-213.3L collection area from South Bound Highway 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.91 miles)
5. Turn left onto ramp and go on I-84 E/US-30 E toward Pendleton (5.29 miles)
6. At exit 109 take ramp to John Day Dam toward Rufus (0.2 miles)
7. Make sharp left (0.18 miles)
8. Turn left on Rufus Landing Rd (Rock Beach Ln) (0.52 miles)
9. Continue to the end of Rufus Landing Road.

<< Go Back

Rufus D-213.8L

Position - Location:	45° 41.804', -120° 44.533'	45° 41' 48.2", -120° 44' 32.0"	45.69673, -120.74221	Wasco

Strategy Objective: Deflection : Keep oil out of shallow water habitat and deflect into downstream collection area.

Implementation: Use 1000' feet of boom. Crew will need waders to deploy. Adjust angle of boom, placement & number of anchors according to conditions of the day.

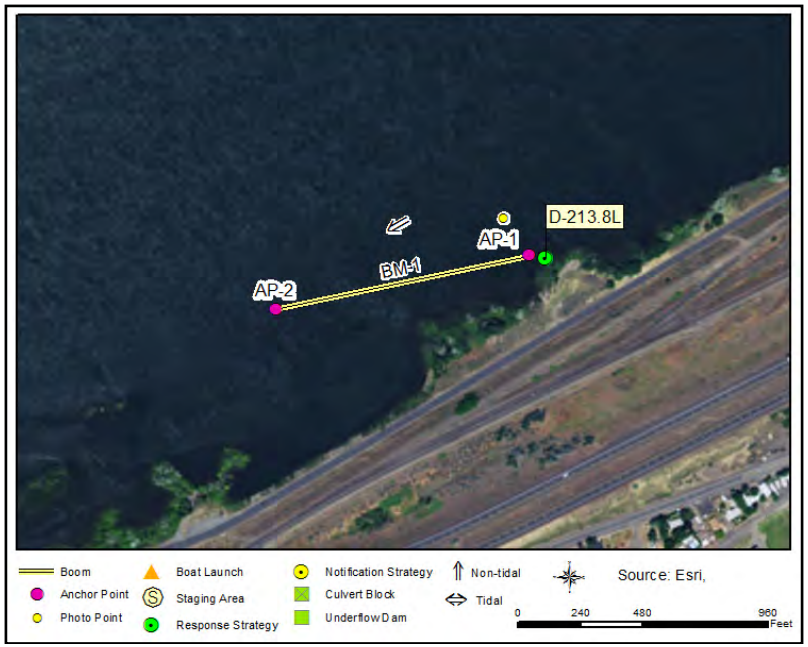
Staging Area: Remote: Giles French Park (SA-D-214.6L) Lots of staging just downstream at gravel parking lots.

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Underwater Rocks

Field Notes: Launch boat from Giles French Park (BL-D-214.6L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Resident Warmwater Fish, Salmonid Concentrations and Habitat, Sensitive Resources Nearby, Waterfowl (Wintering and Production)



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

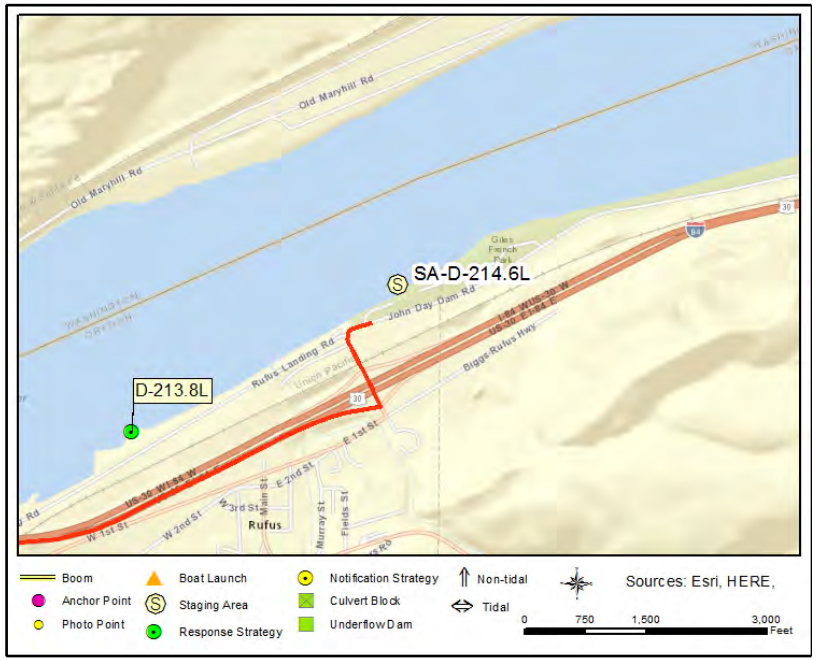
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Rufus D-213.8L

D-213.8L Photo: Up river anchor location



Site Contact

Nearest Address

John Day Dam Road
Wasco, OR 97065

Driving Directions

Directions to Giles French Park Boat Launch BL-D-214.6L starting from SB US Highway 97.
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.91 miles)
5. Turn left onto ramp and go on I-84 E/US-30 E toward Pendleton (5.29 miles)
6. At exit 109 take ramp to John Day Dam toward Rufus (0.2 miles)
7. Make sharp left (0.18 miles)
8. Bear right on John Day Dm (John Day Dam Ln) (0.07 miles)
9. Finish at Giles French Park

<< Go Back

Impounded pond SW of the John Day Lock & Dam D-214.5R

Position - Location:	45° 42.381', -120° 44.080'	45° 42' 22.9", -120° 44' 4.8"	45.70635, -120.73467	goldendale

Strategy Objective: Collection : Divert oil to shore for collection just upstream of impounded pond SW of the John Day Lock & Dam

Implementation: Use 500' of boom anchored to shore and angled down river. Due to proximity to John Day dam area could be dangerous at times depending on how much water is being released. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage equipment in large gravel area near collection point

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

Field Notes: Launch boat from Giles French Ramp (BL-D-214.6L)

Watercourse: River - Above a Dam - Dalles Pool

Resources at Risk: Downstream Resources, Waterfowl and Shorebird Concentrations

Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

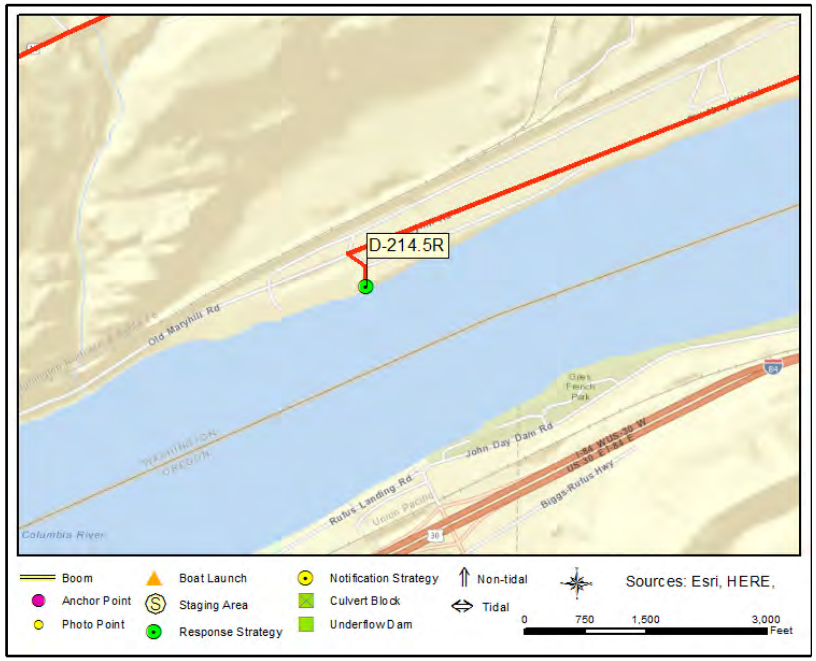
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Impounded pond SW of the John Day Lock & Dam D-214.5R

D-214.5R Photo: View of strategy location from shore



Site Contact

USACE The Dalles pool
Primary Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

John Day Dam Road
goldendale, WA

Driving Directions

1. Directions to D-214.5R starting at Goldendale, WA
2. Go east on E Allyn St toward S Chatfield St (0.05 miles)
3. Turn left on S Chatfield St (0.16 miles)
4. Turn right on WA-142 (E Broadway St) (0.91 miles)
5. Turn right on US-97 (Highway 97) (10.14 miles)
6. Turn left to stay on US-97 (Highway 97) (0.2 miles)
7. Turn left to stay on US-97 (WA-14) (0.45 miles)
8. Continue on WA-14 (Highway 14) (6.81 miles)
9. Turn right on John Day Dam Rd (3.3 miles)
10. Finish at John Day Dam Road, goldendale, WA, on the right

<< Go Back

Giles French Boat Launch D-214.6L

Position - Location:	45° 42.108', -120° 43.724'	45° 42' 6.5", -120° 43' 43.4"	45.70181, -120.72873	Wasco

Strategy Objective: Collection : Collect oil moving downstream while keeping boat launch open

Implementation: Deploy 1000' of boom from the base of the pier near shore, with 200' along the shoreline and 800' set out to the NE to divert oil to the collection point. Adjust angle of boom, number & placement of anchors, according to conditions of the day.

Staging Area: Onsite: Stage on site at SA-D-214.6L/Giles French

Site Safety: Moving vehicles, water hazard, slips, trips & falls.

Field Notes: Launch on site at BL-D-214.6L/Giles French

Watercourse: River - Above a Dam - John Day pool

Resources at Risk: Boat Launch/Ramp, Downstream Resources

Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	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

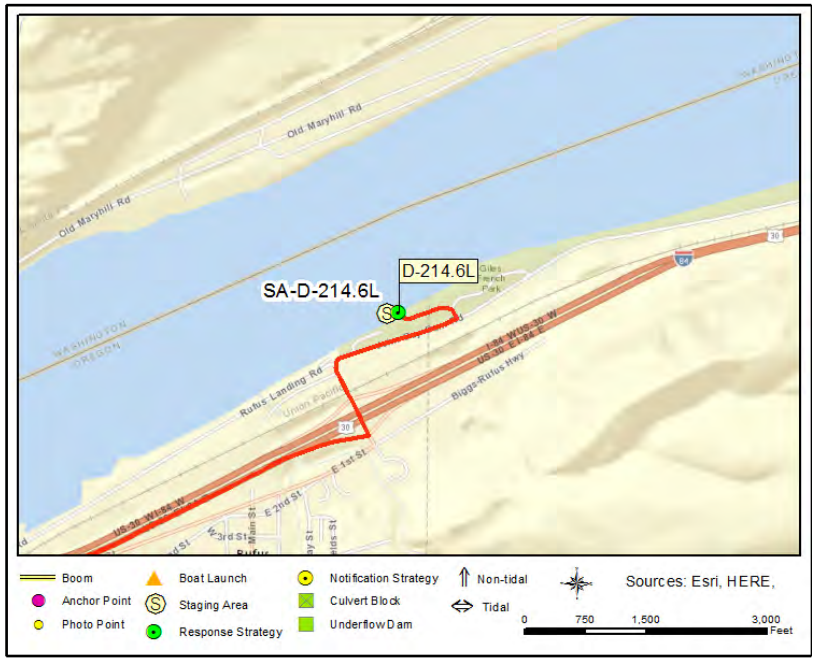
Recommended Personnel

1	Boat Operator
4	Laborer

<< Go Back

Giles French Boat Launch D-214.6L

D-214.6L Photo: View of the Giles French boat launch and site of D-214.6L



Site Contact

USACE The Dalles pool
Land/Property Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

John Day Dam Rd.
Wasco, OR 97065

Driving Directions

1. Start at Sam Hill Memorial Bridge, Bigg Junction OR 97065
2. Go south on US-97 (Sam Hill Memorial Brg) toward 104 (0.21 miles)
3. Turn left onto ramp and go on I-84 E/US-30 E toward Pendleton (5.29 miles)
4. At exit 109 take ramp to John Day Dam toward Rufus (0.2 miles)
5. Make sharp left (0.18 miles)
6. Bear right on John Day Dm (John Day Dam Ln) (0.1 miles)
7. Finish at Giles French Boat Launch

<< Go Back

John Day Dam downstream lock D-216.4R

Position - Location:	45° 43.095', -120° 41.944'	45° 43' 5.7", -120° 41' 56.6"	45.71825, -120.69906	Goldendale

Strategy Objective: Collection : Divert oil coming through the lock to collection point

Implementation: Deploy 800' from the S side of the lock gate to the N shore downstream to divert oil for collection with a vac truck or skimmer & portable storage. Adjust angle of boom, placement & number of anchors, depending on conditions of the day.

Staging Area: Onsite: Call the John Day Dam Control Room at 541-298-9712 to have someone meet you at the gate to access the site.

Site Safety: Dam, lock, water hazard, heavy equipment, slips, trips & falls.

Field Notes: Pre-notify the Dam Control Room at 541-298-9712 for dam access. Launch at BL-D-214.6L/Giles French on the OR side unless you can get through the locks then launch at BL-J-216.5/Railroad Island above the dam on the WA side

Watercourse: River - Below a Dam - Downstream side of the John Day Locks in The Dalles pool

Resources at Risk: Downstream Resources, Lock and Dam

Recommended Equipment

3	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

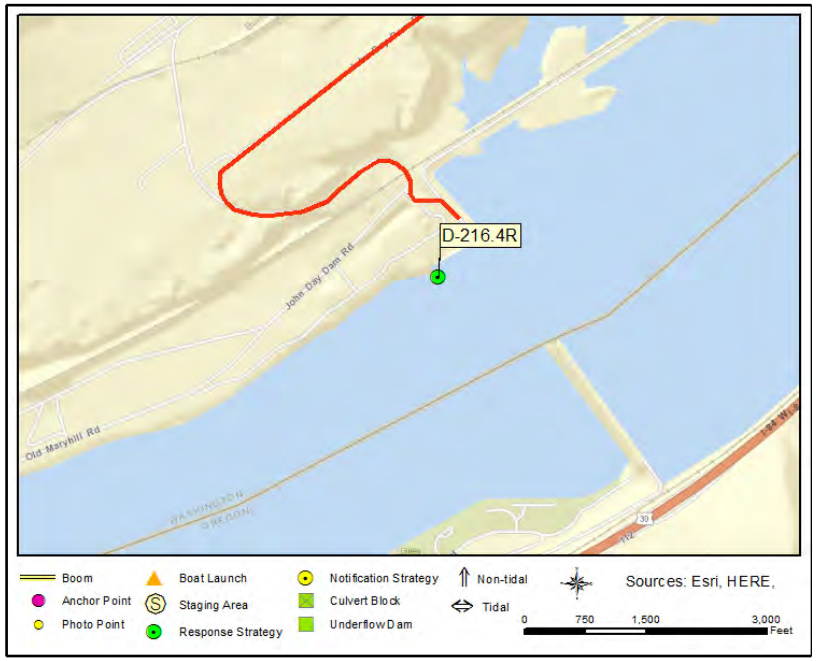
Recommended Personnel

1	Boat Operator
3	Laborer

<< Go Back

John Day Dam downstream lock D-216.4R

D-216.4R Photo: Aerial view of the downstream end of the John Day Lock showing anchor point for collection strategy D-216.3R



Site Contact

USACE John Day Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-9712

Nearest Address

John Day Dam Rd
Goldendale, WA 98620

Driving Directions

1. Directions to the WA side of the John Day Dam, starting at Sam Hill Memorial Bridge, Biggs Junction, OR 97065
2. Go northeast on US-97 (Sam Hill Memorial Brg) (2.25 miles)
3. Turn right on WA-14 (Highway 14) (6.81 miles)
4. Turn right on John Day Dam Rd (1.38 miles)
5. Turn right to access the dam, or left toward J-216.5R/Railroad Island boat launch (0.3 mi)

<< Go Back

John Day Dam downstream S fish ladder in/out take D-216.45L

Position - Location:	45° 42.706', -120° 41.403'	45° 42' 42.4", -120° 41' 24.2"	45.71177, -120.69005	Wasco

Strategy Objective: Exclusion : Keep oil away from the fish ladder

Implementation: Deploy 100' of boom in a chevron formation, anchor on either side of the opening to the fish ladder. Adjust boom & anchors according to conditions of the day.

Staging Area: Onsite: Call the Dam Control room to get access to the dam 541-298-9712. Parking is available close to strategy location

Site Safety: Dam, water hazard, slips, trips & falls

Field Notes: Pre-notify the John Day Dam Control Room at 541-298-9712 for dam access. Launch at BL-D-214.6L/Giles French

Watercourse: River - Below a Dam - At the downstream side of the John Day Dam, in The Dalles pool

Resources at Risk: Fish Ladder(s)

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

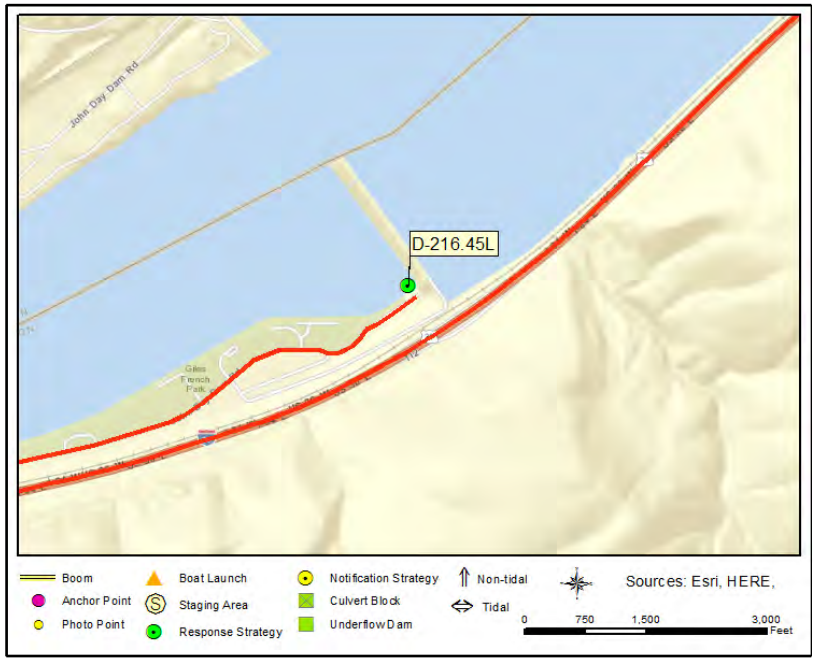
Recommended Personnel

1	Boat Operator
2	Laborer

<< Go Back

John Day Dam downstream S fish ladder in/out take D-216.45L

D-216.45L Photo: John Day Dam downstream OR fishladder intake



Site Contact

USACE John Day Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-9712

Nearest Address

John Day Dam Road
Wasco, OR 97065

Driving Directions

1. Directions to the John Day Dam in OR. Starting at th street, Umatilla, OR 97882
2. Go east on Power City Rd (0.27 miles)
3. Turn right on Brownell Blvd (0.22 miles)
4. Turn right on US-730 (6th St) (0.01 miles)
5. Bear right onto ramp and go on I-82 E toward Pendleton/I-84/Portland (9.4 miles)
6. Take ramp on the right and go on I-84 W toward Portland (69.34 miles)
7. At exit 109 take ramp on the right to John Day Dam toward Rufus (0.3 miles)
8. Turn right (0.09 miles)
9. Bear right on John Day Dam Ln until you reach the access gate (2.3 miles)
10. Finish at John Day Dam Road, 97065, on the right

<< Go Back

John Day Dam downstream N Fish Ladder D-216.45R

Position - Location:	45° 43.119', -120° 41.822'	45° 43' 7.1", -120° 41' 49.3"	45.71865, -120.69703	Goldendale

Strategy Objective:	Exclusion : Keep oil away from fish ladder
Implementation:	Deploy 100' of boom at an angle across the opening to the fish ladder. Adjust angle of boom, placement & number of anchors according to conditions of the day.
Staging Area:	Onsite: Call the John Day Dam Control Room at 541-298-9712 to have someone meet you at the gate to access the site.
Site Safety:	Dam, water hazard, slips, trips & falls.
Field Notes:	Pre-notify the Dam Control Room at 541-298-9712 for dam access. Launch at BL-D-214.6L/Giles French on the OR side unless you can get through the locks then launch at BL-J-216.5/Railroad Island above the dam on the WA side
Watercourse:	River - Below a Dam - At the downstream base of the John Day Dam, in The Dalles pool
Resources at Risk:	Fish Ladder(s)

Recommended Equipment

3	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

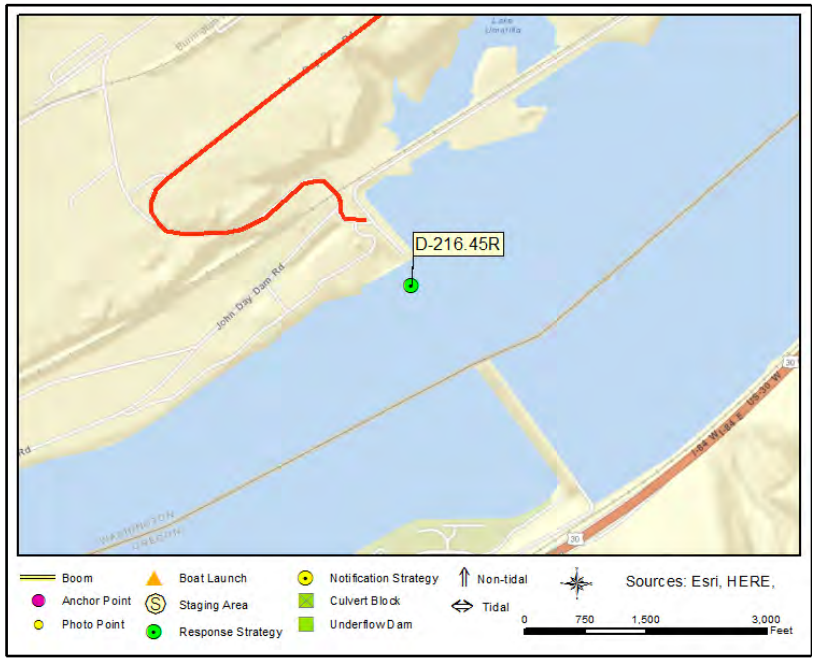
Recommended Personnel

1	Boat Operator
2	Laborer

<< Go Back

John Day Dam downstream N Fish Ladder D-216.45R

D-216.45R Photo: Aerial view of the John Day downstream N fish ladder



Site Contact

USACE John Day Control Room
Pre-Notification Required : Emergency contact & access to dam

541-298-9712

Nearest Address

John Day Dam Rd
Goldendale, WA 98620

Driving Directions

1. Directions to the WA side of the John Day Dam, starting at Sam Hill Memorial Bridge, Biggs Junction, OR 97065
2. Go northeast on US-97 (Sam Hill Memorial Brg) (2.25 miles)
3. Turn right on WA-14 (Highway 14) (6.81 miles)
4. Turn right on John Day Dam Rd (1.38 miles)
5. Turn right to access the dam, or left toward J-216.5R/Railroad Island boat launch (0.3 mi)

<< Go Back

APPENDIX 4B

Notification Strategy 2-Pagers

<< Go Back

NOTIFICATION STRATEGIES - LIST

D-191.7-N D-194.5-N D-204.7L-N J-216.5-N

<< Go Back

The Dalles Lock & Dam Notification D-191.7-N

Position - Location:	45° 36.833', -121° 8.026'	45° 36' 50.0", -121° 8' 1.6"	45.61389, -121.13377	The Dalles

Strategy Objective: Notification : Protection of fish ladders, closure of lock/spillway, deployment of GRP strategies

Implementation: Notify Project management and take action to protect USACE property and resources, including the deployment, by USACE staff or response contractors, of GRP strategies. Strategies in The Dalles pool include: D-191.7M and D-192.8L, both exclusion strategies to protect the fish ladders on the upstream side of the dam, and D-191.9R a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the Bonneville pool, include: B-192.7M and B-191.6R to protect the fish ladders on the downstream side of the dam, as well as B-191.55R collection strategies at the lock.

Field Notes: USACE has the facilities to establish an incident command post on site. Responders should work with USACE personnel to gain access to facility property and recreation areas after hours. Those deploying GRP strategies on USACE property will need to be escorted.

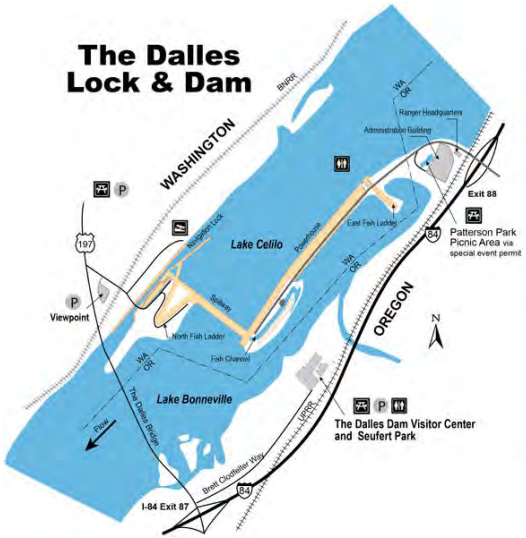
Watercourse: River - Above a Dam - The Dalles Pool

Resources at Risk: Lock and Dam

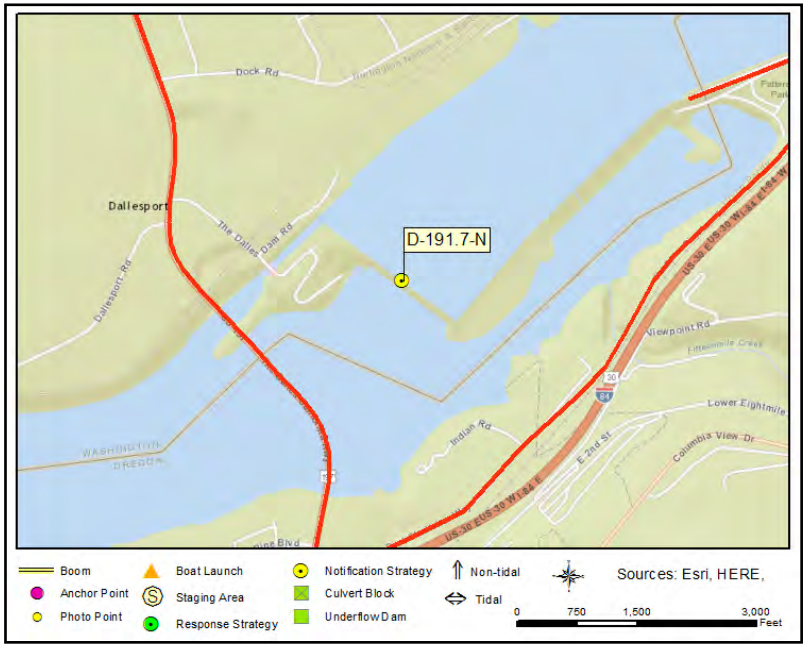
Communication Process and Action:

Call Control Room Operator (24/7) 541-298-7505

The Dalles Lock & Dam Notification D-191.7-N



D-191.7-N Photo: Map of The Dalles Lock & Dam



Site Contact

USACE The Dalles Dam Control Room
Emergency Contact : Emergency contact & access to dam

541-298-7505

Nearest Address

3545 Bret Clodfelter Way (Exit 88 on I-84)
The Dalles, OR 97058

Driving Directions

1. Directions to N-D-191.7M/The Dalles Lock & Dam, starting at US 197, Dallesport, WA 98617
2. Turn left to merge onto I-84E/U.S. 30 E toward US-97S/Arlington(1.7 mi)
3. Take exit 88 toward The Dalles Dam (0.2 mi)
4. Turn left onto Td Dam Dr (220 ft)
5. Continue straight, entering Washington, destination will be on at the end of the road (0.5 mi)

<< Go Back

Horsethief Lake State Park D-194.5-N

Position - Location:	45° 38.701', -121° 6.698'	45° 38' 42.1", -121° 6' 41.9"	45.64501, -121.11163	Lyle

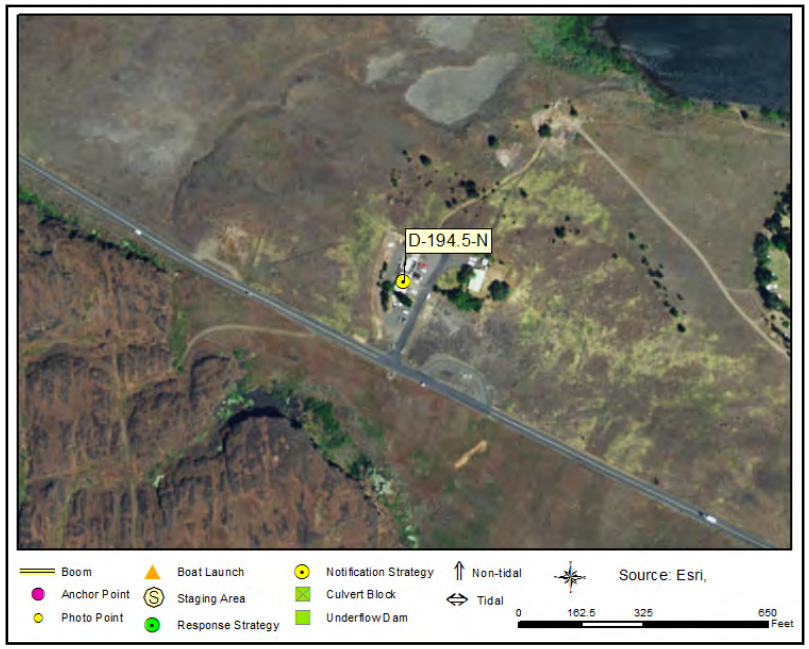
Strategy Objective: Notification : Deploy exclusion strategy on Horsethief Lake

Implementation: Call Klickitat County Emergency Dispatch at 509-773-4545 (24/7). Upon receipt of this call they will notify the Horsethief Lake State Park Manager who will direct personnel to deploy D-194.5R, an exclusion strategy at Horsethief Lake State Park. Once deployed, or if unable to deploy for any reason, a State Park representative will contact the WA ECY PREP Pager Duty Officer at 360-923-6020. Implementatior of D-194.5R by contractors is an alternative option.

Field Notes: Horsethief Lake State Park has equipment & personnel to deploy strategy, however, training may not be sufficnient. Any others responding to this location should assist as necessary. Property may be gated if off-season, bring bolt cutters to access property if gates

Watercourse: River - Above a Dam - The Dalles Pool

Resources at Risk: Public Recreation Site/Area, State Park, Waterfowl Concentrations

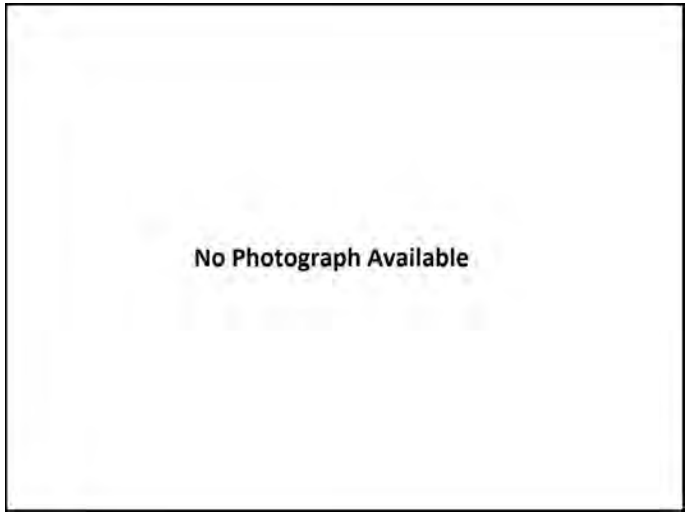


Communication Process and Action:

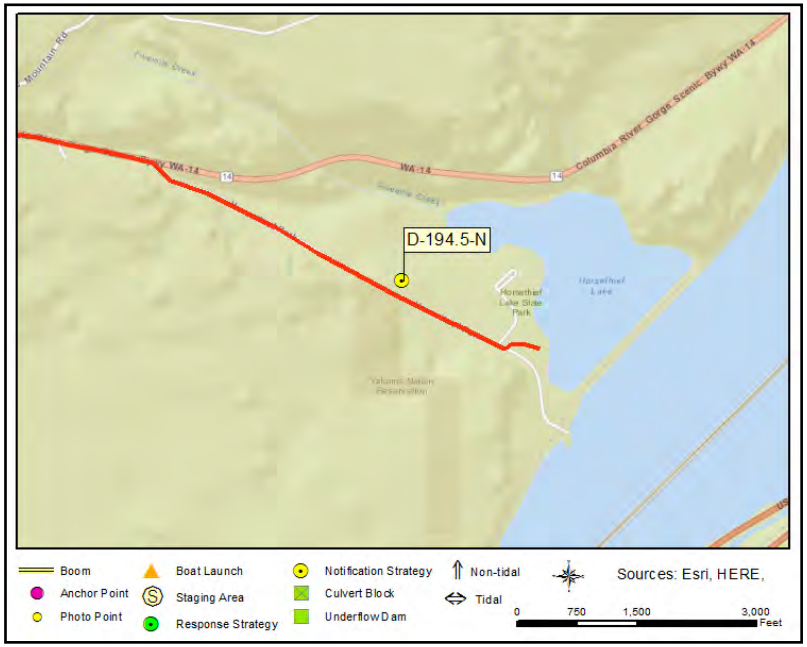
Call Klickitat County Emergency Dispatch at 509-773-4545 (24/7).

<< Go Back

Horsethief Lake State Park D-194.5-N



D-194.5-N Photo: Photo Not Available



Site Contact

Horsethief State Park
Land/Property Contact : Property Manager

WA
509-767-1159

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to D-194.5R Horsethief Lake boat launch on the lake, starting from Dallesport take WA Hwy197 to the intersection of WA Hwy 197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you come to the third left hand turn, it is BEFORE the railroad tracks, the boat launch is on the right.

<< Go Back

Heritage Landing Water Intake/Well D-204.7L-N

Position - Location:	45° 38.079', -120° 54.859'	45° 38' 4.8", -120° 54' 51.5"	45.63466, -120.91431	The Dalles

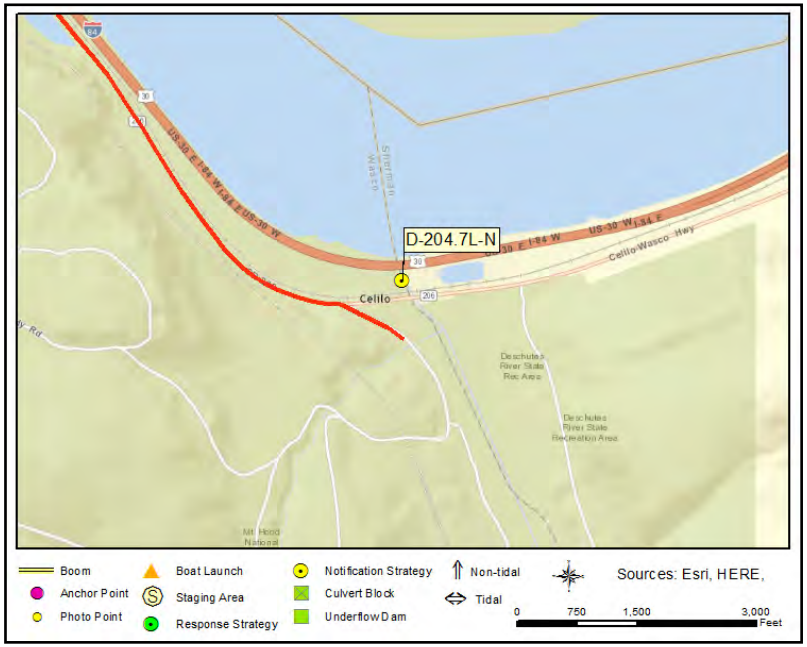
Strategy Objective:	Notification : Alert to need to monitor and potentially shut off transient, non-community well located less than 500 feet
Implementation:	Determine need to shut down water intake/well
Field Notes:	This well is shown as being both a surface water and groundwater withdrawal.
Watercourse:	River - Above a Dam - The Dalles Pool
Resources at Risk:	Public Health and Safety, Water Intakes

Communication Process and Action:

Call Park Manager at 541-739-2322x23

Heritage Landing Water Intake/Well D-204.7L-N

D-204.7L-N Photo: Sign at Heritage Landing State Recreation Area



Site Contact

Heritage Landing State Recreation Area
Primary Contact : Park Manager
89600 Biggs-Rufus Hwy
Wasco, OR 97065
541-739-2322 ext. 23

Nearest Address

Celilo-Wasco Highway and Moody Road
The Dalles, OR 97058

Driving Directions

1. Directions to Heritage Landing State Recreation Area on the Lower Deschutes River, starting from Sam Hill Memorial Bridge, Biggs Junction OR 97065
2. Go southeast on US-97 (Sam Hill Memorial Brg) toward 104 (0.32 miles)
3. Make sharp right on OR-206-SPUR (Biggs-Rufus Hwy) (2.81 miles)
4. Continue on OR-206 (Biggs-Rufus Hwy) (2.06 miles)
5. Cross the Deschutes River and turn left into Heritage Landing boat launch

<< Go Back

John Day Lock & Dam Notification J-216.5-N

Position - Location:	45° 42.928', -120° 41.551'	45° 42' 55.7", -120° 41' 33.1"	45.71546, -120.69252	Rufus

Strategy Objective: Notification : Protection of fish ladders, lock &/or spillway closure, deployment of GRP strategies

Implementation: Notify Project management and take action to protect USACE property and resources, including the deployment, by USACE staff or response contractors, of GRP strategies. Strategies in The John Day pool include: J-216.5R and J-216.7L, both exclusion strategies to protect the fish ladders on the upstream side of the dam, and J-216.55R, a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in The Dalles pool, include: D-216.8L and D-216.4R to protect the fish ladders, as well as D-216.3R, a collection strategy at the end of the lock.

Field Notes: USACE has the facilities to establish an incident command post on site. Responders should work with USACE personnel to gain access to facility property and recreation areas after hours. Those deploying GRP strategies on USACE property will need to be escorted.

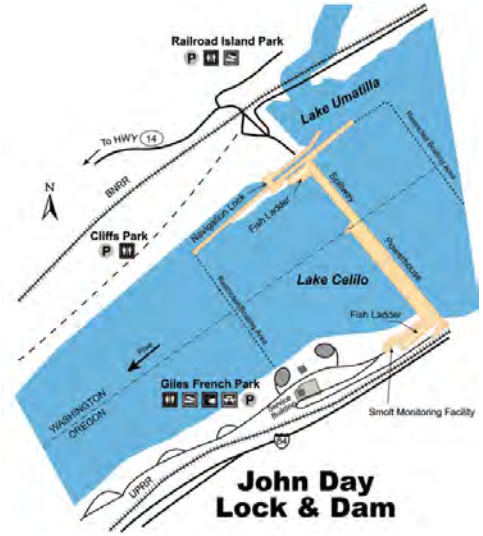
Watercourse: River - Above a Dam - John Day Pool

Resources at Risk: Lock and Dam

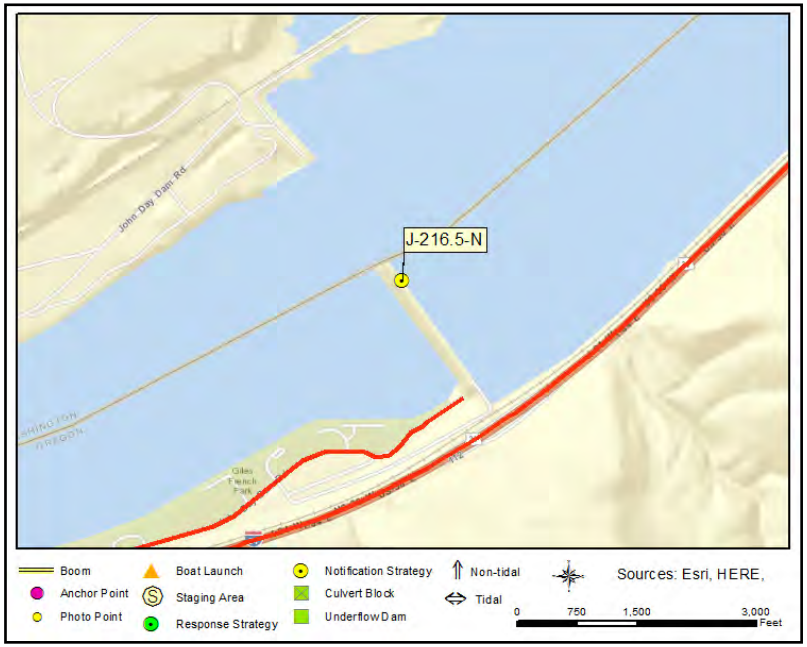
Communication Process and Action:

Call John Day Lock & Dam Control Room Operator (24/7) 541-298-9712

John Day Lock & Dam Notification J-216.5-N



J-216.5-N Photo: Map of John Day Lock & Dam



Site Contact

USACE John Day Control Room
Emergency Contact : Emergency contact & access to dam

541-298-9712

Nearest Address

John Day Dam Rd
Rufus, OR 97065

Driving Directions

1Directions to the John Day Dam on the Oregon Side.
1. Start at Boardman, Oregon
2. Go west on Boardman Ave NE toward Boardman Ave/N Main St (0.05 miles)
3. Turn left on N Main St (0.08 miles)
4. Turn right onto ramp and go on I-84 W/US-30 W (53.91 miles)
5. At exit 109 take ramp on the right to John Day Dam toward Rufus (0.3 miles)
6. Turn right (0.09 miles)
7. Bear right on John Day Dm (John Day Dam Ln) (0.07 miles)
8. Continue along John Day Dam Road up to the Dam.

<< Go Back

APPENDIX 4C

Staging Area 2-Pagers

<< Go Back

STAGING AREA - LIST

SA-D-191.9R	SA-D-194.4R	SA-D-198.2R	SA-D-201.9L	SA-D-209R
SA-D-209.9R	SA-D-212.5R	SA-D-214.6L	SA-LDR-0.2L	

<< Go Back

The Dalles Dam North Shore boat launch SA-D-191.9R

Staging Area

Position - Location:	45° 37.035', -121° 8.198'	45° 37' 2.1", -121° 8' 11.9"	45.61724, -121.13663	Dallesport

Comments: Lighted staging area with very large parking lot and a single concrete ramp, 5 degree grade and floating dock

GRP Response Strategies Served:

D-191.7M, D-192.8L, D-191.9R

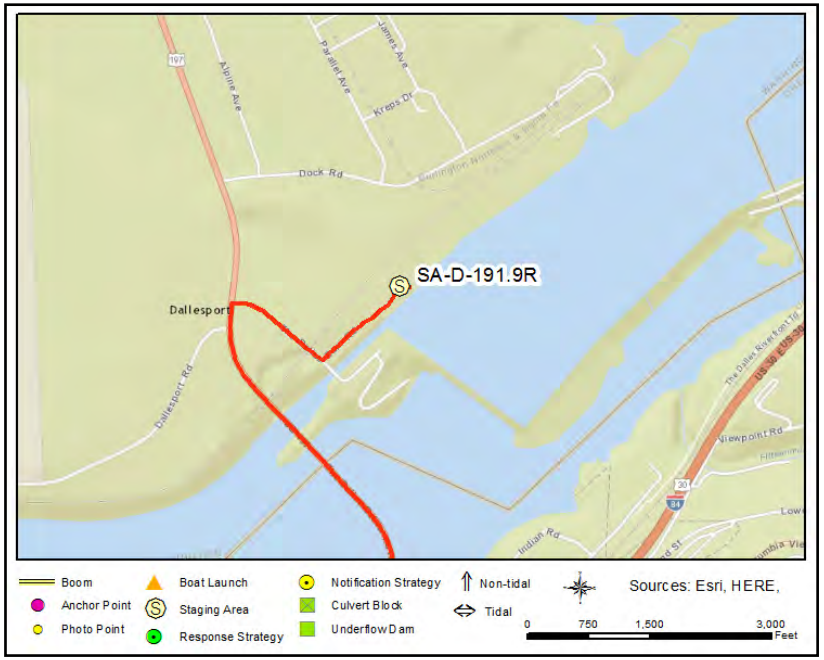
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 floating dock
Boat Ramp(s)	Concrete, Solid	Single concrete ramp, 5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		65' x 195'= 12675 sq ft gravel parking
Parking - Car	Gravel	10 cars
Parking - Trailer	Gravel	space for 10 trailers
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	

<< Go Back

The Dalles Dam North Shore boat launch SA-D-191.9R

SA-D-191.9R Photo: The Dalles Dam North Shore boat launch



Site Contact

USACE The Dalles pool
Primary Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

Dock Rd
Dallesport, WA 98617

Driving Directions

1. Directions to SA-D-191.9R/The Dalles N Shore Boatl Launch, starting from I-84 take exit 87 for U.S. 30/U.S. 197towardDufur/Bend(0.2 mi)
2. Turn right onto US-197 N Entering Washington (1.1 mi)
3. Take the first right (0.25 mi) to the four way intersection
4. Turn left and stay to the right at the fork (0.3 mi)
5. Finish at The Dalles Dam North Shore boat launch

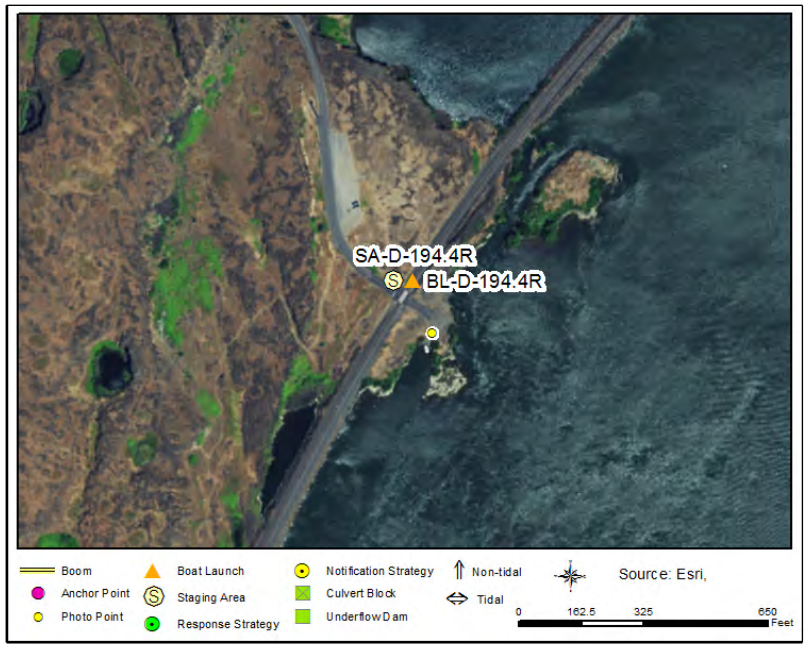
<< Go Back

Horsethief State Park SA-D-194.4R

Staging Area

Position - Location:	45° 38.409', -121° 6.244'	45° 38' 24.5", -121° 6' 14.6"	45.64014, -121.10407	Lyle

Comments: Large staging area with parking lots, grassy areas, restrooms, camping facilities.



GRP Response Strategies Served:

D-192.8R, D-192.7R, D-194.4R

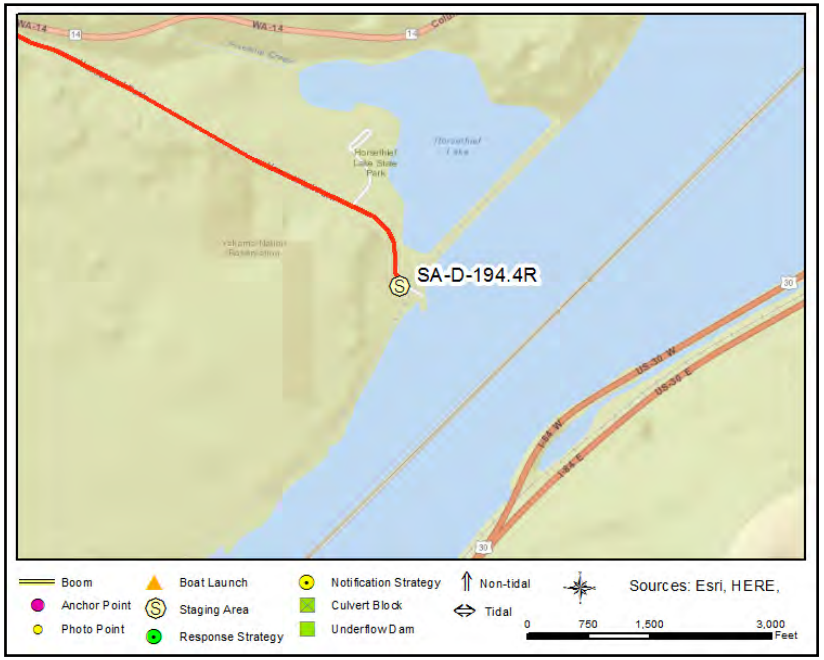
Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	Small gravel ramp, no large boats
Cell Phone Coverage	Yes	Verizon-good coverage
Parking - Car	Marked	Lots of parking throughout State Park.
Parking - Trailer	Marked	parking for 4 small boat trailers.
Power	Yes	
Restroom	Restroom - Flush	
Water (potable)	Yes	

<< Go Back

Horsethief State Park SA-D-194.4R

SA-D-194.4R Photo: Horsethief State Park Boat Launch



Site Contact

Horsethief State Park
Primary Contact : Property Manager

WA
509-767-1159

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to BL-D-194.4R/Horsethief State Park boat launch, from the intersection of WA Hwy197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you cross the railroad tracks and come to the boat launch

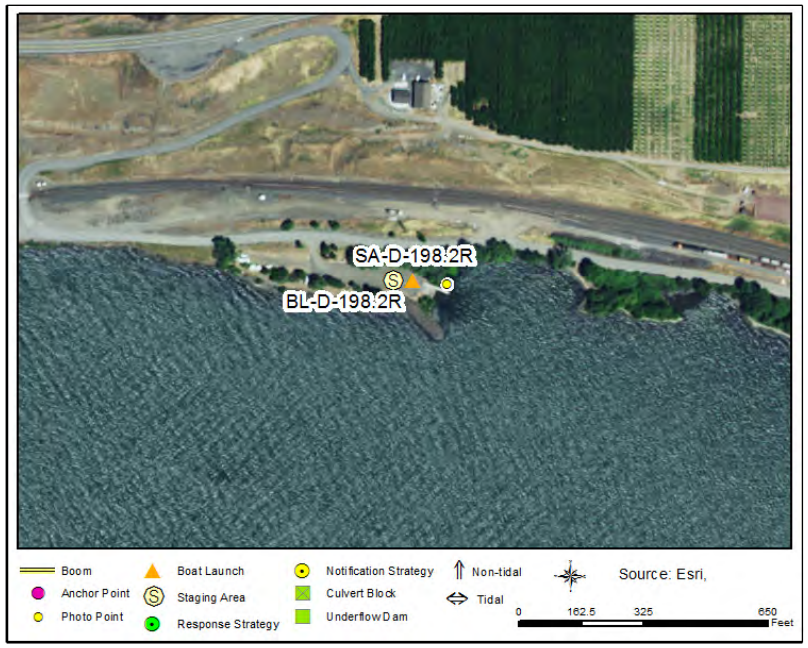
<< Go Back

Avery Recreation Area SA-D-198.2R

Staging Area

Position - Location:	45° 39.742', -121° 2.129'	45° 39' 44.5", -121° 2' 7.8"	45.66237, -121.03549	Lyle

Comments: Small gravel area for staging- reserved for tribal fishing at times throughout the year.



GRP Response Strategies Served:

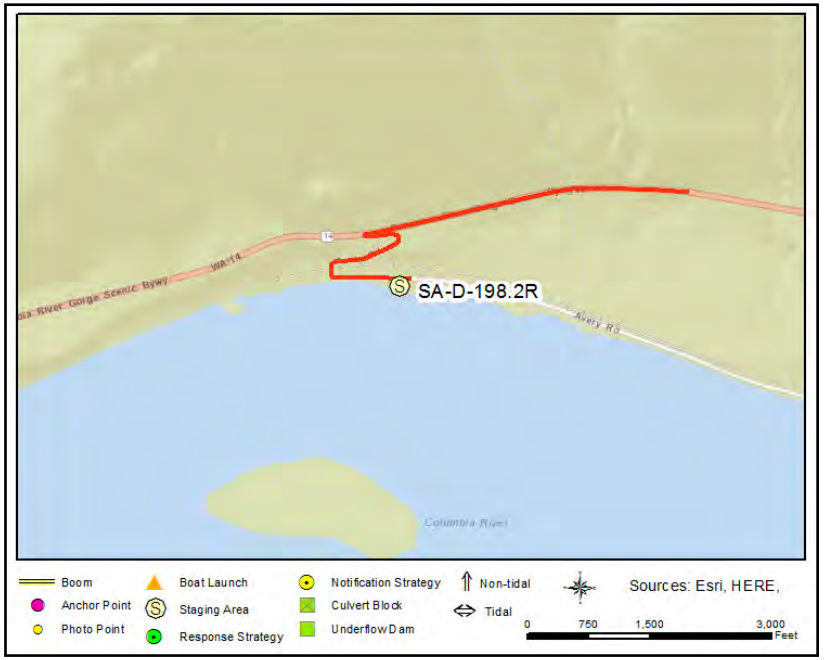
D-197.1L, D-197.5L, D-197.4M, D-197.2M

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 small boat dock at ramp
Boat Ramp(s)	Concrete, Solid	1
Parking - Car	Gravel	gravel lot
Parking - Trailer	Gravel	same gravel lot as car parking
Power	No	
Restroom	Restroom - Vault	1
Water (potable)	No	

Avery Recreation Area SA-D-198.2R

SA-D-198.2R Photo: Avery Recreation Boat Ramp



Site Contact

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Bureau of Indian Affairs
Land/Property Contact : Oversees Tribal In-Lieu Fishing Sites
503-231-6702

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

1. Start at 8989 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) toward Avery Rd
3. Make sharp left on Avery Rd
4. Finish at Avery Road, 98635, on the right
5. Cross the railroad tracks and look for entrance to boat ramp. Lat45.662321, Long -121.035273

<< Go Back

Celilo Park SA-D-201.9L

Staging Area

Position - Location:	45° 38.935', -120° 57.785'	45° 38' 56.1", -120° 57' 47.1"	45.64892, -120.96308	Dalles

Comments: Good staging area with restrooms, grassy area and plenty of parking for vehicles and trailers.

GRP Response Strategies Served:

D-202.8R, D-201R, D-202L, D-200.9L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Dock space for 3-4 vessels
Boat Ramp(s)	Asphalt	1 Good for vessels of various sizes
Cell Phone Coverage	Yes	Verizon-good coverage
Parking - Car	Marked	Large parking area for cars
Parking - Trailer	Marked	Good parking for multiple trailers
Restroom	Restroom - Flush	
Water (potable)	Yes	

<< Go Back

Celilo Park SA-D-201.9L

SA-D-201.9L Photo: Celilo Park Boat Ramp

Site Contact

Celilo State Park
Land/Property Contact : Property Manager

OR
541-506-7819

Nearest Address

Celilo Park Road
Dalles, OR 97058

Driving Directions

1. Start at 360 US 97 Goldendale
2. Go southwest on US-97 (Highway 97)
3. Turn left to stay on US-97 (Highway 97)
4. Turn left to stay on US-97 (WA-14)
5. Turn right at WA-14 to stay on US-97 (Highway 97)
6. Turn right toward W/W/The Dalles
7. Take ramp and go on I-84 W/US-30 W
8. At exit 97 take ramp on the right to OR-206
9. Turn right on OR-206
10. Bear left on Celilo Park Rd
11. Finish at Celilo Park Road, 97058, on the left

<< Go Back

Maryhill State Park West SA-D-209R

Staging Area

Position - Location:	45° 40.803', -120° 50.145'	45° 40' 48.2", -120° 50' 8.7"	45.68006, -120.83574	Goldendale

Comments: Lighted, paved staging area with a single concrete ramp

GRP Response Strategies Served:

D-207.5M

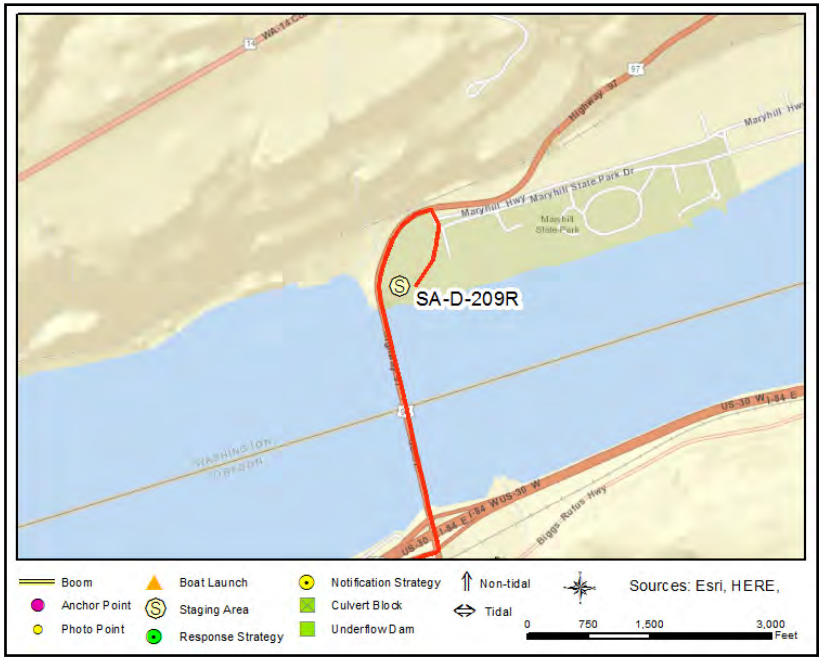
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Single concrete ramp
Cell Phone Coverage	Yes	
Power	Yes	
Restroom	Restroom - Flush	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

<< Go Back

Maryhill State Park West SA-D-209R

SA-D-209R Photo: Maryhill State Park west boat launch



Site Contact

Maryhill State Park
Tribal Contact : Property manager
509-773-5007

Nearest Address

50 U.S. 97
Goldendale, WA 98620

Driving Directions

1. Directions to BL-D-209R/Maryhill West, starting at I-84, biggs junction, OR 97065
2. Take exit 104 toward US-97/Biggs Rufus Hwy (0.14 miles)
3. Make sharp left on US-97 (Highway 97) toward Yakima/I-84 (0.83 miles)
4. Turn right toward Maryhill State Park Dr (148 ft)
5. Slight right onto Maryhill State Park Dr (108 ft)
6. Turn right (0.2 mi)

<< Go Back

Maryhill State Park SA-D-209.9R

Staging Area

Position - Location:	45° 40.986', -120° 49.246'	45° 40' 59.2", -120° 49' 14.7"	45.68311, -120.82076	Goldendale

Comments: Paved and Grassed Areas

GRP Response Strategies Served:

D-209.3L, D-211.8M, D-209.8R, D-211.3M, D-209.9R

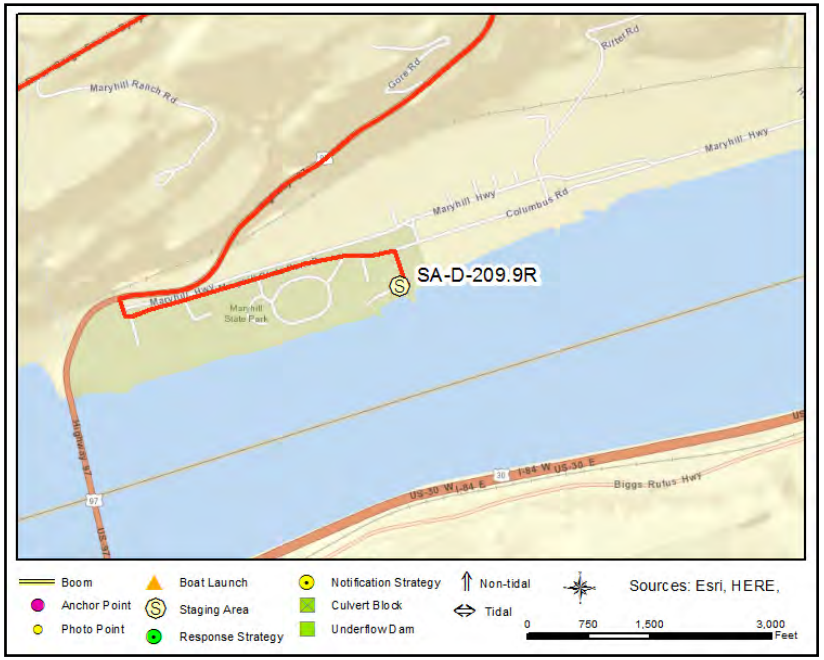
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks at boat launch
Boat Ramp(s)	Concrete, Solid	2 concrete ramps, 7.5 degree grade
Cell Phone Coverage	Yes	Verizon- good coverage
Parking - Car	Marked	space for ~50 cars
Parking - Trailer	Marked	space for 15 trailers
Power	Yes	
Restroom	Restroom - Flush	Several bathrooms at the park
User Fee	Yes	Fee to use State Park
Water (potable)	Yes	

<< Go Back

Maryhill State Park SA-D-209.9R

SA-D-209.9R Photo: Maryhill State Park Boat Launch



Site Contact

Maryhill State Park
Land/Property Contact : Property manager

WA
509-773-5007

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

Directions to BL-D-209.9R/Maryhill State Park Boat Launch from South Bound US 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.22 miles)
5. Follow signs to State Park, Boat launch is at the east end of the park.

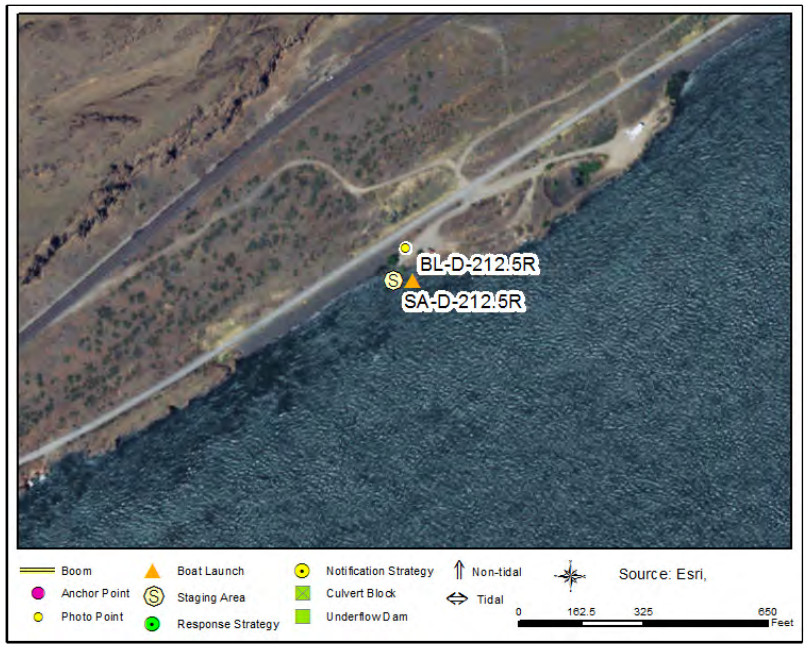
<< Go Back

Maryhill East primitive boat launch SA-D-212.5R

Staging Area

Position - Location:	45° 41.664', -120° 46.526'	45° 41' 39.9", -120° 46' 31.5"	45.69441, -120.77543	Goldendale

Comments: Primitive gravel boat launch & staging area



GRP Response Strategies Served:

D-212.6R

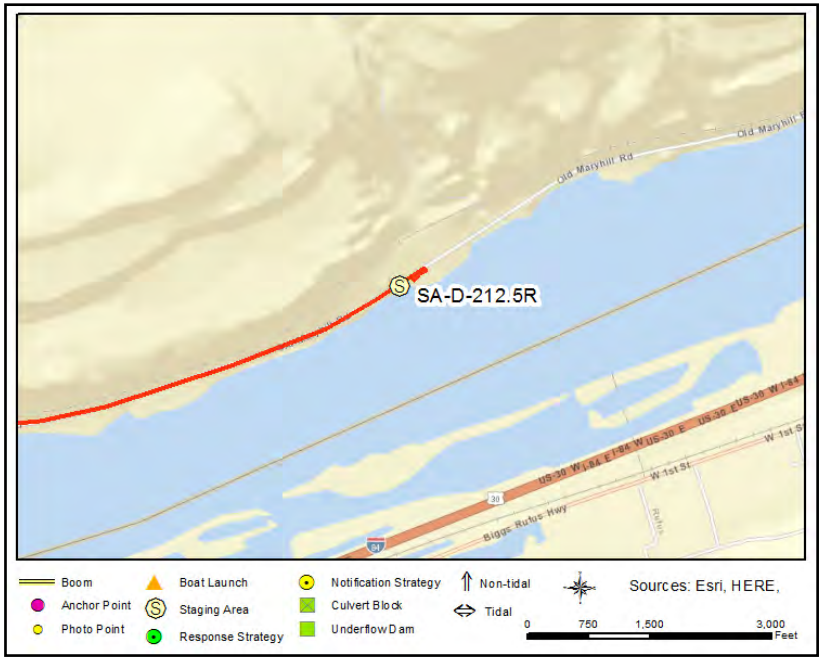
Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	Single gravel boat launch 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		2 Gravel parking lots 3000 & 9000 sq ft+
Parking - Car	Gravel	Room for 15 cars & 15 trailers
Parking - Trailer	Gravel	Room for 15 cars & 15 trailers
Power	No	
Restroom	Restroom - Portable	1
User Fee	No	
Waste Disposal	None	None
Water (potable)	No	

<< Go Back

Maryhill East primitive boat launch SA-D-212.5R

SA-D-212.5R Photo: Maryhill East primitive boat launch



Site Contact

Bureau of Indian Affairs
Land/Property Owner : Oversees Tribal In-Lieu Fishing Sites
503-231-6702

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Nearest Address

Maryhill Hwy
Goldendale, WA 98620

Driving Directions

1. Start at Hwy 97 Biggs Junction, OR 97065
2. Go northwest on US-97 (Highway 97) (8.02 miles)
3. Turn right on Maryhill Hwy (0.03 miles)
4. Turn left at Maryhill State Park Dr to stay on Maryhill Hwy (4 miles)
5. Finish at Maryhill Hwy, 98620, on the right

<< Go Back

Giles French Park SA-D-214.6L

Staging Area

Position - Location:	45° 42.106', -120° 43.728'	45° 42' 6.3", -120° 43' 43.7"	45.70176, -120.72880	Rufus

Comments: Park facilities including two parking lots and several grassy areas.

GRP Response Strategies Served:

D-213.3L, D-214.6L, D-212.7M, D-213.8L

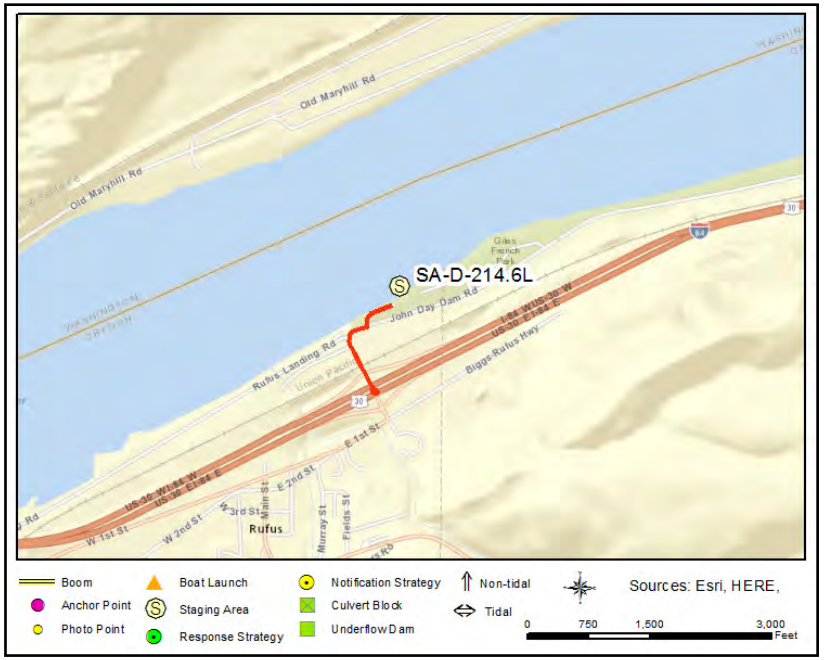
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Two floating docks, one at each ramp
Boat Ramp(s)	Concrete, Solid	2
Parking - Car	Marked	30
Parking - Trailer	Marked	25
Power	No	
Restroom	Restroom - Flush	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

<< Go Back

Giles French Park SA-D-214.6L

SA-D-214.6L Photo: Rufus boat launch



Site Contact

USACE The Dalles pool
Land/Property Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

John Day Dam Road
Rufus, OR 97065

Driving Directions

1. Start at Interstate 84, Rufus, OR
2. Take exit 109 ramp to John Day Dam toward Rufus (0.2 miles)
3. Take John Day Dam Rd (0.5 miles)
4. Finish at Giles-French Park on the left

<< Go Back

Deschutes River State Rec Area SA-LDR-0.2L

Staging Area

Position - Location:	45° 37.938', -120° 54.802'	45° 37' 56.3", -120° 54' 48.1"	45.63230, -120.91336	The Dalles

Comments: Gravel parking area that can be used for staging

Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Asphalt	Single launch-busy during the summer
Parking - Car	Not Marked	Several parking lots, space for ~30 cars
Parking - Trailer	Not Marked	Several parking lots, ~ 30 trailers
Power	Yes	
Restroom	Restroom - Flush	1
Water (potable)	Yes	

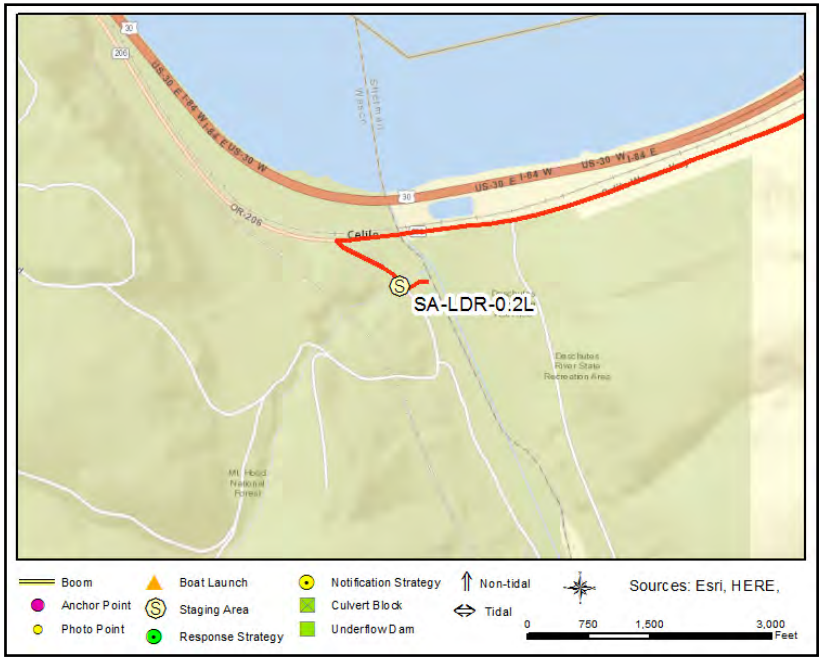
GRP Response Strategies Served:

D-206.6M, D-204.7L

<< Go Back

Deschutes River State Rec Area SA-LDR-0.2L

SA-LDR-0.2L Photo: Deschutes River Boat Ramp



Site Contact

Deschutes River State Rec Area
Primary Contact : land manager

OR
541-739-2322

Nearest Address

Celilo-Wasco Highway and Moody Road
The Dalles, OR 97058

Driving Directions

1. Directions to SA-LDR-0.2L starting from I-84 take exit 104 for US-97 toward Yakima Bend (0.2 mi)
2. Turn left onto US-97 S (0.2 mi)
3. Turn right at the 2nd cross street onto Biggs-Rufus Hwy (4.6 mi)
4. Continue onto OR-206 W (0.2 mi)
5.TurnleftontoMoodyRd/OldMoodyRd(0.9 mi)
6. Turn left into Deschutes River State Recreation Area (0.7 mi)

<< Go Back

APPENDIX 4D

Boat Launch 2-Pagers

<< Go Back

BOAT LAUNCHES - LIST

BL-D-191.9R	**BL-D-194.4R**	**BL-D-198.2R**	**BL-D-201.9L**	**BL-D-209R**
BL-D-209.9R	**BL-D-212.5R**	**BL-D-214.6L**	**BL-LDR-0.2L**	

<< Go Back

The Dalles Dam North Shore boat launch BL-D-191.9R

Boat Launch Location

Position - Location:	45° 37.035', -121° 8.198'	45° 37' 2.1", -121° 8' 11.9"	45.61724, -121.13663	Dallesport

Comments: Lighted staging area with very large parking lot and a single concrete ramp, 5 degree grade and floating dock

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 floating dock
Boat Ramp(s)	Concrete, Solid	Single concrete ramp, 5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		65' x 195'= 12675 sq ft gravel parking
Parking - Car	Gravel	10 cars
Parking - Trailer	Gravel	space for 10 trailers
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	

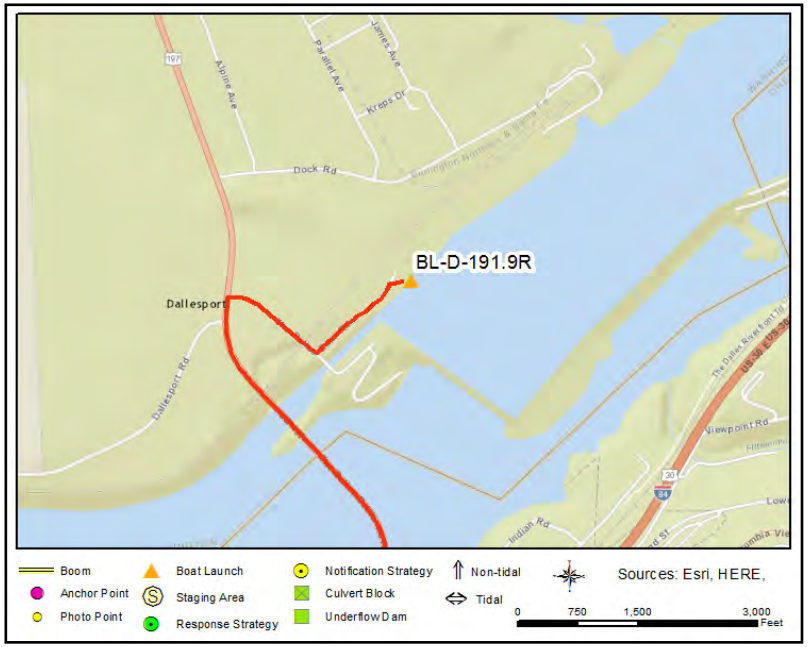
GRP Response Strategies Served:

D-191.7M, D-192.8L, D-191.9R

<< Go Back

The Dalles Dam North Shore boat launch BL-D-191.9R

SA-D-191.9R Photo: The Dalles Dam North Shore boat launch



Site Contact

USACE The Dalles pool
Primary Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

Dock Rd
Dallesport, WA 98617

Driving Directions

1. Directions to SA-D-191.9R/The Dalles N Shore Boatl Launch, starting from I-84 take exit 87 for U.S. 30/U.S. 197towardDufur/Bend(0.2 mi)
2. Turn right onto US-197 N Entering Washington (1.1 mi)
3. Take the first right (0.25 mi) to the four way intersection
4. Turn left and stay to the right at the fork (0.3 mi)
5. Finish at The Dalles Dam North Shore boat launch

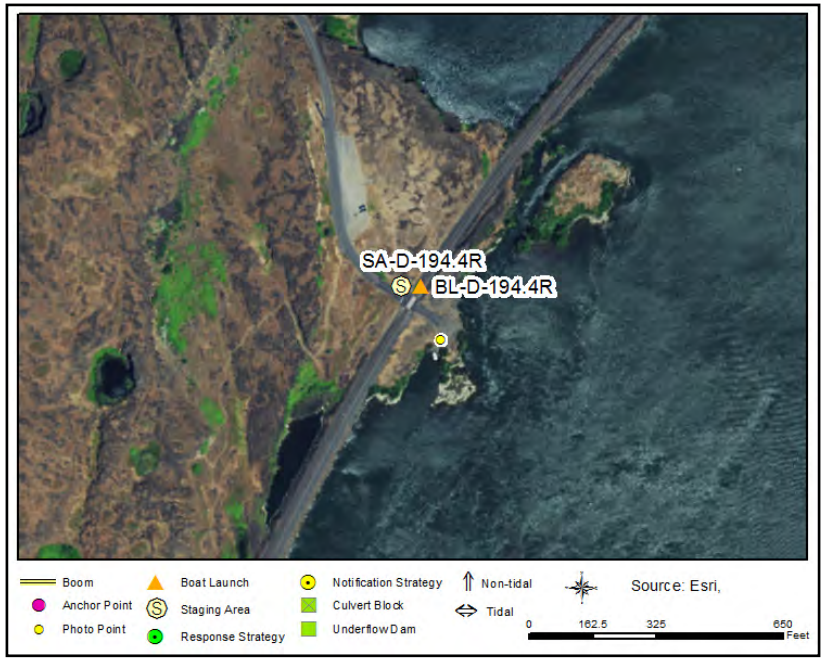
<< Go Back

Horsethief State Park BL-D-194.4R

Boat Launch Location

Position - Location:	45° 38.409', -121° 6.244'	45° 38' 24.5", -121° 6' 14.6"	45.64014, -121.10407	Lyle

Comments: Small boat launch to River. Tight access and very close to active train tracks with no controlled crossing. BE VERY CAREFUL WHEN ACCESSING BOAT LAUNCH. There is also a second boat launch that access Horsethief Lake in the same general area. Make sure you are accessing the river, not the lake.



Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	Small gravel ramp, no large boats
Cell Phone Coverage	Yes	Verizon-good coverage
Parking - Car	Marked	Lots of parking throughout State Park.
Parking - Trailer	Marked	parking for 4 small boat trailers.
Power	Yes	
Restroom	Restroom - Flush	
Water (potable)	Yes	

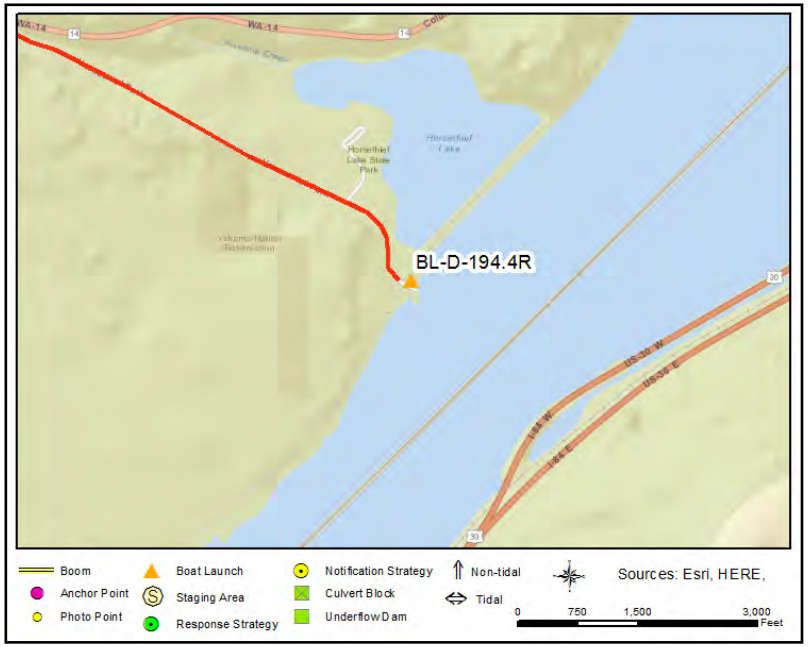
GRP Response Strategies Served:

D-192.8R, D-192.7R, D-194.4R, D-192.5R

<< Go Back

Horsethief State Park BL-D-194.4R

SA-D-194.4R Photo: Horsethief State Park Boat Launch



Site Contact

Horsethief State Park
Primary Contact : Property Manager

WA
509-767-1159

Nearest Address

8485 Highway 14
Lyle, WA 98635

Driving Directions

1. Directions to BL-D-194.4R/Horsethief State Park boat launch, from the intersection of WA Hwy197 & WA Hwy 14, Lyle, WA 98635
2. Go east on WA-14 (Highway 14) (1.6 mi)
3. Turn right to enter Horsethief Lake State Park, follow the park road straight until you cross the railroad track and come to the boat launch

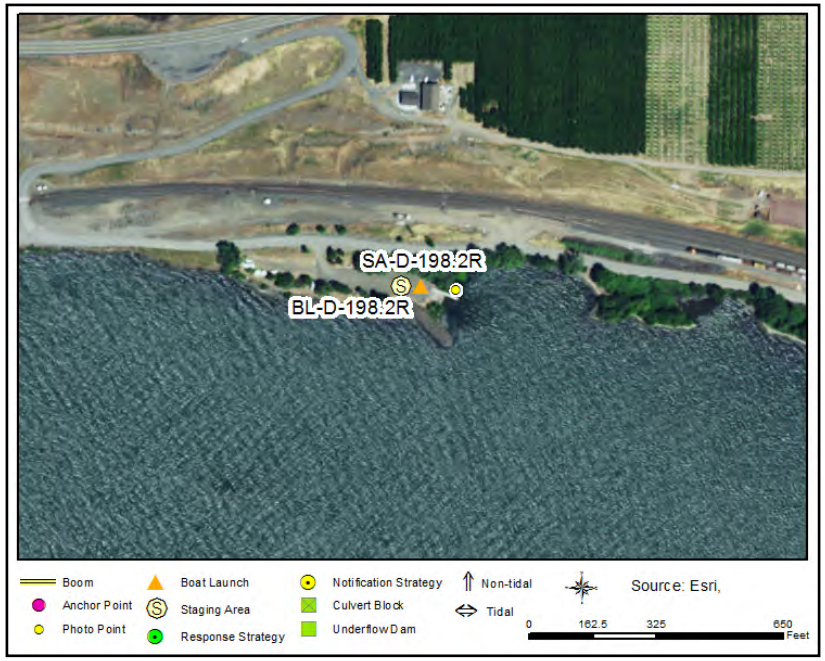
<< Go Back

Avery Recreation Area BL-D-198.2R

Boat Launch Location

Position - Location:	45° 39.742', -121° 2.129'	45° 39' 44.5", -121° 2' 7.8"	45.66237, -121.03549	Lyle

Comments: Concrete boat launch. Reserved for tribal fishing at times throughout the year.



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 small boat dock at ramp
Boat Ramp(s)	Concrete, Solid	1
Parking - Car	Gravel	gravel lot
Parking - Trailer	Gravel	same gravel lot as car parking
Power	No	
Restroom	Restroom - Vault	1
Water (potable)	No	

GRP Response Strategies Served:

D-197.1L, D-199.3R, D-197.5L, D-197.4M, D-197.2M

<< Go Back

Avery Recreation Area BL-D-198.2R

SA-D-198.2R Photo: Avery Recreation Boat Ramp

Site Contact

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Bureau of Indian Affairs
Land/Property Contact : Oversees Tribal In-Lieu Fishing Sites
503-231-6702

Nearest Address

Avery Road
Lyle, WA 98635

Driving Directions

1. Start at 8989 Highway 14 Lyle
2. Go west on WA-14 (Highway 14) toward Avery Rd
3. Make sharp left on Avery Rd
4. Finish at Avery Road, 98635, on the right
5. Cross the railroad tracks and look for entrance to boat ramp. Lat45.662321, Long -121.035273

<< Go Back

Celilo Park BL-D-201.9L

Boat Launch Location

Position - Location:	45° 38.935', -120° 57.785'	45° 38' 56.1", -120° 57' 47.1"	45.64892, -120.96308	Dalles

Comments: Good boat launch on west side of the park.

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Dock space for 3-4 vessels
Boat Ramp(s)	Asphalt	1 Good for vessels of various sizes
Cell Phone Coverage	Yes	Verizon-good coverage
Parking - Car	Marked	Large parking area for cars
Parking - Trailer	Marked	Good parking for multiple trailers
Restroom	Restroom - Flush	
Water (potable)	Yes	

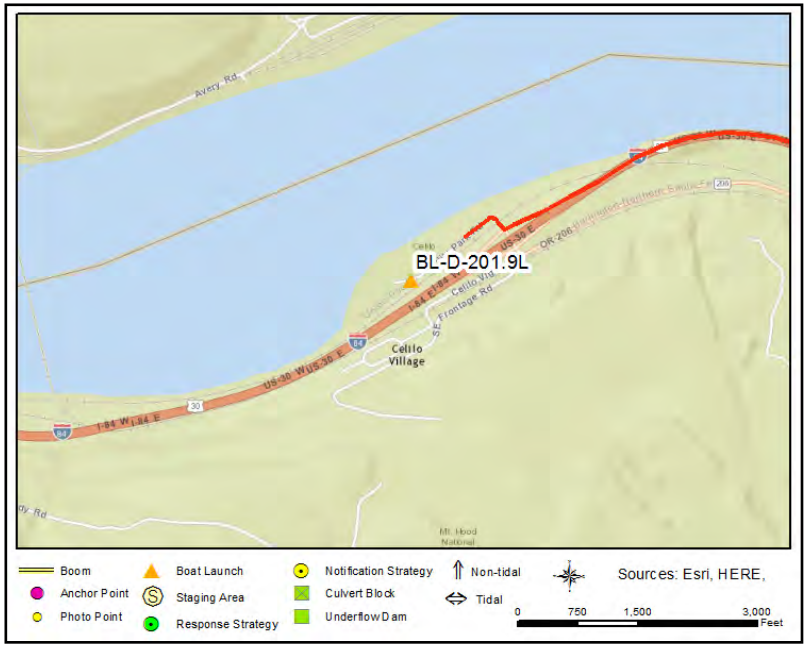
GRP Response Strategies Served:

D-202.8R, D-201R, D-202L, D-200.9L

<< Go Back

Celilo Park BL-D-201.9L

SA-D-201.9L Photo: Celilo Park Boat Ramp



Site Contact

Celilo State Park
Land/Property Contact : Property Manager

OR
541-506-7819

Nearest Address

Celilo Park Road
Dalles, OR 97058

Driving Directions

1. Start at 360 US 97 Goldendale
2. Go southwest on US-97 (Highway 97)
3. Turn left to stay on US-97 (Highway 97)
4. Turn left to stay on US-97 (WA-14)
5. Turn right at WA-14 to stay on US-97 (Highway 97)
6. Turn right toward W/W/The Dalles
7. Take ramp and go on I-84 W/US-30 W
8. At exit 97 take ramp on the right to OR-206
9. Turn right on OR-206
10. Bear left on Celilo Park Rd
11. Finish at Celilo Park Road, 97058, on the left

<< Go Back

Maryhill State Park West BL-D-209R

Boat Launch Location

Position - Location:	45° 40.803', -120° 50.145'	45° 40' 48.2", -120° 50' 8.7"	45.68006, -120.83574	Goldendale

Comments: Lighted, paved staging area with a single concrete ramp

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Single concrete ramp
Cell Phone Coverage	Yes	
Power	Yes	
Restroom	Restroom - Flush	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

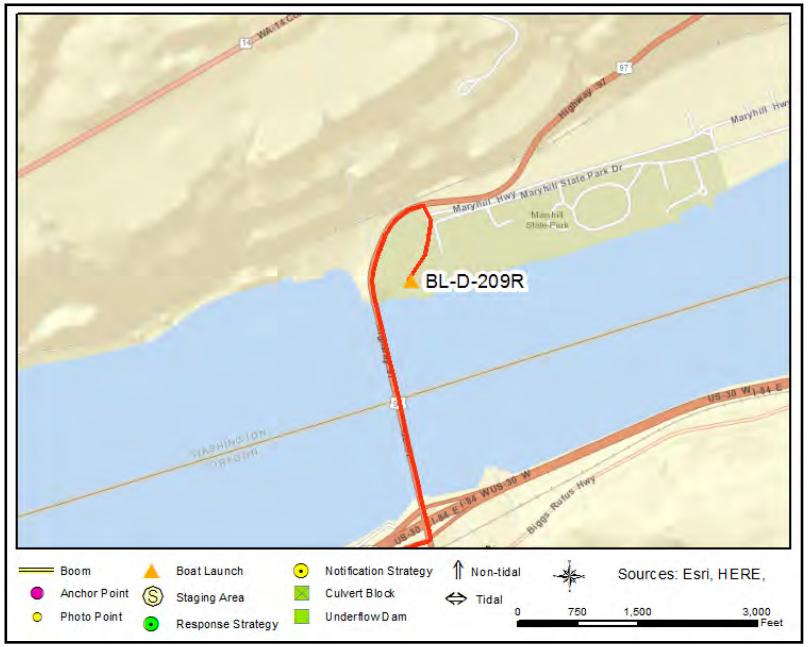
GRP Response Strategies Served:

D-206.5R, D-207.6M, D-207.5M, D-207.8R

<< Go Back

Maryhill State Park West BL-D-209R

SA-D-209R Photo: Maryhill State Park west boat launch



Site Contact

Maryhill State Park
Tribal Contact : Property manager
509-773-5007

Nearest Address

50 U.S. 97
Goldendale, WA 98620

Driving Directions

1. Directions to BL-D-209R/Maryhill West, starting at I-84, biggs junction, OR 97065
2. Take exit 104 toward US-97/Biggs Rufus Hwy (0.14 miles)
3. Make sharp left on US-97 (Highway 97) toward Yakima/I-84 (0.83 miles)
4. Turn right toward Maryhill State Park Dr (148 ft)
5. Slight right onto Maryhill State Park Dr (108 ft)
6. Turn right (0.2 mi)

<< Go Back

Maryhill State Park BL-D-209.9R

Boat Launch Location

Position - Location:	45° 40.986', -120° 49.246'	45° 40' 59.2", -120° 49' 14.7"	45.68311, -120.82076	Goldendale

Comments: concrete boat launch

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks at boat launch
Boat Ramp(s)	Concrete, Solid	2 concrete ramps, 7.5 degree grade
Cell Phone Coverage	Yes	Verizon- good coverage
Parking - Car	Marked	space for ~50 cars
Parking - Trailer	Marked	space for 15 trailers
Power	Yes	
Restroom	Restroom - Flush	Several bathrooms at the park
User Fee	Yes	Fee to use State Park
Water (potable)	Yes	

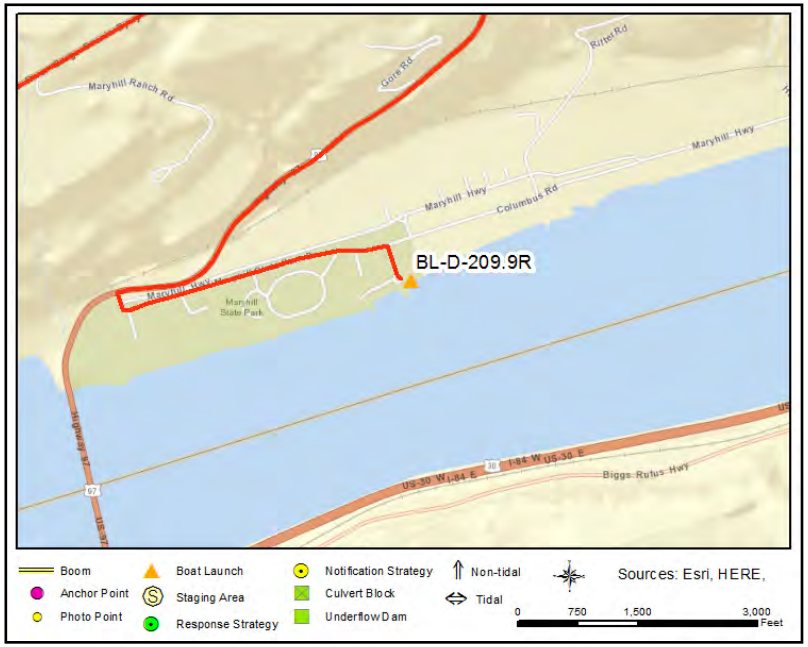
GRP Response Strategies Served:

D-209.3L, D-211.8M, D-209.8R, D-211.3M, D-209.9R

<< Go Back

Maryhill State Park BL-D-209.9R

SA-D-209.9R Photo: Maryhill State Park Boat Launch



Site Contact

Maryhill State Park
Land/Property Contact : Property manager

WA
509-773-5007

Nearest Address

50 SR 97
Goldendale, WA 98620

Driving Directions

Directions to BL-D-209.9R/Maryhill State Park Boat Launch from South Bound US 97
1. Start at 723 US 97 Goldendale
2. Go south on US-97 (Highway 97) toward Stringstreet Rd (4.86 miles)
3. Turn left to stay on US-97 (Highway 97) (0.2 miles)
4. Turn left to stay on US-97 (WA-14) (2.22 miles)
5. Follow signs to State Park, Boat launch is at the east end of the park.

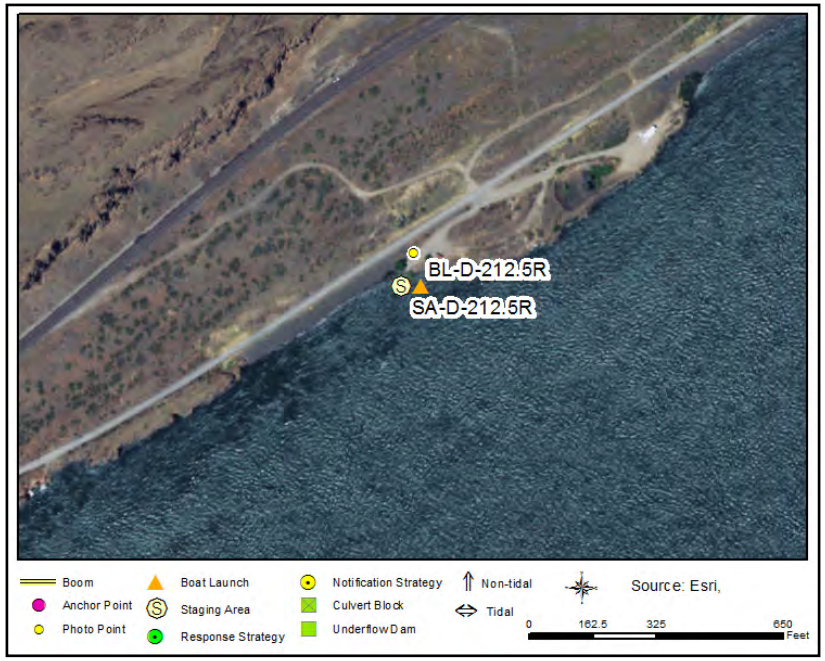
<< Go Back

Maryhill East primitive boat launch BL-D-212.5R

Boat Launch Location

Position - Location:	45° 41.664', -120° 46.526'	45° 41' 39.9", -120° 46' 31.5"	45.69441, -120.77543	Goldendale

Comments: Primitive gravel boat launch & staging area



Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	Single gravel boat launch 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		2 Gravel parking lots 3000 & 9000 sq ft+
Parking - Car	Gravel	Room for 15 cars & 15 trailers
Parking - Trailer	Gravel	Room for 15 cars & 15 trailers
Power	No	
Restroom	Restroom - Portable	1
User Fee	No	
Waste Disposal	None	None
Water (potable)	No	

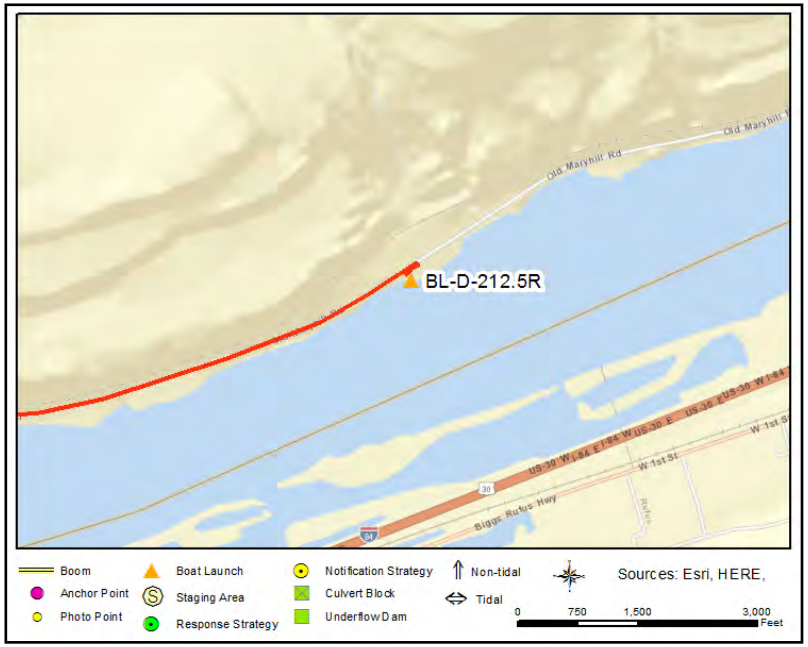
GRP Response Strategies Served:

D-212.6R

<< Go Back

Maryhill East primitive boat launch BL-D-212.5R

SA-D-212.5R Photo: Maryhill East primitive boat launch



Site Contact

Bureau of Indian Affairs
Land/Property Owner : Oversees Tribal In-Lieu Fishing Sites
503-231-6702

Columbia River Inter-Tribal Fish Commission
Tribal Contact : Fishing Treaty In-lieu Site - Law Enforcement
800-487-3474

Nearest Address

Maryhill Hwy
Goldendale, WA 98620

Driving Directions

1. Start at Hwy 97 Biggs Junction, OR 97065
2. Go northwest on US-97 (Highway 97) (8.02 miles)
3. Turn right on Maryhill Hwy (0.03 miles)
4. Turn left at Maryhill State Park Dr to stay on Maryhill Hwy (4 miles)
5. Finish at Maryhill Hwy, 98620, on the right

<< Go Back

Giles French Park BL-D-214.6L

Boat Launch Location

Position - Location:	45° 42.106', -120° 43.728'	45° 42' 6.3", -120° 43' 43.7"	45.70176, -120.72880	Rufus

Comments: Two concrete ramps, 7 degree grade with floating docks (different parking areas)

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Two floating docks, one at each ramp
Boat Ramp(s)	Concrete, Solid	2
Parking - Car	Marked	30
Parking - Trailer	Marked	25
Power	No	
Restroom	Restroom - Flush	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

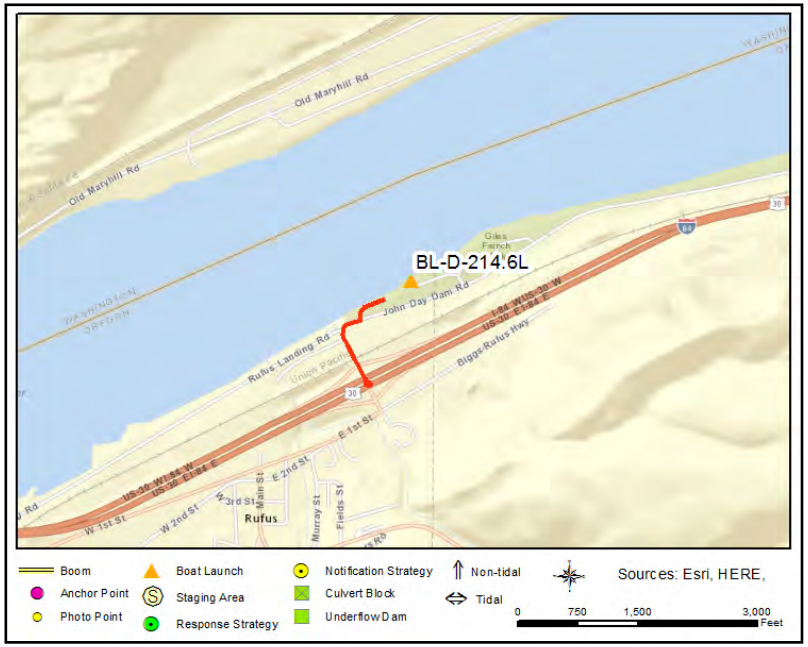
GRP Response Strategies Served:

D-213L, D-213.3L, D-214.6L, D-216.45L, D-216.45R, D-212.7M, D-213.8L, D-216.4R, D-214.5R

<< Go Back

Giles French Park BL-D-214.6L

SA-D-214.6L Photo: Rufus boat launch



Site Contact

USACE The Dalles pool
Land/Property Contact : Natural Resource Manager

The Dalles Dam, OR
541-506-7819

Nearest Address

John Day Dam Road
Rufus, OR 97065

Driving Directions

1. Start at Interstate 84, Rufus, OR
2. Take exit 109 ramp to John Day Dam toward Rufus (0.2 miles)
3. Take John Day Dam Rd (0.5 miles)
4. Finish at Giles-French Park on the left

<< Go Back

Deschutes River State Rec Area BL-LDR-0.2L

Boat Launch Location

Position - Location:	45° 37.938', -120° 54.802'	45° 37' 56.3", -120° 54' 48.1"	45.63230, -120.91336	The Dalles

Comments: Small boat launch that can be used to access the Columbia River (@ river mile D-204.8) and the lower Deschutes River.

Location Information

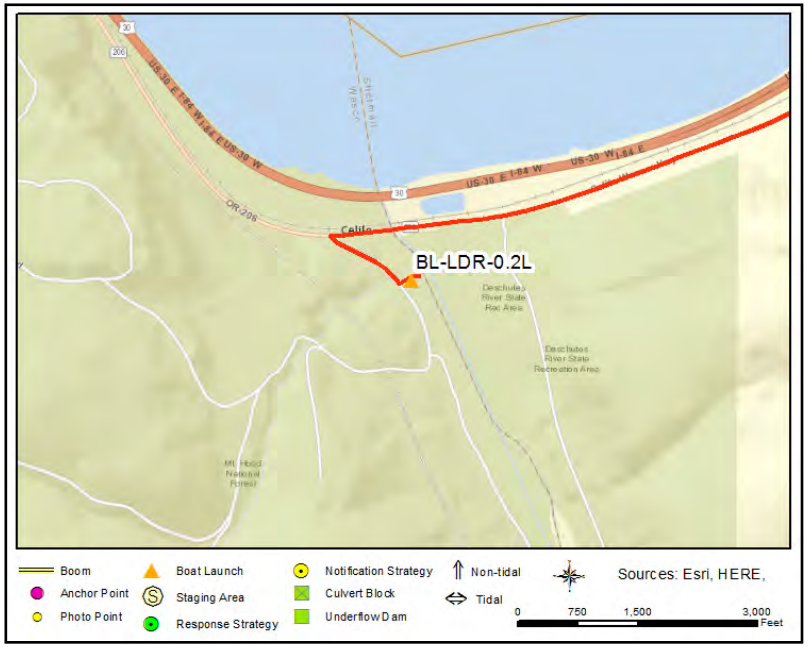
Asset	Type/Status	Amount/Number
Boat Ramp(s)	Asphalt	Single launch-busy during the summer
Parking - Car	Not Marked	Several parking lots, space for ~30 cars
Parking - Trailer	Not Marked	Several parking lots, ~ 30 trailers
Power	Yes	
Restroom	Restroom - Flush	1
Water (potable)	Yes	

GRP Response Strategies Served:

D-206.6M, D-204.7L

Deschutes River State Rec Area BL-LDR-0.2L

SA-LDR-0.2L Photo: Deschutes River Boat Ramp



Site Contact

Deschutes River State Rec Area
Primary Contact : land manager

OR
541-739-2322

Nearest Address

Celilo-Wasco Highway and Moody Road
The Dalles, OR 97058

Driving Directions

1. Directions to SA-LDR-0.2L starting from I-84 take exit 104 for US-97 toward Yakima Bend (0.2 mi)
2. Turn left onto US-97 S (0.2 mi)
3. Turn right at the 2nd cross street onto Biggs-Rufus Hwy (4.6 mi)
4. Continue onto OR-206 W (0.2 mi)
5.TurnleftontoMoodyRd/OldMoodyRd(0.9 mi)
6. Turn left into Deschutes River State Recreation Area (0.7 mi)

<< Go Back

CHAPTER 5

(Reserved)

<< Go Back

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<< Go Back

CHAPTER 6

Resources at Risk

6.1 CHAPTER INTRODUCTION

This chapter provides a summary of natural, cultural, and economic resources at risk in The Dalles Pool of the Middle Columbia River. 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.

The Middle Columbia River subbasin affords a wide variety of aquatic, riparian, and upland habitats. These varied habitats support a complex diversity of wildlife species, including large and

small mammals, song birds, birds of prey, upland birds, and other waterfowl, as well as numerous reptiles and amphibians. Some species are resident throughout the year; others are migratory either within the subbasin or, in numerous cases, seasonally migrate outside the subbasin. Many wildlife species found in the subbasin are classified as threatened, endangered, sensitive, or of special concern under either the federal Endangered Species Act or Washington State guidelines. Classification types are listed below, with the abbreviation of each type provided in the brackets (to the right of the classification).

- 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:

- American white pelican [SE],
- Bald eagle [SS (WA)],
- Burrowing owl [SC],
- Common loon [SS],
- Flammulated owl [SC],
- Golden eagle [SC (WA)],
- Greater sage-grouse [FC/ST],
- Lewis's woodpecker [SC],
- Loggerhead shrike [SC],
- Northern spotted owl [FT/SE (WA)/ST (OR)],
- Peregrine falcon [FCo/SS (WA)],
- Purple martin [SC (WA)],
- Sage thrasher [SC],
- White-headed woodpecker [SC],
- Yellow-billed cuckoo [FT/SC],
- Vaux's swift [SC (WA)]
- Western grebes [SC].

Mammals:

- Black-tailed jackrabbit [SC],
- Canada lynx [FT/ST],
- Fisher [FC/SE],
- Gray wolf [FE/SE],
- Grizzly bear [FT/SE],
- Pygmy rabbit [FE/SE],
- Townsend's ground squirrel [SC],
- Washington ground squirrel [FC/SC (WA)/SE (OR)],
- Western gray squirrel [ST].

Fish:

- Bull trout [FT/SC (WA)],
- Columbia River chum salmon [FT/SC (WA)],
- Green sturgeon [FT],
- Lower Columbia River Chinook salmon [FT/SC (WA)],
- Lower Columbia River Coho salmon [FT/SE (OR)],
- Lower Columbia River steelhead [FT/SC (WA)],
- Mid-Columbia River steelhead [FT/SC (WA)],
- Pacific lamprey [FCo],
- River lamprey [FCo/SC],
- Snake River fall Chinook salmon [FT/SC (WA)/ST (OR)],
- Snake River sockeye [FE/SC (WA)],
- Snake River spring/summer Chinook [FT/SC (WA)/ST (OR)],
- Snake River steelhead [FT/SC (WA)],
- Upper Columbia River Chinook [FE/SC (WA)],
- Upper Columbia River steelhead [FT/SC (WA)].

Amphibian and Reptile:

- California mountain kingsnake [SC (WA)],
- Common sharp-tailed snake [SC],
- Larch Mountain salamander [SS (WA)],
- Oregon spotted frog [FT/SE (WA)],
- Sagebrush lizard [SC],
- Western (Pacific) pond turtle [SE (WA)],
- Western toad [SC (WA)].

Plants:

- Northern wormwood [FC],
- Ute ladies'-tresses [FT],
- White bark pine [FC],
- White Bluffs bladderpod [FT]

6.2.1 General Resource Concerns

6.2.1a - Habitats:

- Wetlands in this region are all fresh water and 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 nearshore fish habitat by providing shade, cover, and food.
- Side channels and impounded areas provide feeding and resting areas for 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.
- Stream mouths are concentration areas for anadromous fish and are feeding areas for a variety of birds.
- Human-made structures such as pilings, rock jetties or log rafts may be used as roosting or nesting areas for a variety of marine birds and raptors.
- Numerous habitat restoration sites exist along the Middle Columbia River and its tributaries. Often, significant resources have been invested in these locations to improve stream conditions specific to salmon recovery.

6.2.1b - Fish:

- Various salmonids (both juvenile and adults) are present in the river above Bonneville Dam throughout the year. Millions of juvenile salmonids move downstream past the dam to use estuarine waters as a rearing and foraging area as they prepare for migration to the ocean. Returning adult salmonids of various types and stocks support significant tribal, commercial and recreational fisheries.
- Anadromous fish (other than salmon) in this region include American shad, Green sturgeon [FT], and Pacific lamprey [FCo].
- Resident fish present year-round in freshwater portions of the river include White sturgeon, Walleye, Largemouth bass, Crappie, Perch, Bullheads and Northern pike minnow.

6.2.1c - Wildlife:

- Significant **waterfowl concentrations** exist throughout this GRP region from fall through spring. Hundreds of thousands of geese, swans, and dabbling ducks may occupy this region during peak periods. Resident and migratory waterfowl heavily utilize the islands, backwaters, wetlands and adjacent uplands of the region from fall through spring. Numerous islands in this sub-region also provide nesting habitat for resident waterfowl.
- **Bald eagles [SS (WA)] and Great blue herons** are nesting residents and may be found year-round throughout the region. Peregrine falcons [FCo/SS (WA)] are commonly found as winter and spring visitors. Other raptors, including Osprey, Northern harrier, and Burrowing owl [SC] are also regularly found in this area.
- **Resident and migratory songbirds** heavily utilize riparian habitats year-round and are susceptible to oiling if riparian vegetation and shorelines become contaminated.
- **Other small mammals** common to the region include beaver, muskrat, river otter, mink, and raccoon. The black-tailed jackrabbit [SC] and the Townsend's ground squirrel [SC] are also found in this area. Because of their habitat preferences, all of these species are vulnerable to contact with spilled oil.

6.2.2 Specific Geographic Areas of Concern

Middle Columbia River, The Dalles Pool, Lake Celilo (~RM 192-215). See Figure 6-1.

1. **Spearfish/Little Spearfish Lakes (~RM 193):** Impounded waterbody. Waterfowl concentration area. Western (Pacific) pond turtle [SE (WA)].
2. **Horsethief Lake (~RM 194).** Impounded waterbody. Waterfowl concentration area. State park.
3. **Brown's Island and vicinity (~RM 197):** Reservoir islands provide important bird breeding and winter concentration areas that include various waterfowl, American white pelican [SE], Bald eagle [SS (WA)], and Great blue heron. Sagebrush lizard [SC] also present. Islands on Oregon side of the river serve as salmonid concentration and rearing areas.
4. **Celilo Park (~RM 201):** Salmonid concentration. Public recreation.
5. **Miller Island (~RM 203-206):** Reservoir island (USFS). Waterfowl concentration area. Great blue heron and raptor breeding area including Bald eagle [SS (WA)], and Golden eagle [SC (WA)].
6. **Deschutes River (~RM 204):** Waterfowl concentration area. Salmonid habitat. Public recreation (Oregon State Park).
7. **Maryhill State Park (~RM 208):** Riparian habitat. Public recreation area.
8. **Rufus Islands (~RM 210-213):** Reservoir islands. Waterfowl breeding and winter concentration areas. Salmonid concentration and rearing habitat. Resident warm water fish presence.

<< Go Back

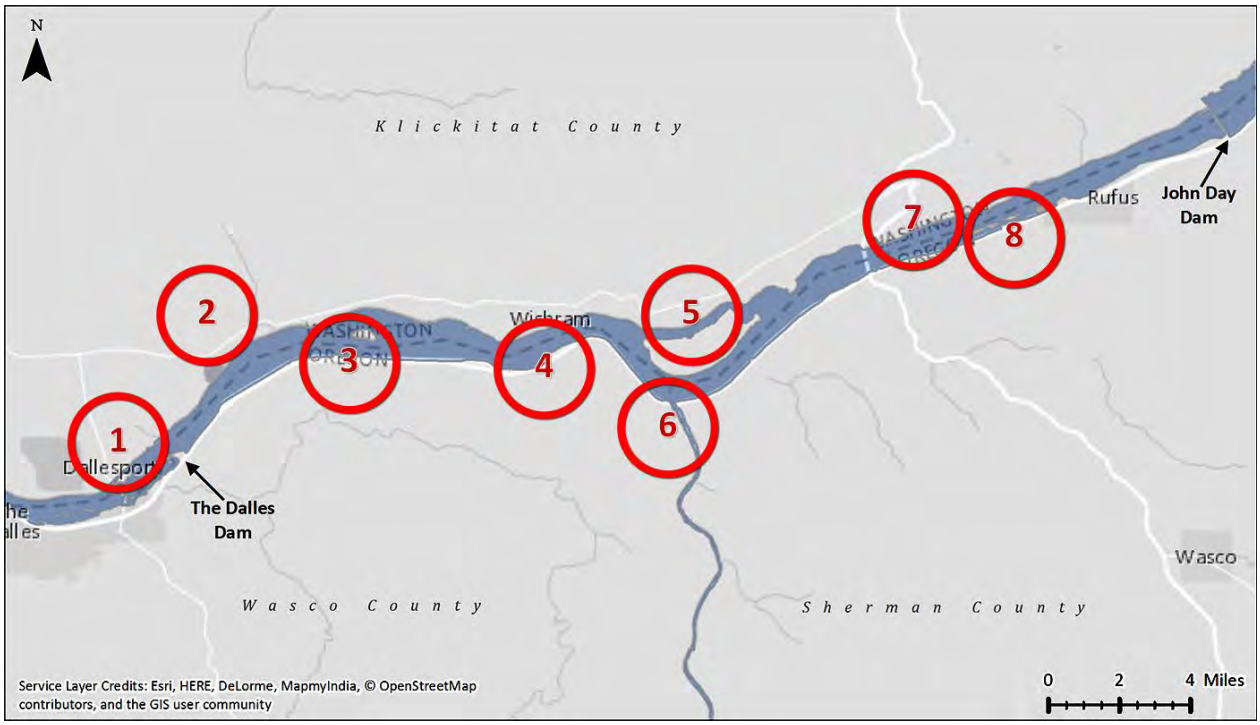

Figure 6-1: Middle Columbia River, The Dalles Pool, Lake Celilo (~RM 192-215).

6.3 CULTURAL RESOURCES AT RISK - SUMMARY

Culturally significant resources are present within the Middle Columbia River area. Information regarding the types of cultural resources and their locations is maintained by both the Washington Department of Archeology and Historic Preservation (WDAHP) and the Oregon State Historic Preservation Office (OR SHPO). This sensitive information is made available to the Washington Department of Ecology for oil spill preparedness and response planning. The Tribal Historic Preservation Offices (THPOs) of the Cowlitz, Nez Perce, Umatilla, Warm Springs, Yakama Nation, and the Confederated Tribes of the Colville Reservation, may also be able to provide information on cultural resources at risk in the area and should be contacted, along with WDAHP and the OR SHPO, through normal trustee notification processes when significant oil spills, or smaller spills above reportable thresholds, occur on the Columbia River. During a spill response, after the Unified Command is established, information related to specific archeological concerns will be coordinated through the Environmental Unit. In order to ensure that tactical response strategies do not inadvertently harm culturally sensitive sites, WDAHP and the OR SHPO should be consulted before disturbing any soil or sediment during a response action. WDAHP, the OR SHPO, and/or the Tribes may assign a person, or provide a list of professional archeologists that can be contracted, to monitor response activities and cleanup operations for the protection of cultural resources at risk. Due to the sensitive nature of such information, details regarding the location and type of cultural resources present are not included in this document.

WDAHP	(360) 586-306	Rob.Whitlam@dahp.wa.gov
OR SHPO	(503) 986-0674	Dennis.Griffin@oregon.gov
Cowlitz Indian Tribe, Cultural Resources Director	(360) 577-6962	culture@cowlitz.org
Nez Perce Tribe, Spill Responder and Water Quality	(208) 621-3893	keithb@nezperce.org
Confederated Tribes of the Umatilla Indian Reservation	(541) 276-4348	NaturalResources@ctuir.org
Warm Springs Confederated Tribes	(541) 553-3257	jp.patt@wstribes.org
Confederated Tribes of the Yakama Indian Nation	(509) 865-5121	kate@yakama.com
Confederated Tribes of the Colville Reservation, THPO	(509) 634-2695	guy.moura@colvilletribes.com

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 (photographing human remains is prohibited to all except the appropriate authorities). 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

If any person monitoring work activities or involved in spill response believes that they have encountered cultural resources, all work must be stopped immediately and the Incident Commander and Cultural Resource Specialist notified. 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 are 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, fish traps, and prehistoric water craft
- 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, or shipwrecks

<< Go Back

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 6 A 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

The use of boats and watercraft are usually restricted within 200 yards of offshore National Wildlife Refuge sites or other sensitive areas. Response organizations should immediately request a waiver from National Marine Fisheries Service [NMFS] and/or U.S. Fish and Wildlife Service regarding the inadvertent approach or hazing of marine mammals that may be encountered during open water response operations. After a Unified Command is formed, the Wildlife Branch (Operations Section) in consultation with the appropriate trustee agencies and the Environmental Unit will evaluate and recommend 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 it. 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).

<< Go Back

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<< Go Back

APPENDIX 6A

The Dalles Pool of the Middle Columbia River

List of Economic Resources

Category	Name	Location/Address	Lat/Long	Contact	Phone	Email
A-1 Drinking Water Intakes	Heritage Landing Water Intake/Well	Celilo-Wasco Highway and Moody Road, The Dalles, OR 97058	45.63268/-120.91276	Heritage Landing Park Manager	541-739-2322x23	
A2 - Energy/Power Generation Water Intakes	The Dalles Lock & Dam	3545 Bret Clodfelter Way, The Dalles, OR 97058	45.619/-121.12	Control Room Operator (24/7)	541-298-7505	
B1 - Industrial Intakes	Klickitat County Port District 1	PO Box 188 White Salmon, WA 98605	45.6237/-121.1358	District 1 Secretary	509-493-3406	
B1 - Industrial Intakes	BNSF	1 Railroad Ave, Wishram, WA 98673	45.6563/-120.967	BNSF Railway Co	509-748-3203	
B2 - Agricultural Irrigation Intakes	Gunkel Orchards	89 Maryhill Hwy, Goldendale, WA 98620	45.6715/-120.8651	Jenny Pew	509-773-4698	
B2 - Agricultural Irrigation Intakes	Maryhill Museum of Art	35 Maryhill Museum Dr, Goldendale, WA 98620	45.6745/-120.8609	Maryhill Museum of Art	509-773-3733	
C2 - Public Recreation Areas	Deschutes River State Rec Area, Heritage Landing State Park	Celilo-Wasco Highway and Moody Road, The Dalles, OR 97058	45.632168/-120.912985	Heritage Landing Park Manager	541-739-2322x23	
C4 - Parks & Beaches	Horsethief State Park	8485 Highway 14, Lyle, WA 98635	45.63991/-121.10376	Washington State Parks and Recreation Commission	509-767-1159	
C4 - Parks & Beaches	Avery Recreation Area	Avery Road, Lyle, WA 98635	45.662321/-121.035273	US Army Corp of Engineers	541-506-7819	
C4 - Parks & Beaches	Celilo Park	Celilo Park Road, The Dalles, OR 97058	45.64889/-120.96354	US Army Corp of Engineers	541-506-7819	
C4 - Parks & Beaches	Maryhill St. Park	50 SR 97, Maryhill, WA 98620	45.683107/-120.820788	Washington State Parks and Recreation Commission	509-773-5007	

<< Go Back

Category	Name	Location/Address	Lat/Long	Contact	Phone	Email
C4 - Parks & Beaches	Giles French Park	John Day Dam Road, Rufus, OR 97065	45.701274/-120.729231	US Army Corp of Engineers	541-506-4807	
C6 - National River Reach	Columbia River Gorge National Scenic Area	Portion of the Columbia River from the mouth of the Sandy River to the mouth of the Deschutes River	45.7047/-121.7917	USDA Forest Service, Columbia River Gorge	541-308-1700	