



State of Oregon
Department of
Environmental
Quality



DEPARTMENT OF
ECOLOGY
State of Washington



MIDDLE COLUMBIA RIVER

MCNARY POOL

Geographic Response Plan (MCRM-GRP)



MIDDLE COLUMBIA RIVER

McNARY POOL

Geographic Response Plan

(MCRM-GRP)

October 2015

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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

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 - Central Region Spill Response Team	(509) 575-2490*
Washington Department of Fish and Wildlife - Region 5	(360) 696-6211
Washington Department of Fish and Wildlife - Oil Spill Team	(360) 534-8233*
Washington 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 - 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
Washington State Patrol - District #3	(509) 575-2320
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 - McNary Pool	
City of Pasco Police Department	(509) 545-3415
City of Pasco Fire and Police Dispatch	(509) 545-3510
City of Kennewick Police Department	(509) 585-4208
City of Kennewick Fire Station 1	(509) 585-4231
Port of Kennewick, WA	(509) 586-1186
City of Richland, WA Fire and Emergency Services	(509) 737-0911
City of Richland Police Department	(509) 942-7340
City of Touchet, WA Fire District	(509) 394-2433
City of West Richland Police	(509) 967-3425
Benton County Sheriff	(509) 735-6555
Benton County Fire District	(509) 737-0911
Franklin County Sheriff	(509) 545-3510
Franklin County Fire District	(509) 547-9306
Franklin County Emergency Management	(509) 545-3546
Walla Walla County Sheriff	(509) 545-8441
Walla Walla County Fire District	(509) 394-8807
Umatilla County Sheriff	(541) 966-3651
Umatilla Fire Department	(541) 922-2770

* Contact Numbers staffed 24-hour/day

Before you print this document

Chapter 4 with appendices (pages [35-438](#)) and Appendix 6A (pages [453-456](#)) of this document are provided in “landscape” page orientation; all other chapters and appendices are oriented in “portrait.” The appendices in Chapter 4 (pages [117-438](#)) 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 McNary Pool-GRP (MCRM-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 McNary 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.....	24
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).....	60
4.5 Matrices.....	66
4.5.1 Naming Conventions (Short Names).....	66

4.5.2	Response Strategy Matrices	67
4.5.3	Notification Strategy Matrices.....	98
4.5.4	Staging Area Matrices.....	104
4.5.5	Boat Launch Matrices.....	110
	APPENDIX 4A.....	117
	APPENDIX 4B.....	307
	APPENDIX 4C.....	333
	APPENDIX 4D.....	387
	CHAPTER 5.....	439
	CHAPTER 6.....	441
6.1	Chapter Introduction.....	441
6.2	Natural Resources at Risk - Summary.....	441
6.2.1	General Resource Concerns.....	444
6.2.2	Specific Geographic Areas of Concern.....	445
6.3	Cultural Resources at Risk - Summary.....	448
6.3.1	Discovery of Human Skeletal Remains	449
6.3.2	Procedures for the Discovery of Cultural Resources	449
6.4	Economic Resources at Risk Summary.....	450
6.5	General information	450
6.5.1	Flight restriction zones.....	450
6.5.2	Hazing.....	450
6.5.3	Oiled Wildlife	451
	APPENDIX 6A.....	453

LIST OF FIGURES

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

Figure 6-1: Middle Columbia River, McNary Pool, Lake Wallula (~RM 292-317). 446

Figure 6-2: Middle Columbia River, McNary Pool, Lake Wallula (~RM 317-343). 447

LIST OF TABLES

Table 4-1: Water Speed Drift Measurement Table.....	39
Table 4-2: Historical River Streamflow Ranges.....	40
Table 4-3: M-A (Hanford Reach ~M-343).....	50
Table 4-4: M-B (Upstream on the Yakima River ~YAK 4.3).....	51
Table 4-5: M-C (US-12/I-82 Bridge ~M-336.1).....	52
Table 4-6: M-D (US-395, WA-397 and Railroad Bridge @ Kennewick/Pasco ~M-328).....	53
Table 4-7: M-E (Ice Harbor Lock and Dam ~MSN-9.6).....	54
Table 4-8: M-F (Tidewater/Tesoro Pipelines, US-12 and Railroad Bridges ~MSN-2.3).....	55
Table 4-9: M-G (Railroad Bridge @ Burbank/Finley ~M-323.4).....	56
Table 4-10: M-H (McNary Wildlife Refuge Bridges ~M-320.7).....	57
Table 4-11: M-I (Walla Walla River Confluence ~M-314.5).....	58
Table 4-12: M-J (Switzer Canyon Area ~M-302.3).....	59

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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 McNary Pool of the Middle Columbia River (MCRM-GRP). At the western edge of the McNary Pool, the Columbia River provides a border between Oregon and Washington until reaching river mile 310 where it leaves Oregon, continuing on through the McNary Pool to river mile 343, the beginning of the Hanford Reach, and beyond to its headwaters in Canada. The MCRM-GRP planning area covers 50.5 miles of the Columbia River, extending from the McNary Dam at river mile 292.5 to the Hanford reach on the outskirts of Richmond, WA at river mile 343. Included within the McNary Pool are 9.6 miles of the Snake River, ending at the base of the Ice Harbor Dam, and a four mile section of the Yakima River, running from the confluence of the Yakima River with the Columbia River up to the I-182 Bridge, for a total of 64.1 miles in the McNary Pool-GRP. Numerous cities and towns are located on the banks of the Columbia River within the McNary Pool, including: Kennewick, Pasco, and Richland, Washington and a portion of Umatilla, Oregon, upstream of the McNary Dam. 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	Comments, Corrections, or Suggestions
Chapter 2	Site Descriptions
Chapter 3	Response Options and Considerations
Chapter 4	Response Strategies and Priorities
Appendix 4A	Tactical Response Strategies
Appendix 4B	Notification Strategies
Appendix 4C	Staging Area
Appendix 4D	Boat Launch Locations
Chapter 5	Reserved
Chapter 6	Resources at Risk
Appendix 6A	List of Economic Resources in Area

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>.

GRP Comment Form

Today's Date: _____

Your Name: _____

Title: _____

Company/Agency: _____

Address: _____

City: _____

State/Province: _____

Zip: _____

Email: _____

Ph: _____

GRP Page Number: _____ Section or Paragraph: _____

Comment(s): _____

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

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 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 MCRM-GRP encompasses the McNary Pool (a.k.a. Lake Wallula), and covers a 50.5 mile reach of the Columbia River, running primarily north, from the upstream side of the McNary Lock and Dam (located at river mile M-292.5), leaving Oregon behind at the state line in Umatilla County located at river mile 310, and continuing on through Benton, Walla Walla, and Franklin counties in Washington where the McNary Pool-GRP ends at the border between the Tri-Cities and the Hanford Site. Also included within the McNary Pool-GRP are short sections of the both the Snake and Yakima Rivers. The section of the Snake River within the GRP runs from its confluence with the Columbia River at river mile MSN-0, upstream to the base of the USACE Ice Harbor Lock and Dam located at river mile MSN-9.6. Similarly, the confluence of the Yakima River, YAK-0, is included in the McNary Pool-GRP and response strategies have been developed within the first four miles of the Yakima, up to the I-182 Bridge at river mile YAK-4.0.

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

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

² <http://www.ucmp.berkeley.edu/cenozoic/cenozoic.php>

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 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 MCR 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

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.

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 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,

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

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

⁹ Lewis and Clarks Journals <http://frontiers.loc.gov/cgi-bin/query> (2:527).

¹⁰ Lewis and 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/>

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 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 McNary Pool is 50.5 miles long and has a capacity of 1,350,000 acre/feet.¹⁸ This reach of the river leaves Oregon and extends north into Washington past the confluence of both the Snake and Yakima Rivers to the Tri-Cities metropolitan area, ending at river mile 343, the beginning of the Hanford reach. Washington communities along this stretch of the river include Finley, Burbank, and the Tri-Cities of Kennewick, Pasco, and Richland. With a population of ~250,000, the Tri-Cities metropolitan area presents a sharp contrast in urban development from the other sections of the MCR; the next largest city on the bank of the river is The Dalles, with a population of ~15,000.

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.¹⁹

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

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

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/mcnary.pdf>

¹⁹ http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_tropical.pdf

forms the border between Washington and Oregon before flowing into the Pacific Ocean.²⁰ 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.²¹

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 McNary Pool has an average elevation of 340 feet above mean sea level.²² Tributary rivers within the McNary Pool include the Yakima (WA), Snake (WA), and Walla Walla (WA). Portions of the Columbia River within the pool are included within six WRIAs: Rock/Glade (WRIA 31), Walla Walla (WRIA 32), Lower Snake (WRIA 33), Esquatzel Coulee (WRIA 36), Lower Yakima (WRIA 37), and Alkaki/Squilchuck (WRIA 40) watersheds.²³ On the Oregon side, the McNary Pool feeds into the Umatilla watershed.

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.²⁴ 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.²⁵

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 rain, creating a distinct shift in climate.²⁶ 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

²⁰ http://geonames.usgs.gov/apex/f?p=gnispq:3:0::NO::P3_FID:1140014

²¹ <http://pubs.usgs.gov/of/1987/ofr87-242/>

²² <http://www.nwd-wc.usace.army.mil/dd/common/projects/www/mcn.html>

²³ <http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm>

²⁴ <http://www.nwp.usace.army.mil/Portals/24/docs/pubs/pamphlets/TDJDWCBrochure.pdf>

²⁵ http://www.ocs.oregonstate.edu/county_climate/Morrow_files/Morrow.html

²⁶ <http://usatoday30.usatoday.com/weather/tg/wrnshdw/wrnshdw.htm>

winds pass over the Cascades there is little moisture remaining, creating the shrub steppe ecosystem that is emblematic of Eastern Washington.

The McNary Pool, as the furthest east in the Middle Columbia River corridor, exhibits a dry continental climate. At the McNary Dam, elevation 344 feet above mean sea level, the average annual temperature is 53°F, ranging from a mean low of 34°F in January, to a mean high of 73°F in July and August. Recorded temperature extremes are -22°F and 111°F. Mean annual precipitation is 8 inches with half occurring between the months of November and February. Annual snowfall is 3 inches, with more than half occurring in December and 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."²⁷ 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).²⁸ 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.

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

²⁷ <http://www.nwp.usace.army.mil/Portals/24/docs/pubs/pamphlets/TDJDWCBrochure.pdf> pg. 3

²⁸ <https://fortress.wa.gov/ecy/publications/publications/1508010.pdf>

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 trucks, 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 and Facilities

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.²⁹ 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.³⁰ 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

²⁹ <https://fortress.wa.gov/ecy/publications/publications/1508010.pdf> (320)

³⁰ 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 2014.³¹ These numbers are only predicted to rise as facilities are improved or increased.³²

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.³³ 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.³⁴

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.³⁵ 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.

³¹ <http://www.Statesmanjournal.com/story/news/2014/05/26/west-coast-oil-trains/9605759/>

³² <https://fortress.wa.gov/ecy/publications/publications/1508010.pdf> (460)

³³ <https://fortress.wa.gov/ecy/publications/publications/1508010.pdf> (317)

³⁴ <https://fortress.wa.gov/ecy/publications/publications/1508010.pdf> (320)

³⁵ <http://tidewater.com/pasco>

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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CHAPTER 3

MCNARY POOL

Spill Response Options and Considerations

Location				
McNary Dam	Hat Rock State Park	Burbank	Pasco/Kennewick	Richland

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

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Potential Response Options	Source Control and Containment Activities
	Aerial/Vessel Surveillance Activities
	Wildlife Rescue and Rehabilitation Activities
	Collection for Skimming Operations <i>(Note: 1)</i>
	Vessel Based Skimming Operations <i>(Note: 2)</i>
	Shore Based Skimming Operations <i>(Note: 3)</i>
	Shoreside Protection Booming <i>(Note: 4)</i>
	Shoreside Cleanup Activities <i>(Note: 5)</i>
	In-Situ Burning <u>Areas not pre-approved (Note: 8)</u>
Dispersant Use <u>Areas not pre-approved (Note: 9)</u>	

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Considerations	Shoreside Access can be Limited by Private Property
	State or National Wildlife Refuge/Recreation Area
	Threatened/Endangered Terrestrial Species <i>(Note: 6)</i>
	Public or Commercial Marina(s) in Area
	Commercial Vessel Movement/Port Area
	Recreational Boat Traffic
	Tribal Lands or U and A Interests <i>(Note: 7)</i>
	Historic/Cultural District(s) in Area
	Dam(s) in Area
	Interstate Highway Corridor
	Oil Movement by Rail in Area
	Oil Pipeline(s) in Area

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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.

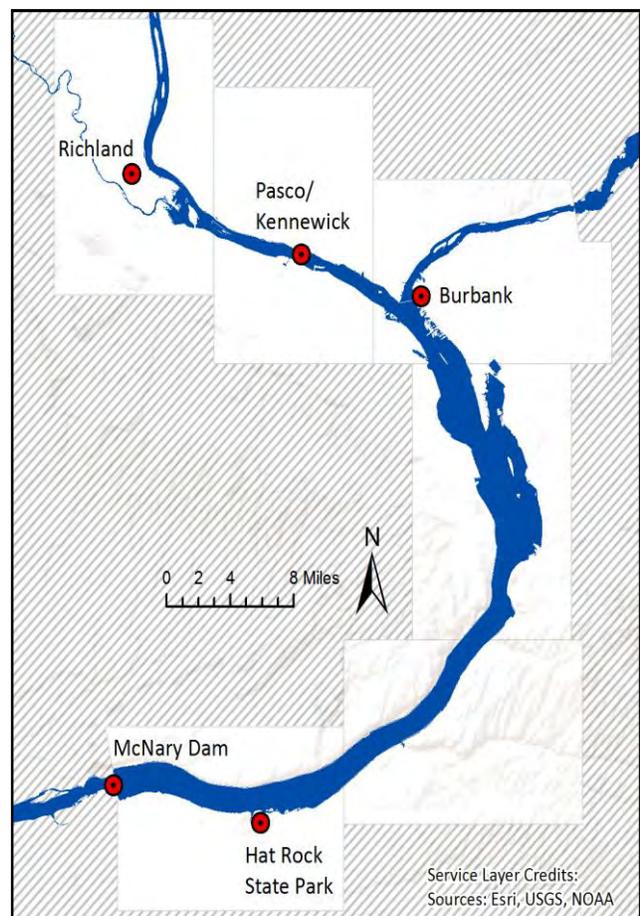
Note 5: Shoreside Cleanup options depend on safe and efficient access to locations and the type of river, creek, or stream bank present. Potential activities could include flooding, flushing, manual removal, vacuum, mechanical removal, sorbents, vegetation cutting, mechanical tilling/aeration, and/or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



MIDDLE COLUMBIA RIVER

MCNARY POOL

Geographic Response Plan

(MCRM-GRP)

CHAPTER 4

Response Strategies and Priorities

OCTOBER 2015

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 through 4D (pages [117-438](#)) 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 Oil Spill Origin Points (POSOPs) 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/stream-flow 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	1.0 mph		3.5 mph		

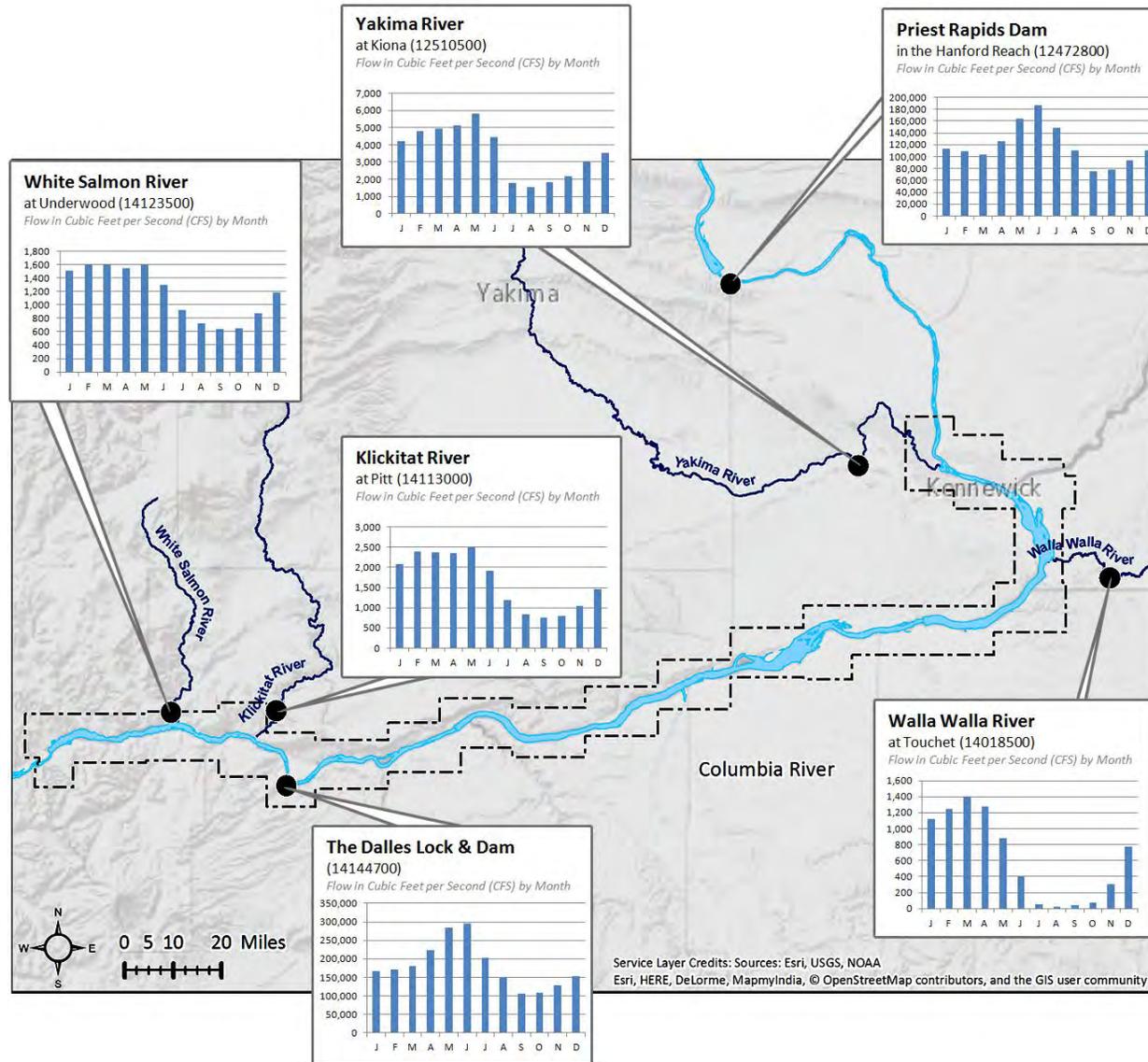


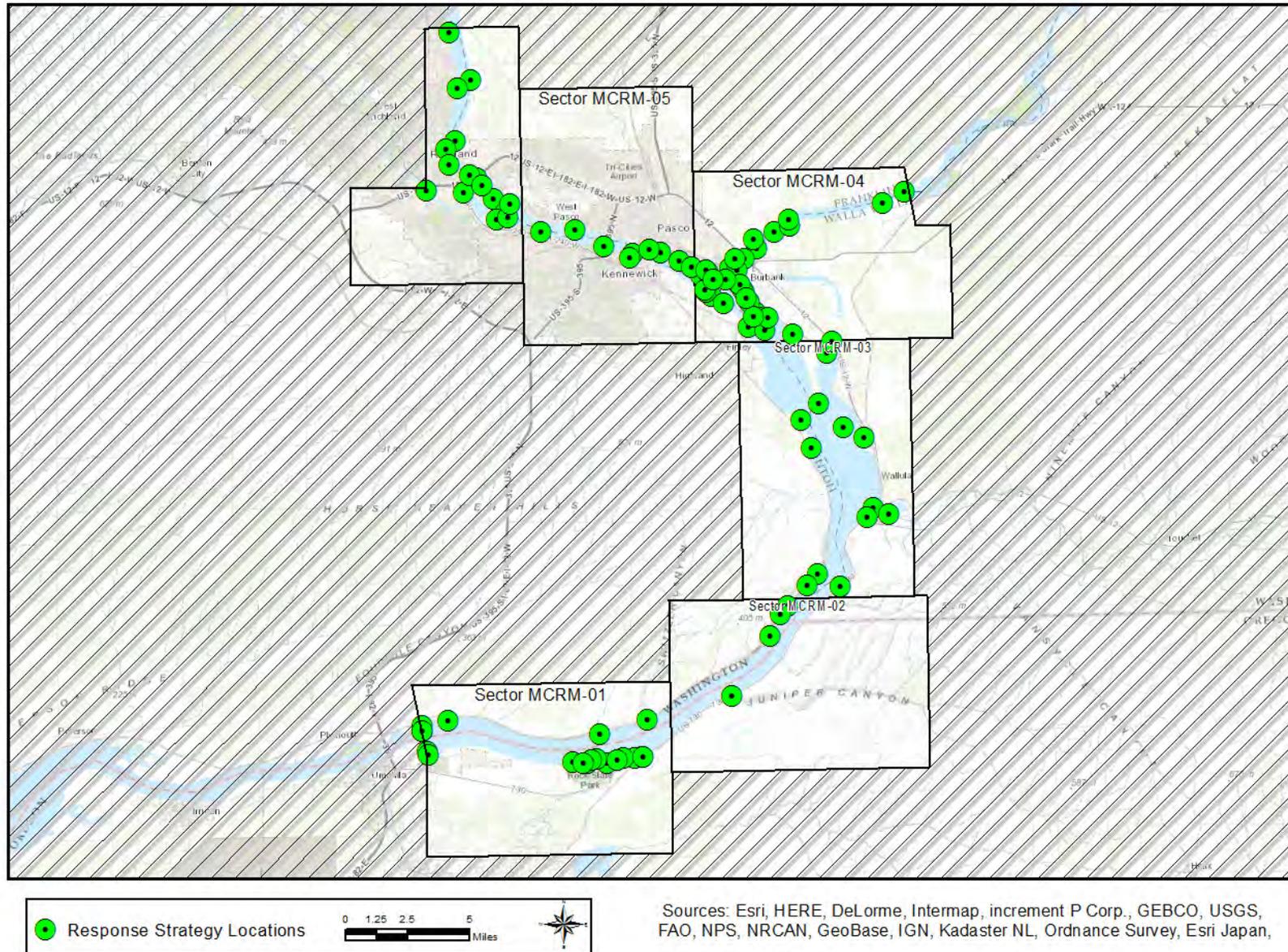
Figure 4-1: USGS Mean Monthly Discharge Measurements for Columbia River and Tributaries

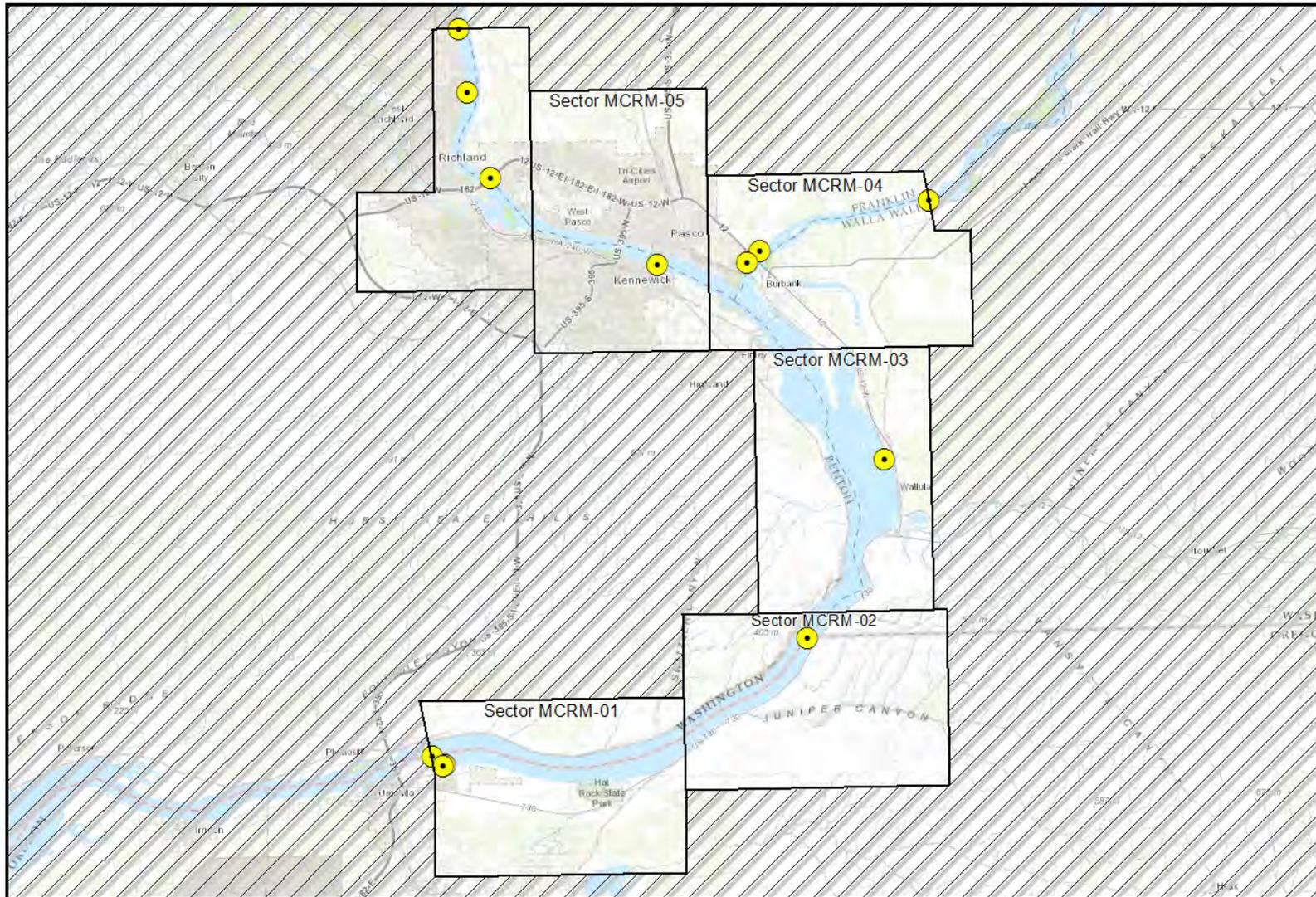
4.2 AREA OVERVIEW MAPS

The following maps provide a geographic overview of the Middle Columbia River 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 POSOPs. Detailed information for each location can be found in the matrices of Section 4.5 or in the chapter appendices. Priority tables for potential oil spill origin points can be found in Section 4.3.2.

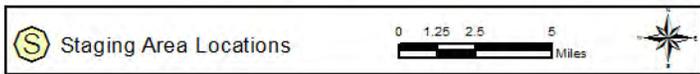
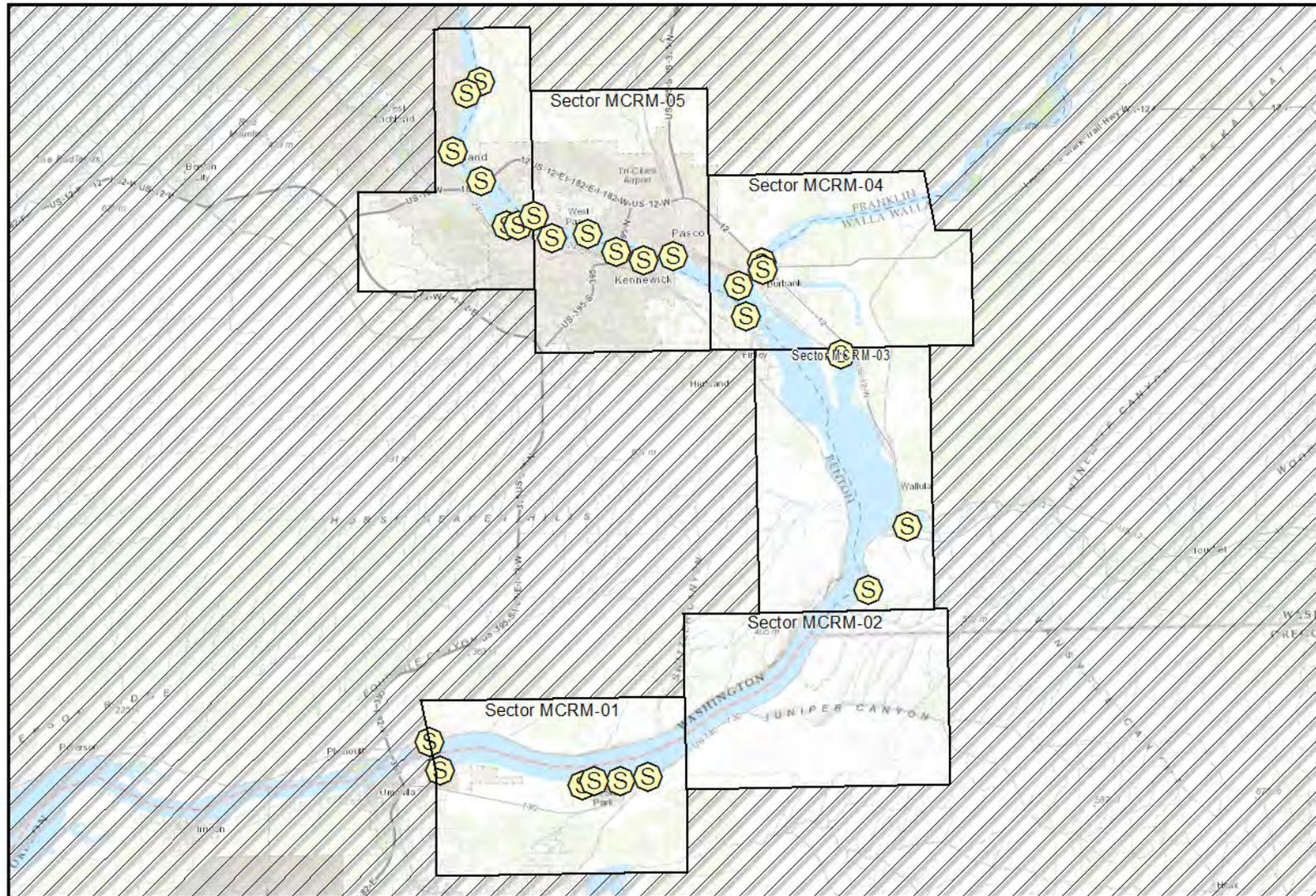
The following area maps are provided, by pool, for reference:

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

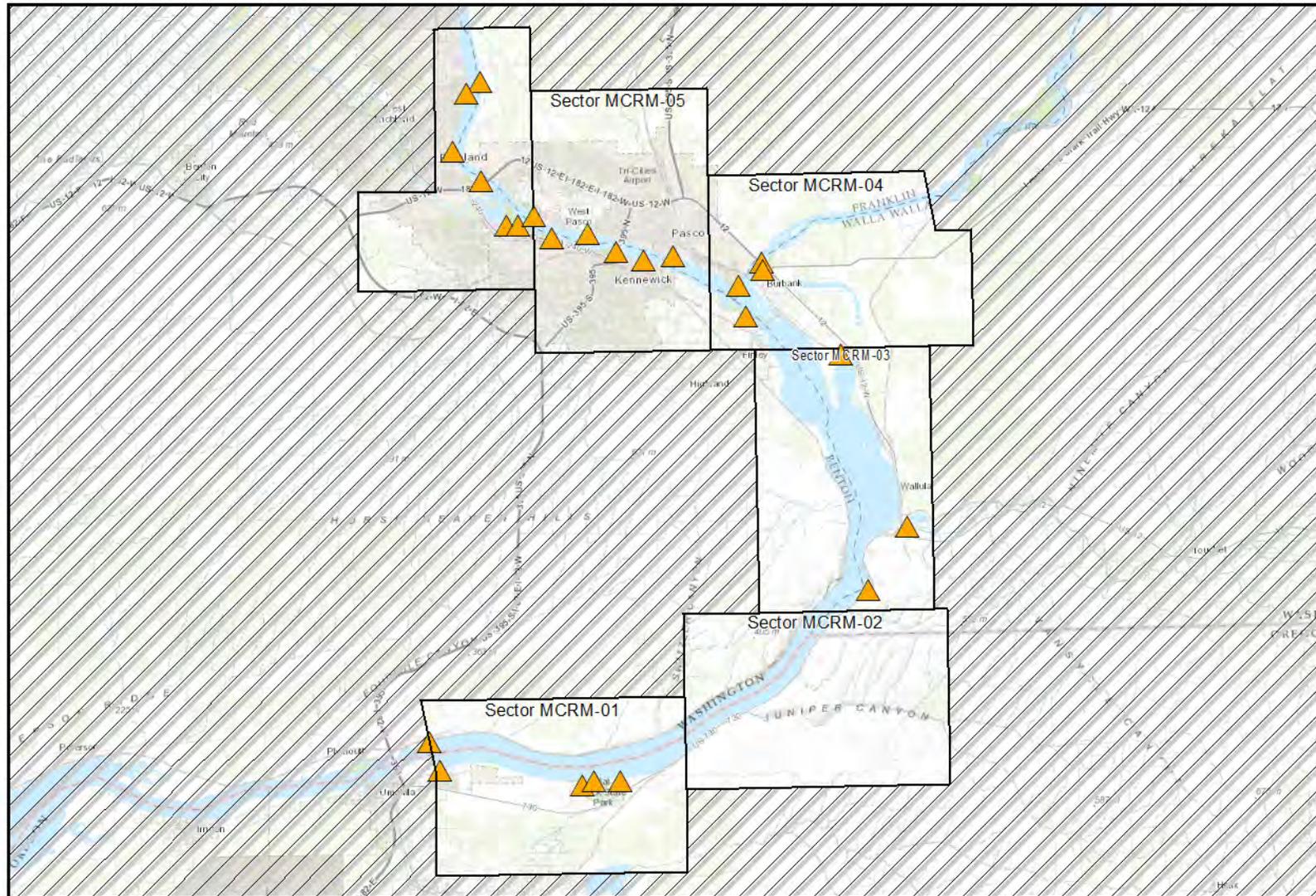




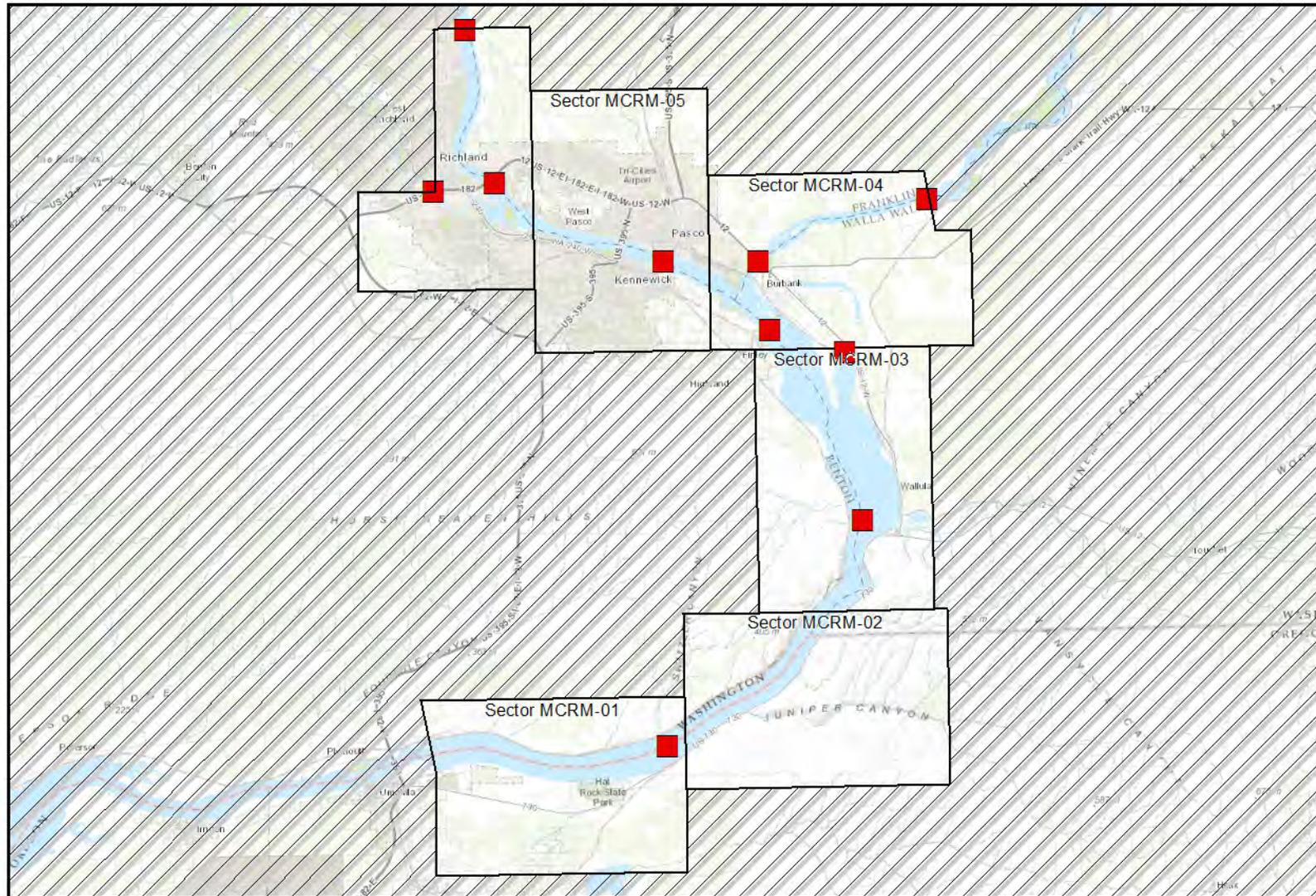
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,



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



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



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

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 McNary 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 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

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 McNary Pool-GRP; example include, points M-A, M-B, M-C and M-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

Table 4-3: M-A (Hanford Reach ~M-343)

M-A (Hanford Reach ~M-343)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-337.3R	65	90	261
2	M-337.8R	65	90	263
3	M-338.2L	65	90	265
4	M-340.3R	65	91	267
5	M-340.7L	65	91	269
6	M-342.8R	65	91	271

Table 4-4: M-B (Upstream on the Yakima River ~YAK 4.3)

M-B (Upstream on the Yakima River ~YAK 4.3)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-334R	65	87	247
2	M-334.3M	65	87	249
3	M-334.5L	65	88	251
4	M-335M	65	88	253
5	YAK-0.5R	65	96	301
6	YAK-2.1L	65	97	303
7	YAK-4.2L	65	97	305

Table 4-5: M-C (US-12/I-82 Bridge ~M-336.1)

M-C (US-12/I-82 Bridge ~M-336.1)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-332.8R	64	86	245
2	M-334R	65	87	247
3	M-334.3M	65	87	249
4	M-334.5L	65	88	251
5	M-335M	65	88	253
6	M-335.8R	65	89	255
7	M-336.1R	65	89	257

Table 4-6: M-D (US-395, WA-397 and Railroad Bridge @ Kennewick/Pasco ~M-328)

M-D (US-395, WA-397 and Railroad Bridge @ Kennewick/Pasco ~M-328)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-325.89L	63	84	223
2	M-326.1M	63	84	227
3	M-326.5L	64	84	229
4	M-327.1L	64	84	231
5	M-328L	64	85	233
6	M-328.4L	64	85	235

Table 4-7: M-E (Ice Harbor Lock and Dam ~MSN-9.6)

M-E (Ice Harbor Lock and Dam ~MSN-9.6)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	MSN-2R	63	93	281
2	MSN-2.1L	63	93	283
3	MSN-2.8L	63	94	285
4	MSN-2.9R	63	94	287
5	MSN-4M	63	95	289
6	MSN-4.5L	63	95	291
7	MSN-4.6M	63	95	293
8	MSN-8.4M	63	96	295

Table 4-8: M-F (Tidewater/Tesoro Pipelines, US-12 and Railroad Bridges ~MSN-2.3)

M-F (Tidewater/Tesoro Pipelines, US-12 and Railroad Bridges ~MSN-2.3)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-324.44M	63	82	209
2	M-324.6M	63	82	211
3	MSN-0.8M	63	92	273
4	MSN-1R	63	92	275
5	MSN-1.55L	63	92	277
6	MSN-1.56R	63	93	279
7	MSN-2R	63	93	281
8	MSN-2.1L	63	93	283

Table 4-9: M-G (Railroad Bridge @ Burbank/Finley ~M-323.4)

M-G (Railroad Bridge @ Burbank/Finley ~M-323.4)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-318.3R	62	76	181
2	M-319.2M	62	76	183
3	M-321.9L	63	78	189
4	M-322.6M	63	78	191
5	M-323.1M	63	78	193
6	M-323.2M	63	79	195
7	M-323.2R	63	79	197
8	M-323.4M	63	79	199

Table 4-10: M-H (McNary Wildlife Refuge Bridges ~M-320.7)

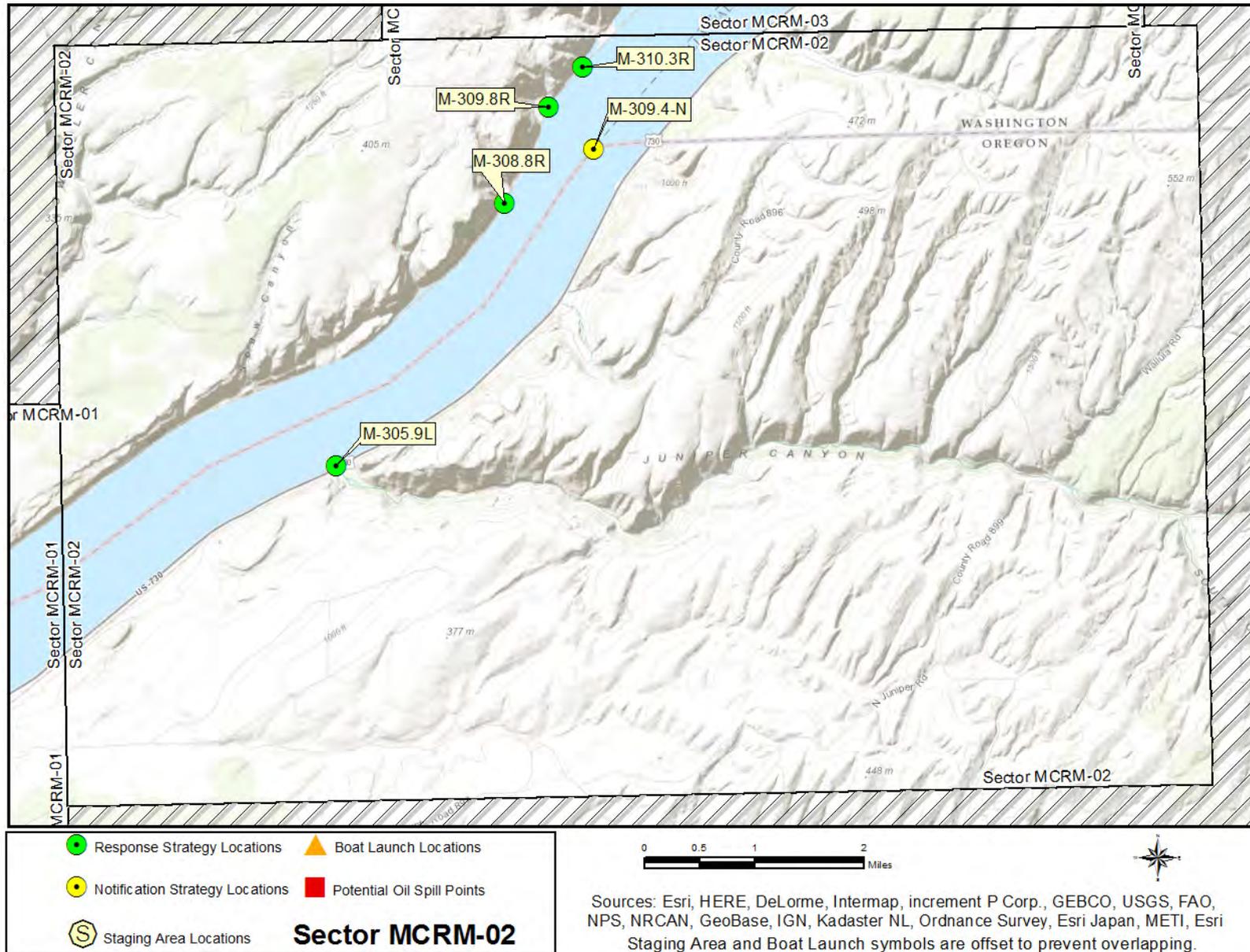
M-H (McNary Wildlife Refuge Bridges ~M-320.7)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-317L	62	74	175
2	M-317.5R	62	75	177
3	M-317.8M	62	75	179
4	M-318.3R	62	76	181
5	M-319.2M	62	76	183
6	M-320.6L	62	77	185
7	M-320.7L	62	77	187

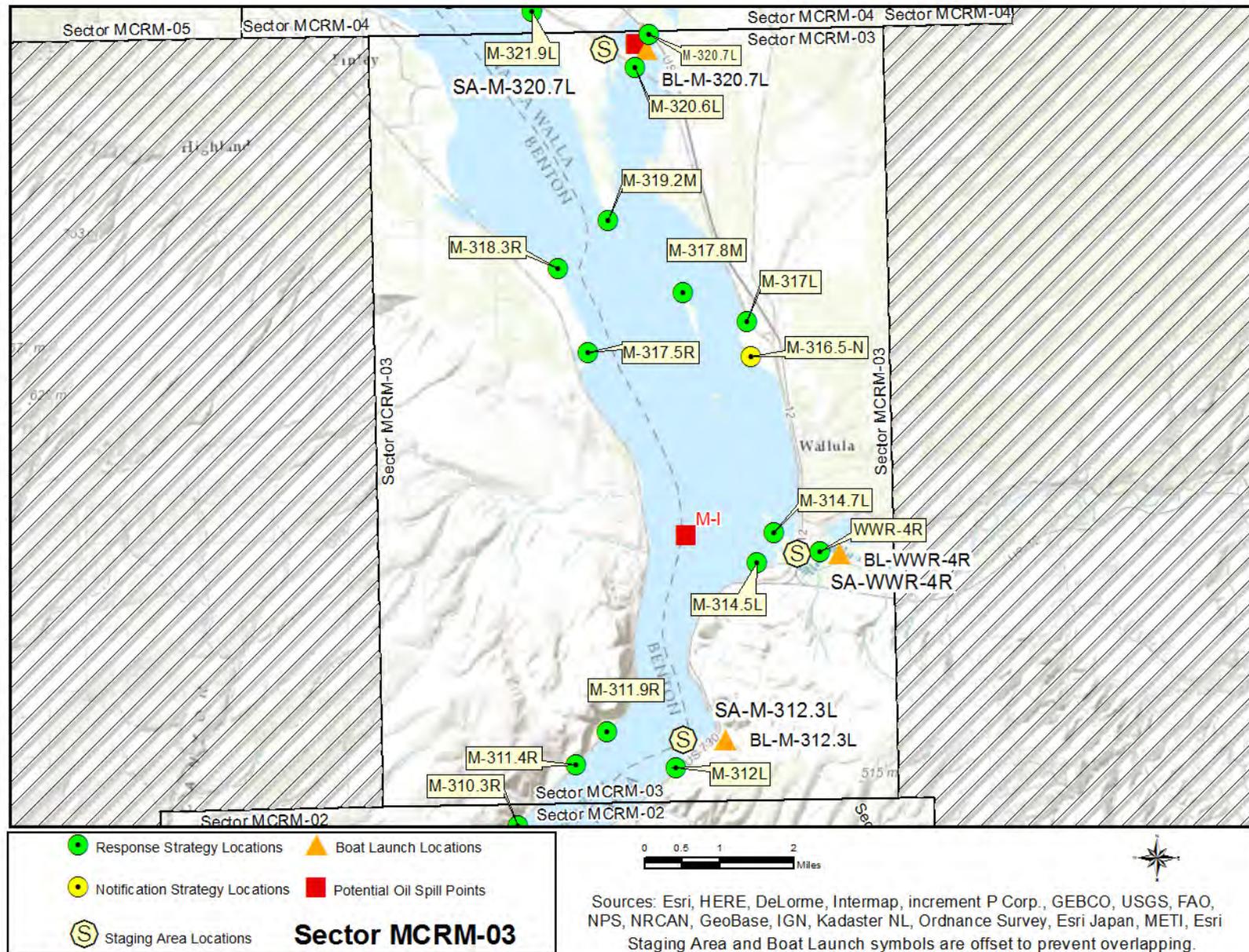
Table 4-11: M-I (Walla Walla River Confluence ~M-314.5)

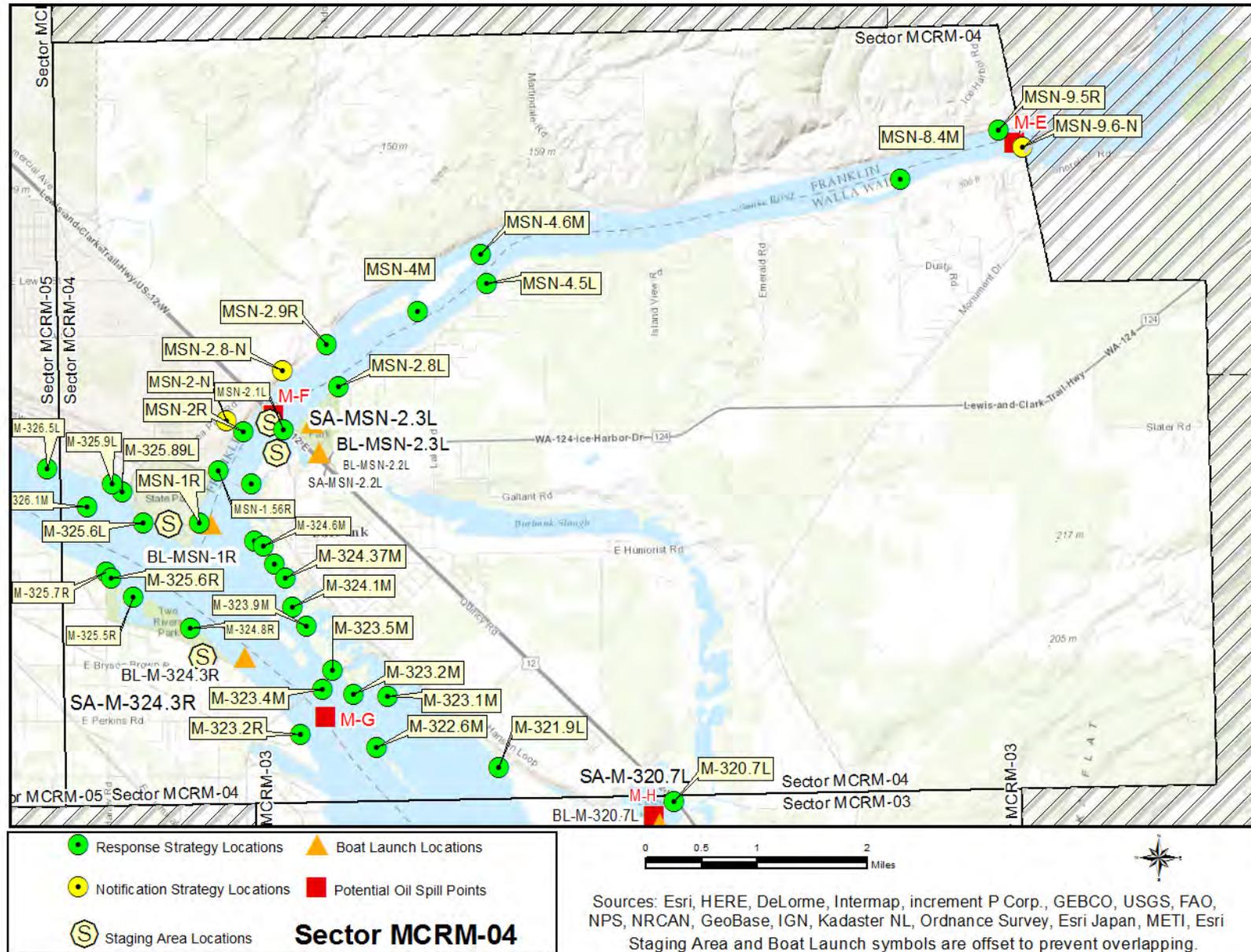
M-I (Walla Walla River Confluence ~M-314.5)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-311.4R	62	72	165
2	M-311.9R	62	72	167
3	M-312L	62	72	169
4	M-314.5L	62	73	171
5	WWR-4R	62	96	299
6	M-314.7L	62	74	173

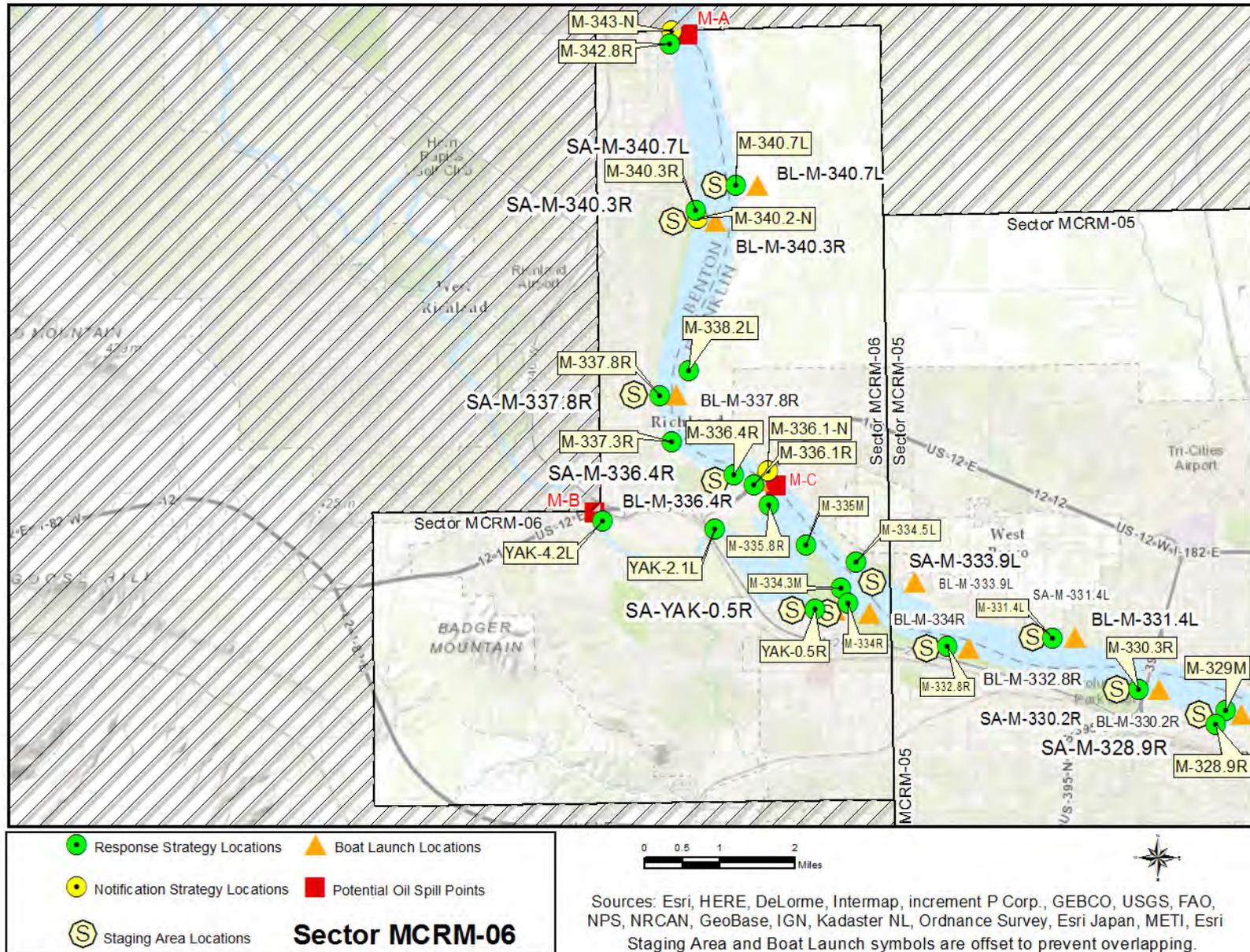
Table 4-12: M-J (Switzer Canyon Area ~M-302.3)

M-J (Switzer Canyon Area ~M-302.3)				
Implementation Priority	Strategy Number	Sector Map (Page #)	Strategy Matrix (Page #)	Strategy Details (Page #)
1	M-299.8L	60	69	139
2	M-299.9R	60	69	141
3	M-300L	60	70	143
4	M-300.3L	60	70	145
5	M-300.9L	60	70	147
6	M-301.1L	60	70	149
7	M-301.5L	60	71	151
8	M-301.6L	60	71	153





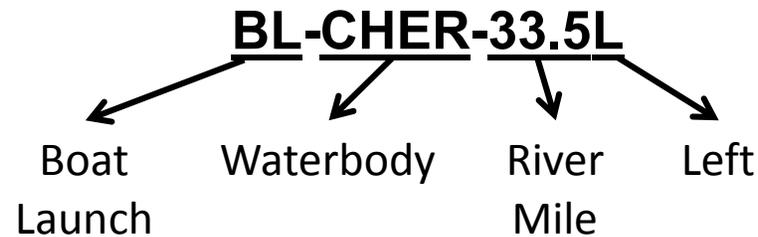




4.5 MATRICES

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
 D=The Dalles Pool
 J=John Day Pool
 M=McNary Pool
 MSN=McNary Pool/Snake River

SIH=Snake River/Ice Harbor Pool
 WIND=Wind River
 LDR=Lower Deschutes River
 JDR=John Day River
 RC=Rock Creek

WWR=Walla Walla River
 YAK=Yakima River
 N = Notification Strategy
 SA = Staging Area
 BL = Boat Launch

L = River Left
 R = River Right
 M = River Middle

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#)
M-292.6L	McNary Southshore Boat Launch 45.92688 -119.29311	Collection	Boom 1000ft	Yes	Onsite BL-M-292.6L/S McNary Dam Lots of parking and several launch ramps on site	Lock and Dam	Launch boat from McNary Dam Southshore boat launch, BL-M-292.6L	60	119
M-292.6R	McNary Lock 45.94068 -119.29849	Exclusion	Boom 300ft	Yes	Onsite Stage at SA-M-292.6R/ N. Contractors must call McNary Dam control at (541) 922-2231 to access site.	Lock and Dam	Launch boat from McNary Dam boat launch, BL-M-292.6R	60	121
M-292.63R	McNary Dam Boat Launch 45.94375 -119.29821	Collection	Boom 1200ft	Yes	Onsite SA-M-292.6R/ N McNary Dam boat launch and parking on site	Osprey, Raptors, Waterfowl Concentrations	Launch boat from McNary Dam boat launch, BL-M-292.6R	60	123
M-292.65R	McNary Upstream fish ladder 45.94041 -119.29780	Exclusion	Boom 200ft	Yes	Onsite Stage at SA-M-292.6R/ N. McNary Dam launch. Contractors must call McNary Dam control at (541) 922-2231 to access site.	Fish Ladder(s)	Launch boat from McNary Dam boat launch, BL-M-292.6R	60	125

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-292.7M	McNary Fish Ladder 45.92872 -119.29404	Exclusion	Boom 100ft	Yes	Onsite S Shore McNary Dam parking lots on site	Fish Ladder(s)	Launch boat from McNary Dam Southshore boat launch, BL-M-292.6L	60	127
M-293.7R	AgriNorthwest Pump Station 45.94674 -119.27641	Deflection	Boom 1000ft	Yes	Remote SA-M-292.6R/N McNary Dam boat launch	Osprey, Raptors, Waterfowl Concentrations	Launch boat from McNary Dam boat launch, BL-M-292.6R	60	129
M-298.7L	Hat Rock State Park 45.92125 -119.17266	Exclusion	Boom 1400ft	Yes	Onsite Stage at SA-M-292.6L/ Hat Rock	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch at BL-M-298.7L/ Hat Rock	60	131
M-299.2L	McNary Yacht Club 45.92038 -119.16336	Exclusion	Boom 100ft	Yes	Onsite McNary Yacht Club, SA-M-299.1L	Marina, Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from McNary Yacht Club, BL-M-299.1L	60	133

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-299.4L	Channel upstream of McNary Yacht Club 45.92021 -119.16038	Exclusion	Boom 500ft	Yes	Remote Stage at McNary Yacht Club/ SA-M-299.1L	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch at McNary Yacht Club/ BL-M-299.1L	60	135
M-299.5M	Islands E of Hat Rock State Park 45.92230 -119.15682	Exclusion	Boom 500ft	Yes	Remote McNary Yacht Club, SA-M-299.1L	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from McNary Yacht Club, BL-M-299.1L	60	137
M-299.8L	Third Island E of Hat Rock State Park 45.92257 -119.15237	Exclusion	Boom 800ft	Yes	Remote McNary Yacht Club, SA-M-299.1L	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from McNary Yacht Club, BL-M-299.1L	60	139
M-299.9R	Easterday Farms 45.93737 -119.14967	Deflection	Boom 1000ft	Yes	Remote Hat Rock State Park, site is on remote BNSF land	Water Intakes	Launch boat from Hat Rock State Park, BL-M-298.7L	60	141

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-300L	Warehouse Beach West 45.92015 -119.14391	Deflection	Boom 800ft	Yes	Onsite SA-M-300L Warehouse Beach Recreation Area	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from Warehouse Recreational Area, BL-M-300L	60	143
M-300.3L	Warehouse Beach East 45.92183 -119.13511	Exclusion	Boom 1000ft	Yes	Onsite Warehouse Beach Recreation Area	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from Warehouse Recreational Area, BL-M-300L	60	145
M-300.9L	Peninsula east of Warehouse Beach 45.92285 -119.12986	Deflection	Boom 500ft	Yes	Remote Sand Station Rec Area - bathroom, beach, lots of parking	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from Warehouse Recreational Area, BL-M-300L	60	147
M-301.1L	Sand Station Recreation Area- West 45.92284 -119.12066	Deflection	Boom 1000ft	Yes	Onsite Located at Sand Station Recreation Area - Can stage some equipment in the parking area.	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from McNary Yacht Club, BL-M-299.1L	60	149

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-301.5L	Sand Station Recreation Area-East (deflection) 45.92358 -119.11438	Deflection	Boom 700ft	Yes	Remote Pump station 1/4 mile east of Sand Station Rec Area - Can stage some equipment on site.	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Launch boat from McNary Yacht Club, BL-M-299.1L	60	151
M-301.6L	Sand Station Recreation Area- East 45.92366 -119.11355	Collection	Boom 500ft	Yes	Onsite Pump station 1/4 mile east of Sand Station Rec Area - Can stage some equipment on site.	Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations	Use McNary Yacht Club for boat launch	60	153
M-302.3R	Creek above pump station 45.94518 -119.10892	Exclusion	Boom 200ft	Yes	Remote Stage from SA-M-300L / Warehouse Rec Area across the river	Creek Estuary, Water Intakes, Waterfowl (Wintering and Production)	Launch from BL-M-300L / Warehouse Rec Area	60	155
M-305.9L	Juniper Canyon 45.95832 -119.03747	Exclusion	Boom 300ft	Yes	Remote Hat Rock Park	Public Recreation Site/Area, Waterfowl Concentrations	Limited access by land from Highway 730. Launch boat from Hat Rock State Park, BL-M-298.7L	61	157

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-308.8R	No Name Pond 45.99264 -119.00471	Exclusion	Boom 100ft	Yes	Remote Stage at SA-M-312.3L/ Walla Walla Yacht Club	Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-M-312.3L/ Walla Walla Yacht Club	61	159
M-309.8R	Palmer Pond 46.00524 -118.99600	Exclusion	Boom 100ft	Yes	Remote Stage at SA-M-312.3L/ Walla Walla Yacht Club	Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-M-312.3L/ Walla Walla Yacht Club	61	161
M-310.3R	Switch Pond 46.01036 -118.98944	Exclusion	Boom 100ft	Yes	Remote Stage at SA-M-312.3L/ Walla Walla Yacht Club	Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-M-312.3L/ Walla Walla Yacht Club	61	163
M-311.4R	Yellepit Pond 46.02206 -118.97284	Exclusion	Boom 100ft	Yes	Remote Stage at SA-M-312.3L/ Walla Walla Yacht Club	Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-M-312.3L/ Walla Walla Yacht Club	62	165
M-311.9R	Mound Pond 46.02826 -118.96406	Exclusion	Boom 100ft	Yes	Remote Stage at SA-M-312.3L/ Walla Walla Yacht Club	Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-M-312.3L/ Walla Walla Yacht Club	62	167
M-312L	Port Kelley 46.02113 -118.94494	Collection	Boom 1000ft	Yes	Onsite Parking lots near site.	Recreational Use Area, Waterfowl	Launch boat from Walla Walla yacht club, BL-M-312.3L .	62	169

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-314.5L	NW Grain Growers 46.06083 -118.92100	Collection	Boom 1000ft	Yes	Onsite Parking lots at facility, need to contact NW grain growers for access.	Bald Eagle, Bird Habitat, Deer Habitat, General Fish and Wildlife Resources, Herons and Other Wading Birds, National Wildlife Refuge, Osprey, Public Recreation Site/Area, Raptors, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Madam Dorian, BL-WWR-4R .	62	171

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-314.7L	Walla Walla River mouth 46.06657 -118.91617	Exclusion	Boom 300ft	Yes	Remote BL-WWR-4R Madam Dorian boat launch for staging	Bald Eagle, Deer Habitat, Herons and Other Wading Birds, Osprey, Public Recreation Site/Area, Raptors, Resident Fish, Riparian Area, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Madam Dorian, BL-WWR-4R .	62	173
M-317L	Attalia 46.10791 -118.92256	Collection	Boom 1000ft	Yes	Onsite Active rail yard, contact Union Pacific to access at (800) 848-8715. Room for parking at end of Attalia Road	Downstream Resources, Migratory Bird Populations, Waterfowl and Salmonid Concentrations and Habitat	Launch upriver at BL-M-320.7L / Casey Pond	62	175

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-317.5R	Hover Park South 46.10240 -118.96731	Exclusion	Boom 900ft	Yes	Remote Stage on-site at the end of Cushman Rd Kennewick WA	Bald Eagle, Deer Habitat, Fish and Wildlife Resources, Osprey, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Casey Pond, BL-M-320.7L .	62	177
M-317.8M	Badger Island 46.11377 -118.94019	Deflection	Boom 1000ft	Yes	Remote Casey Pond	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only. Launch boat from Casey Pond, BL-M-320.7L .	62	179

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-318.3R	Hover Park North 46.1884 -118.97527	Collection	Boom 1000ft	Yes	Onsite Stage on rough gravel road (4-wheel drive needed) in Hover Park.	Bald Eagle, Deer Habitat, Osprey, Public Recreation Site/Area, Waterfowl and Shorebird Concentrations	Launch boat from Casey Pond, BL-M-320.7L .	62	181
M-319.2M	Southern Peninsula, W of Casey Pond 46.12813 -118.96076	Deflection	Boom 500ft	Yes	Remote Casey Pond	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only. Launch boat from Casey Pond, BL-M-320.7L .	62	183

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-320.6L	Casey Pond 46.15790 -118.95240	Exclusion	Boom 100ft	Yes	Remote Casey Pond boat launch and staging area	Recreational Fishery, Salmonid Concentrations and Habitat, Sensitive Nesting Species, Warm Water Fishery and Spawning, Waterfowl and Shorebird Concentrations	Launch boat from Casey Pond, BL-M-320.7L .	62	185
M-320.7L	Casey Pond East 46.16417 -118.94825	Exclusion	Boom 100ft	Yes	Remote Stage at Casey Pond boat launch	Backwater Habitat, Recreational Fishery, Salmonid Concentrations and Habitat, Sensitive Nesting Species, Warm Water Fishery and Spawning, Waterfowl and Shorebird Concentrations	Launch boat from Casey Pond, BL-M-320.7L .	62	187

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-321.9L	Game Road 46.16906 -118.98118	Collection	Boom 1000ft	Yes	Onsite Gravel road near the strategy can be used for staging.	Downstream Resources	Can hand launch a boat on site.	63	189
M-322.6M	Foundation Island 46.17191 -119.00419	Deflection	Boom 1000ft	Yes	Remote Two Rivers Park SA-M-324.3R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only, shallow water around the islands. Launch boat from Two Rivers Park, BL-M-324.3R .	63	191
M-323.1M	Vilard Pond 46.17860 -119.00183	Exclusion	Boom 300ft	No	Onsite End of unnamed dirt road.	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Access via water is difficult due to shallow water.	63	193

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-323.2M	Burbank 8 46.17900 -119.00832	Deflection	Boom 1000ft	Yes	Remote Two Rivers Park	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Two Rivers Park, BL-M-324.3R .	63	195
M-323.2R	JR Simplot Co. 46.17380 -119.01833	Collection	Boom 800ft	Yes	Onsite JR Simplot Co.- large open areas near site can be used for staging	Downstream Resources	Use Two Rivers Park boat launch BL-M-324.3R .	63	197
M-323.4M	Burbank 7 46.17967 -119.01400	Deflection	Boom 700ft	Yes	Remote Two Rivers Park	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Two Rivers Park, BL-M-324.3R .	63	199

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-323.5M	Burbank 6 46.18218 -119.01218	Exclusion	Boom 700ft	Yes	Remote Two Rivers Park SA-M-324.3R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat Access Only. Launch boat from Two Rivers Park, BL-M-324.3R .	63	201
M-323.9M	Burbank 5 46.18804 -119.01680	Exclusion	Boom 500ft	Yes	Remote Two Rivers Park SA-M-324.3R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only. Launch boat from Two Rivers Park, BL-M-324.3R .	63	203

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-324.1M	Burbank 4 46.19055 -119.01954	Deflection	Boom 700ft	Yes	Remote Two Rivers Park SA-M-324.3R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Launch boat from Two Rivers Park, BL-M-324.3R .	63	205
M-324.37M	Burbank 3 46.19438 -119.02074	Exclusion	Boom 1000ft	Yes	Remote Sacajawea Park SA-MSN-1R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only. Launch boat from Sacajawea Park, BL-MSN-1R .	63	207

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-324.44M	Burbank 2 46.19614 -119.02278	Deflection	Boom 1000ft	Yes	Remote Sacajawea Park or Two Rivers Park SA-MSN-1R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Possible access via trail from Burbank. Launch boat from Sacajawea Park, BL-MSN-1R .	63	209
M-324.6M	Burbank 1 46.19862 -119.02466	Exclusion	Boom 1000ft	Yes	Remote Sacajawea State Park SA-MSN-1R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat Access Only. Launch boat from Sacajawea Park, BL-MSN-1R .	63	211

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-324.8R	Two Rivers Park South 46.18804 -119.03873	Exclusion	Boom 800ft	Yes	Remote Two Rivers Park SA-M-324.3R	Deer Habitat, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and Habitat, Steelhead, Waterfowl and Shorebird Concentrations	Boat access only - use BL-M-324.3R Two Rivers Park boat launch	63	213
M-325.5R	Two Rivers Park 46.19218 -119.04937	Deflection	Boom 1300ft	Yes	Onsite Two Rivers Park SA-M-324.3R	City Park, Waterfowl and Salmonid Concentrations and Habitat	Launch boat onsite at Two Rivers Park, BL-M-324.3R .	63	215
M-325.6L	SW side of Sacajawea State Park 46.20188 -119.04731	Deflection	Boom 800ft	Yes	Onsite Plenty of staging available onsite at Sacajawea State Park. SA-MSN-1R	State Park, Waterfowl and Salmonid Concentrations and Habitat	Use BL-MSN-1R Sacajawea State Park boat launch	63	217
M-325.6R	Two Rivers Park North 46.19481 -119.05348	Deflection	Boom 800ft	Yes	Onsite Stage at Two Rivers Park SA-M-324.3R	City Park, Waterfowl and Salmonid Concentrations and Habitat	Launch boat onsite at Two Rivers Park, BL-M-324.3R .	63	219

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-325.7R	North of E Matzat Rd 46.19561 -119.05454	Deflection	Boom 800ft	Yes	Onsite N corner of Two Rivers Park		Launch at BL-M-324.3R/ Two Rivers	63	221
M-325.89L	Tidewater CCP 46.20605 -119.05113	Collection	Boom 600ft	Yes	Onsite Large parking areas available nearby.	Downstream Resources	Use BL-M-328.1L Pasco Boat Basin boat launch	63	223
M-325.9L	Sacajawea Park Foot Bridge 46.20713 -119.05293	Collection	Boom 100ft	No	Onsite Parking lots nearby could be used for staging.		No boat needed for strategy.	63	225
M-326.1M	Indian Island 46.20409 -119.05783	Deflection	Boom 1000ft	Yes	Remote Sacajawea State Park SA-MSN-1R	Waterfowl and Salmonid Concentrations and Habitat	Launch boat from Sacajawea Park, BL-MSN-1R .	63	227
M-326.5L	SE Rd 27 Water Intake 46.20921 -119.06527	Deflection	Boom 800ft	Yes	Onsite Paved parking area for staging, will need bolt cutters to access pump house deck.	Downstream Resources, Water Intakes	Launch boat from Pasco Boat Basin, BL-M-328.1L .	64	229
M-327.1L	East Dock Street 46.21290 -119.07506	Collection	Boom 800ft	Yes	Onsite Parking lots near site, boat launch at Pasco Boat Basin	Downstream Resources	Launch boat from Pasco Boat Basin, BL-M-328.1L .	64	231

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-328L	Pasco Boat Basin 46.21819 -119.09136	Deflection	Boom 300ft	Yes	Onsite Stage on site at SA-M-328.1L/ Pasco Boat Basin	Recreational Boating	Launch on site at BL-M-328.1L/ Pasco Boat Basin	64	233
M-328.4L	10th Ave Bridge/N Gum St 46.21993 -119.10055	Collection	Boom 800ft	Yes	Onsite Paved roadside parking and pier available for staging	Downstream Resources	Launch at BL-M-328.1L/ Pasco Boat Basin	64	235
M-328.9R	Clover Island S 46.21539 -119.11743	Collection	Boom 1000ft	Yes	Onsite Will need bolt cutters to remove padlock on post by shoreside anchor pt. Stage on site at SA-M-328.9R/ Clover Island	Downstream Resources, Economic Resource, Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-328.9R/ Clover Island	64	237
M-329M	Clover Island N 46.21804 -119.11459	Deflection	Boom 800ft	Yes	Onsite Stage at SA-M-328.9R Clover Island, parking lot across the street from the boat launch.	Economic Resource, Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-M-328.9R/ Clover Island	64	239

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-330.3R	Columbia Park East (Kennewick) 46.22234 -119.13874	Exclusion	Boom 600ft	Yes	Onsite Stage on site at SA-M-330.2R/ Columbia Park East (Kennewick)	Boat Launch/Ramp, City Park, Creek Habitat, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-330.2R/ Columbia Park East (Kennewick)	64	241
M-331.4L	Wade Park 46.23244 -119.16256	Collection	Boom 900ft	Yes	Onsite Stage on site at SA-M-331.4L/ Wade Park	Boat Launch/Ramp, City Park, Downstream Resources, Water Intakes, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-331.4L/ Wade Park	64	243
M-332.8R	Columbia Park West (Kennewick) 46.23131 -119.19188	Collection	Boom 800ft	Yes	Onsite Stage on site at SA-M-332.8R/ Columbia Park West (Kennewick)	Boat Launch/Ramp, Downstream Resources, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-332.8R/ Columbia Park West (Kennewick)	64	245

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-334R	Columbia Park West Marina 46.24001 -119.21947	Exclusion	Boom 800ft	Yes	Onsite Stage on site at SA-M-334R/ Columbia Park Marina	Boat Basin/Marina, Recreational Boating, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-334R/ Columbia Park Marina	65	247
M-334.3M	Bateman Island Creek 46.24293 -119.22135	Exclusion	Boom 500ft	Yes	Remote Stage at SA-M-334R/ Columbia Park Marina	Brooding Area, Public Recreation Site/Area, Salmonid Concentrations and Habitat, Sensitive Shoreline, Waterfowl and Shorebird Concentrations	Use BL-M-334R/ Columbia Park Marina	65	249

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-334.5L	Chiawana Park Pier 46.24791 -119.21701	Collection	Boom 1600ft	Yes	Onsite You can stage at large paved parking area adjacent to the pier (may need bolt cutters if gate is locked)	City Park, Downstream Resources, Recreational Shoreline Area, Waterfowl and Shorebird Concentrations	Launch boat at BL-M-333.9L/ Chiawana Park	65	251
M-335M	N tip of Bateman Island 46.25139 -119.23093	Collection	Boom 1000ft	Yes	Onsite Stage at SA-YAK-0.5R/ Wye Park. You CAN drive to site (two locked gates and need 4-wheel drive)	City Park, Critical Waterfowl, Shorebird Nesting, and Brooding Area, Downstream Resources, Fish and Wildlife Resources, General Fish and Wildlife Resources, Salmonid Concentrations and Habitat, Sensitive Resources Nearby	Launch at BL-YAK-0.5R/ Wye Park	65	253

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-335.8R	N shore confluence of the Columbia & Yakima Rivers 46.25926 -119.24104	Deflection	Boom 800ft	Yes	Remote Stage at SA-M-336.4R/ Columbia Pt Marine Park	Critical Waterfowl, Shorebird Nesting, and Brooding Area, Estuary Resources, Federally Protected Area/Lands, Habitat Management Unit, Salmonid Concentrations and Habitat	Launch boat from BL-M-336.4R/ Columbia Pt Marine Park	65	255
M-336.1R	Hwy I-182 Bridge 46.26312 -119.24512	Collection	Boom 8ft, Boom 1600ft	Yes	Onsite Locked gate by marina parking lot, call City of Richmond but bring bolt cutters in case of delay	Downstream Resources, Recreational Boating, Waterfowl and Salmonid Concentrations and Habitat	Use BL-M-336.4R/ Columbia Pt Marine Park	65	257
M-336.4R	Columbia Point Marine Park 46.26518 -119.25063	Exclusion	Boom 400ft	Yes	Onsite Stage on site at SA-M-336.4R/ Columbia Pt Marine Park - huge parking lot and all amenities	Marina, Recreational Boating, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-M-336.4R/ Columbia Pt Marine Park	65	259

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-337.3R	South end of Howard Amon Park 46.27177 -119.26791	Collection	Boom 1200ft	Yes	Onsite Stage on site, area has a large gravel parking area and an abandoned boat launch	Downstream Resources, Recreational Shoreline Area, Waterfowl and Shorebird Concentrations	BL-M-337.8R/ Howard Ammon Park	65	261
M-337.8R	Howard Ammon Park 46.28074 -119.27099	Collection	Boom 1600ft	Yes	Onsite SA-M-337.8R/ Howard Ammon Park	Downstream Resources, Public Recreation Site/Area, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations	BL-M-337.8R/ Howard Ammon Park	65	263
M-338.2L	USACE land, Burns family dock 46.28550 -119.26287	Collection	Boom 800ft	Yes	Onsite Stage on site, owned by USACE, leased by the Burn's family (who live across the street). Dock/equipment private	Downstream Resources, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations	Boat launch on site	65	265

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-340.3R	Leslie Groves Park 46.31639 -119.26006	Deflection	Boom 1000ft	Yes	Onsite SA-M-340.3R/ Leslie Groves Park	Boat Launch/Ramp, Downstream Resources, Recreational Shoreline Area, Water Intakes, Waterfowl and Shorebird Concentrations	BL-M-340.3R/ Leslie Groves Park	65	267
M-340.7L	Selph Landing 46.32108 -119.24881	Collection	Boom 800ft	Yes	Onsite SA-M-340.7L/ Selph Landing, lots of parking along gravel road	Downstream Resources, Waterfowl and Shorebird Concentrations	Launch on-site at BL-M-340.7L/ Selph Landing	65	269
M-342.8R	Port of Benton C-Ave Docking Area 46.34860 -119.26657	Collection	Boom 800ft	Yes	Onsite Gated off landing area - with paved parking (Call Port of Benton for access but bring bolt cutters)	Critical Waterfowl, Shorebird Nesting, and Brooding Area, Great Blue Heron Rookeries, Waterfowl and Shorebird Concentrations	Use BL-M-340.3R/ Leslie Groves Park	65	271

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-0.8M	Second inlet below railroad bridge 46.19925 -119.02636	Deflection	Boom 1000ft	Yes	Remote Stage at SA-MSN-1R/ Sacajawea State Park, Call Park Manager at (509) 366-5180	Riparian Habitat, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat	Launch at BL-MSN-1R/ Sacajawea State Park	63	273
MSN-1R	Sacajawea State Park Boat Basin 46.20175 -119.03672	Collection	Boom 1000ft	Yes	Onsite Stage on site at SA-MSN-1R/ Sacajawea State Park. Call Park Manager at (509) 366-5180	Boat Launch/Ramp, Downstream Resources, Recreational Shoreline Area, State Park, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-MSN-1R/ Sacajawea State Park.	63	275
MSN-1.55L	Schnitzer Steel 46.20674 -119.02680	Exclusion	Boom 300ft	Yes	Remote Stage out of SA-MSN-2.2L/ Grain Terminal Road	Sensitive Wetland Habitat, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-MSN-2.2L/ Grain Terminal, beware of shallow water.	63	277

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-1.56R	North of train bridge & Sacajawea Park 46.20850 -119.03296	Deflection	Boom 600ft	Yes	Remote Stage at SA-MSN-1R/ Sacajawea State Park. Call Park Manager at (509) 366-5180 if gate closed/unlocked	Downstream Habitat, State Park, Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-MSN-1R/ Sacajawea State Park, good beach access from boat but may be shallow so bring waders.	63	279
MSN-2R	Tesoro Facility 46.21362 -119.02812	Collection	Boom 1000ft	Yes	Onsite Must contact Tesoro for access to property. They have a boat and boom on site.	Downstream Resources, Economic Resource	Launch on-site. Tesoro staff should deploy this strategy and have the boat and boom on site.	63	281
MSN-2.1L	Grain Terminal 46.21371 -119.02061	Exclusion	Boom 1100ft	Yes	Remote Stage at SA-MSN-2.2L/ Grain Terminal in the parking area near the launch ramp.	Recreational Use Area, Sensitive Wetland Area, Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-MSN-2.2L/ Grain Terminal	63	283

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-2.8L	Hood Park North 46.21920 -119.01008	Deflection	Boom 1000ft	Yes	Onsite Stage on site at SA-MSN-2.3L/ Hood Park. Can drive boom close to the onshore anchoring spot if no campers nearby.	Recreational Shoreline Area, Sensitive Resources, USACE Management Area, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-MSN-2.3L/ Hood Park	63	285
MSN-2.9R	Tidewater's Pasco Facility 46.22483 -119.01213	Deflection	Boom 600ft	Yes	Onsite Contact Tidewater facility and wear appropriate PPE to access site	Economic Resource, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat, Wildlife Refuge	Tidewater staff may implement strategy with their own boat and boom, if not use Hood Park BL-MSN-2.3L	63	287

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-4M	Strawberry Island (Part of McNary Wildlife Refuge) 46.22888 -118.99483	Exclusion	Boom 1200ft	Yes	Remote Stage at SA-MSN-2.3L/ Hood Park	Great Blue Heron, State Protected Area/Lands, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat, Wildlife Refuge	Launch at BL-MSN-2.3L/ Hood Park	63	289
MSN-4.5L	Pumping Plant Rd 46.23239 -118.98160	Exclusion	Boom 200ft	Yes	Onsite Stage on-site next to water intake facility. Room for several vehicles, boom, and other equipment.	Downstream Resources, Water Intakes, Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-MSN-2.3L/ Hood Park	63	291
MSN-4.6M	N tip of Strawberry Island 46.23614 -118.98274	Deflection	Boom 1700ft	Yes	Remote Stage at SA-MSN-2.3L/ Hood Park	Great Blue Heron, Migratory Waterfowl, Riparian Habitat, Sensitive Resources, Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-MSN-2.3L/ Hood Park	63	293

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-8.4M	Goose Island 46.24488 -118.90327	Deflection	Boom 1000ft	Yes	Remote Stage at Hood Park SA-MSN-2.3L	Waterfowl and Salmonid Concentrations and Habitat	Launch from BL-MSN-2.3L/ Hood Park	63	295
MSN-9.5R	Ice Harbor Lock 46.25117 -118.88451	Collection		Yes	Remote Stage from upstream SA-SIH-9.9R/ Ice harbor. Contact Ice Harbor Dam Control prior to deploying strategy (509) 547-778	Downstream Resources, Lock and Dam	Launch from upstream BL-SIH-9.9R/ Ice harbor	63	297
WWR-4R	Madame Dorion Memorial Park (M-314.7L) 46.06273 -118.90328	Collection	Boom 300ft	Yes	Onsite SA-WWR-4R/ Madam Dorian	Bald Eagle, Boat Launch/Ramp, Deer Habitat, Recreational Fishery, Waterfowl and Salmonid Concentrations and Habitat	Launch on site at BL-WWR-4R/ Madam Dorian	62	299
YAK-0.5R	Wye Park boat launch 46.23885 -119.22869	Collection	Boom 800ft	Yes	Onsite Paved parking on site at SA-YAK-0.5R/ Wye Park	Boat Launch/Ramp, City Park, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations	Launch on site at BL-YAK-0.5R/ Wye Park	65	301

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
YAK-2.1L	Hwy 240 Bridge - George Washington Way 46.25477 -119.25611	Collection	Boom 800ft	Yes	Onsite Stage on-site large gravel parking area	Critical Waterfowl, Shorebird Nesting, and Brooding Area, Downstream Resources, Public Recreation Site/Area, Salmonid Concentrations and Habitat	Hand launch a boat from the north shore	65	303
YAK-4.2L	Chamna Natural Preserve, Tapteal Water Trail 46.25670 -119.28752	Collection	Boom 600ft	Yes	Onsite Paved parking area with paved path to the water (may need to cut back vegetation by the water for vac truck)	City Park, Critical Waterfowl, Shorebird Nesting, and Brooding Area, Fish and Wildlife Resources, Public Recreation Site/Area, Salmon Concentrations and Habitat	Bring bolt cutters to remove padlock from post in paved path, must hand launch boat	65	305

4.5.3 Notification Strategy Matrices

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-292.6-N	McNary Lock and Dam Notification 45.93603 -119.29659	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 McNary pool include: M-292.7M and M-292.65R , exclusion strategies to protect the fish ladders on the upstream side of the dam, and M-292.6R , a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the John Day pool, include: J-292.5L and J-292.5R to protect the fish ladders, as well as J-288.7R, a collection strategy.	Protection of fish ladders, lock and/or spillway closure, deployment of GRP strategies	60	309
M-293L-N	City of Umatilla Public Works Department 45.93047 -119.28841	Notification	Water Intakes	Contact City of Umatilla Public Works Department and notify to monitor situation and potentially shut off wells or water intakes.	Alert to need to monitor and potentially shut off large municipal wells and/or surface water intake.	60	311

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-293.1L-N	City of Hermiston Water Department 45.93064 -119.28667	Notification	Public Health and Safety, Water Intakes	May shut down water intakes or wells	Alert to need to monitor and potentially shut off large municipal well located less than 500 feet from river bank.	60	313
M-309.4-N	Oregon Water Resources Dept. 45.99957 -118.98749	Notification	Water Intakes	The Oregon Water Resources Department will notify the following municipalities' who divert water directly or indirectly (Ranney wells, shallow gravel wells) from the Columbia River for Human Consumption: Port of Umatilla (541) 922-3224, City of Hermiston (541) 567-5521, City of Irrigon (541) 922-2047, City of Boardman (541) 481-9252	Notify Oregon Water Resources Department for the need for water intake closures	61	315
M-316.5-N	Boise Paper Inc. 46.10106 -118.92155	Notification	Economic Resource, Water Intakes	Call the Boise Paper Environmental Safety Manager at (509) 545-3241 who will then work with Incident Command to determine the need to shut off their water intake pipe.	Notify Water Intake User	62	317

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
M-328.4-N	Kennewick Water Treatment Plant 46.21478 -119.10471	Notification	Economic Resource, Water Intakes	Call (509) 585-4247 (24 hours), to have them shut off water intake at water treatment facility	Shut off water intake	64	319
M-336.1-N	Pasco Water Intake Pipes 1 and 2 46.26584 -119.24115	Notification	Water Intakes	Call (509) 531-9919 (24 hours), to have them shut off water intake at water treatment facility	Shut off water intakes	65	321
M-340.2-N	Richland Water Intake Facility 46.31478 -119.25951	Notification	Water Intakes	Call Richland Water Treatment Plant Operator's 24 hour emergency number (509) 531-4480.	Notification of a spill to allow the facility to close down water intake	65	323
M-343-N	North Richland Irrigation water intake 46.35120 -119.26595	Notification	Economic Resource, Water Intakes	Call the Richland Water Treatment Plant – Water Operators 24 hour emergency number (509) 531-4480 to have them shut down water intake pipe.	Notify City of Richland to shut off water intake pipe.	65	325

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-2-N	Tesoro Pasco Facility 46.21501 -119.03123	Notification	Downstream Resources, Economic Resource, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Call Tesoro's Pasco facility manager at (509) 543-6100 (M-F 8 to 5) or (509) 543-6102 (After Hours). Upon notification Tesoro management will work with incident command to determine if and when to deploy MSN-2R. Once deployed, or if unable to deploy for some reason, a Tidewater representative will contact the WA ECY PREP Pager Duty Officer at (360) 923-6020. Implementation of MSN-2R by contractors is an alternative option.	Deployment of MSN-2R a collection strategy	63	327

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-2.8-N	Tidewater, Pasco Facility 46.22148 -119.02060	Notification	Downstream Resources, Economic Resource, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Call Tidewater's Pasco facility manager at (509) 547-7701 (M-F 8 to 5) or (509) 727-1585 (After Hours). Upon notification Tidewater management will work with incident command to determine if and when to deploy MSN-2.9R . Once deployed, or if unable to deploy for some reason, a Tidewater representative will contact the WA ECY PREP Pager Duty Officer at (360) 923-6020. Implementation of MSN-2.9R by contractors is an alternative option.	Deployment of GRP strategy MSN-2.9R a deflection strategy	63	329

Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
MSN-9.6-N	Ice Harbor Lock & Dam Notification 46.24878 -118.88006	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 McNary pool includes a collection strategy for the downstream end of the lock. There are additional strategies in the Snake River Ice Harbor Pool GRP for the upstream side of the dam to protect the fish ladders and lock.	Protection of fish ladders, closure of lock/spillway, deployment of GRP strategies	63	331

4.5.4 Staging Area Matrices

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-M-292.6L	McNary South Shore boat launch	45.92721 -119.29036	100 Launch Lane Umatilla, OR 97882	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-292.7M , M-292.6L	USACE paved lot and three boat ramps 7.5 degree avg grade	60	335
SA-M-292.6R	McNary Dam North Shore boat launch	45.94378 -119.29894	81226 Mc Nary Rd Kennewick, WA 99338	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-293.7R , M-292.63R , M-292.6R , M-292.65R	Paved USACE staging area and concrete boat ramp	60	337
SA-M-298.7L	Hat Rock State Park boat launch	45.91770 -119.17445	82200 Hat Rock Rd Hermiston, OR 97838	Hat Rock State Park Hat Rock SP manger of boat launch Hermiston, OR 97838 (541) 983-2277	M-305.9L , M-298.7L , M-299.9R	Paved staging area, 2 concrete boat ramps 7.4 degree grade	60	339
SA-M-299.1L	McNary Yacht Club boat launch	45.92003 -119.16470	34099 Beach Shore Drive Hermiston, OR 97838	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-299.2L , M-299.8L , M-299.5M , M-299.4L	Marina staging area and launch with one concrete ramp	60	341
SA-M-300L	Warehouse Beach Rec Area boat launch	45.91958 -119.14324	100 Landing Rd Hermiston, OR 97838	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-300.3L , M-300L , M-302.3R	Primitive launch with gravel ramp and staging area	60	343

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-M-301.2L	Sand Station Recreation Area	45.92179 -119.12008	Landing Road Hermiston, OR 97838	USACE McNary Control Room WA (541) 922-2231	M-300.9L , M-301.1L	Restrooms, beaches, camping suitable for staging	60	345
SA-M-312.3L	Walla Walla Yacht Club	46.02641 -118.93659	299 Port Kelly Road Touchet, WA 99360	Walla Walla Yacht Club Manages Marina@ USACE's Walla Walla boat launch Kennewick, WA 99337 (509) 547-4946	M-311.9R , M-309.8R , M-310.3R , M-308.8R , M-311.4R	Paved staging area, private marina and USACE boat launch	62	347
SA-M-320.7L	Casey Pond Boat Launch, McNary Wildlife Refuge	46.16133 -118.95495	2955 Hanson Loop Rd Burbank, WA 99323	US Fish and Wildlife Service, McNary and Umatilla National Wildlife Refuges Property Contact Burbank, WA 99323 (509) 546-8300	M-320.7L , M-317.8M , M-320.6L , M-319.2M	Staging area and concrete boat launch	62	349
SA-M-324.3R	Two Rivers Park boat launch	46.18419 -119.03252	220880 East Finley Road Kennewick, WA 99337	Two Rivers Park Manage Two Rivers Park boat launch Kennewick, WA 99337 (509) 531-7106	M-322.6M , M-323.1M , M-323.9M , M-323.5M , M-324.8R , M-323.2M , M-323.4M , M-324.1M	Lighted gravel lot (staging area) with 2 concrete boat ramps	63	351
SA-M-328.1L	Pasco Boat Basin Boat Launch	46.21937 -119.09150	1315 South 4th Ave Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456	M-328L	Paved staging area and boat launch next to a marina	64	353

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-M-328.9R	Clover Island boat launch	46.21724 -119.11592	350 Clover Island Dr. Kennewick, WA 99336	Port of Kennewick (509) 586-1186 Manages Clover Island boat launch (they have boom) Kennewick, WA 99336	M-329M , M-328.9R	Lighted paved lots for staging, 3 boat ramps, Marina, and ECY spill trailer at the other end of the island by USCG station	64	355
SA-M-330.2R	Columbia Park East boat launch (Kennewick)	46.22229 -119.13877	1106 Columbia Park Trail Richland, WA 99336	City of Kennewick Parks, Rec and Tourism Manages boat launches Kennewick, WA 99352	M-330.3R	Large lighted/paved staging area and 4 boat ramps, with 7 degree avg. grade	64	357
SA-M-331.4L	Wade Park Boat Launch	46.23264 -119.16200	601 Road 54 Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456	M-331.4L	Large paved lot and two boat ramps	64	359
SA-M-332.8R	Columbia Park West	46.23087 -119.19155	1548 N Edison St. Kennewick, WA 99336	City of Kennewick Parks, Rec and Tourism Manages boat launches Kennewick, WA 99352	M-332.8R	Paved lighted staging area with concrete boat ramp	64	361
SA-M-333.9L	Chiawana Park boat launch	46.24385 -119.20630	100 Chiawana Park Rd Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456		Boat launch with two ramps 7degree grade, plus a park with staging area	64	363

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-M-334R	Columbia Park Marina	46.23810 -119.21915	1776 Columbia Park Trail Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-334.3M , M-334R	Large marina with 3 public boat ramps, 7-8 degree grade, and lots of lighted parking	65	365
SA-M-336.4R	Columbia Point Marine Park boat launch	46.26387 -119.24973	660 Columbia Point Drive Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-336.4R , M-335.8R	Marina and park lighted staging area with four boat ramps	65	367
SA-M-337.8R	Howard Amon Park	46.28098 -119.27210	900 Amon Park Road North, Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-337.8R	Paved lighted staging area and two ramps, each with a 7 degree grade	65	369
SA-M-340.3R	Leslie Groves Park boat launch	46.31439 -119.26056	2 Snyder Street Richland, WA 99354	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-340.3R	Lighted paved staging area with three concrete boat ramps	65	371

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-M-340.7L	Selph Landing boat launch	46.32112 -119.24853	10099 Selph Landing Rd Pasco, WA 99301	USACE Ice Harbor pool Natural Resources Manager Ice Harbor Dam, WA (509) 547-2048	M-340.7L	Primitive launch with room for staging area	65	373
SA-MSN-1R	Sacajawea State Park boat launch	46.20166 -119.03835	2503 Sacajawea Park Road Pasco, WA 99301	Washington State Parks and Recreation Commission Sacajawea State Park Pasco, WA 99301 (509) 545-2361	M-324.6M , MSN-1R , MSN-1.56R , MSN-0.8M , M-326.1M , M-324.37M	State park staging area and boat launch, gated and fee. Call Park Manager, Christian Ford at (509) 366-5180	63	375
SA-MSN-2.2L	Grain Terminal Rd USACE boat launch	46.21070 -119.01784	577 S 2nd Street Burbank, WA 99323	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	MSN-2.1L , MSN-1.55L	11,00 sq. ft. Gravel lot by 1 concrete boat ramp, opposite side of the inlet is additional 12,325 sq. ft. gravel lot with bathroom	63	377
SA-MSN-2.3L	Hood Park USACE boat launch	46.21458 -119.01905	100 Hood Park Road Burbank, WA 99323	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	MSN-2.8L , MSN-4M , MSN-4.6M	Paved 41,600 sq. ft. lot, lighted, 3 ramps @ 6.5 degree grade with floating docks	63	379
SA-SIH-9.9R	Ice Harbor North Shore Recreation Area boat launch	46.25312 -118.87723	1240 Ice Harbor Rd Pasco, WA 99301	USACE Ice Harbor pool Natural Resources Manager Ice Harbor Dam, WA (509) 547-2048	MSN-9.5R	Paved staging area with two 7 degree concrete boat ramps	63	381

Strategy Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-WWR-4R	Madame Dorion Memorial Park US Fish and Wildlife boat launch	46.06231 -118.90348	324 Western Farmer Road Touchet, WA 99360	US Fish and Wildlife Service, McNary and Umatilla National Wildlife Refuges Property Contact Burbank, WA 99323 (509) 546-8300	WWR-4R , M-314.7L	Gravel lot next to 1 concrete boat ramp	62	383
SA-YAK-0.5R	Wye Park boat launch	46.23865 -119.22875	1600 Columbia Park Trail Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	YAK-0.5R	Wye Park has 1 gravel ramp 7 degree grade, and area for staging	65	385

4.5.5 Boat Launch Matrices

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-M-292.6L	McNary South Shore boat launch	45.92721 -119.29036	100 Launch Lane Umatilla, OR 97882	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-292.7M , M-292.6L	USACE paved, lighted lot and three boat ramps 7.5 degree average grade	60	389
BL-M-292.6R	McNary Dam North Shore boat launch	45.94378 -119.29894	81226 Mc Nary Rd Kennewick, WA 99338	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-293.7R , M-292.63R , M-292.6R , M-292.65R	Paved USACE staging area and concrete boat ramp	60	391
BL-M-298.7L	Hat Rock State Park boat launch	45.91770 -119.17445	82200 Hat Rock Rd Hermiston, OR 97838	Hat Rock State Park Hat Rock SP manger of boat launch Hermiston, OR 97838 (541) 983-2277	M-305.9L , M-298.7L , M-299.9R	Paved staging area, 2 concrete boat ramps 7.4 degree grade	60	393
BL-M-299.1L	McNary Yacht Club boat launch	45.92003 -119.16470	34099 Beach Shore Drive Hermiston, OR 97838	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-299.2L , M-299.8L , M-299.5M , M-301.5L , M-301.6L , M-301.1L , M-299.4L	Marina staging area and launch with one concrete ramp	60	395
BL-M-300L	Warehouse Beach Rec Area boat launch	45.91958 -119.14324	100 Landing Rd Hermiston, OR 97838	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	M-300.3L , M-300L , M-300.9L , M-302.3R	Primitive launch with gravel ramp and staging area	60	397

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-M-312.3L	Walla Walla Yacht Club	46.02641 -118.93659	299 Port Kelly Road Touchet, WA 99360	Walla Walla Yacht Club Manages Marina@ USACE's Walla Walla boat launch Kennewick, WA 99337 (509) 547-4946	M-311.9R , M-312L , M-309.8R , M-310.3R , M-308.8R , M-311.4R	Paved staging area, private marina and USACE boat launch 9 degree grade	62	399
BL-M-320.7L	Casey Pond Boat Launch, McNary Wildlife Refuge	46.16133 -118.95495	2955 Hanson Loop Rd Burbank, WA 99323	US Fish and Wildlife Service, McNary and Umatilla National Wildlife Refuges Property Contact Burbank, WA 99323 (509) 546-8300	M-318.3R , M-320.7L , M-317L , M-317.8M , M-317.5R , M-320.6L , M-319.2M	Staging area and concrete boat launch	62	401
BL-M-324.3R	Two Rivers Park boat launch	46.18419 -119.03252	220880 East Finley Road Kennewick, WA 99337	Two Rivers Park Manage Two Rivers Park boat launch Kennewick, WA 99337 (509) 531-7106	M-322.6M , M-323.9M , M-323.2R , M-323.5M , M-325.7R , M-324.8R , M-325.6R , M-323.2M , M-323.4M , M-325.5R , M-324.1M	Lighted gravel lot (staging area) with 2 concrete boat ramps, 8 degree grade	63	403
BL-M-328.1L	Pasco Boat Basin Boat Launch	46.21937 -119.09150	1315 South 4th Ave Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456	M-328.4L , M-327.1L , M-326.5L , M-328L , M-325.89L	Paved staging area and boat launch next to a marina	64	405

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-M-328.9R	Clover Island boat launch	46.21724 -119.11592	350 Clover Island Dr. Kennewick, WA 99336	Port of Kennewick (509) 586-1186 Manages Clover Island boat launch (they have boom) Kennewick, WA 99336	M-329M , M-328.9R	Lighted paved lots for staging, 3 boat ramps, Marina, and ECY spill trailer at the other end of the island by USCG station	64	407
BL-M-330.2R	Columbia Park East boat launch (Kennewick)	46.22229 -119.13877	1106 Columbia Park Trail Richland, WA 99336	City of Kennewick Parks, Rec and Tourism Manages boat launches Kennewick, WA 99352	M-330.3R	Large lighted/paved staging area and 4 boat ramps, with 7 degree average grade	64	409
BL-M-331.4L	Wade Park Boat Launch	46.23264 -119.16200	601 Road 54 Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456	M-331.4L	Large lighted paved lot and two boat ramps	64	411
BL-M-332.8R	Columbia Park West	46.23087 -119.19155	1548 N Edison St. Kennewick, WA 99336	City of Kennewick Parks, Rec and Tourism Manages boat launches Kennewick, WA 99352	M-332.8R	Paved lighted staging area with concrete boat ramp, 7.5 degree grade and an anchor point	64	413
BL-M-333.9L	Chiawana Park boat launch	46.24385 -119.20630	100 Chiawana Park Rd Pasco, WA 99301	City of Pasco Recreation Service Pasco, WA 99301 (509) 545-3456	M-334.5L	Boat launch with two ramps 7degree grade, plus a park with staging area	64	415

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-M-334R	Columbia Park Marina	46.23810 -119.21915	1776 Columbia Park Trail Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-334.3M , M-334R	Large marina with 3 public boat ramps, 7-8 degree grade, and lots of lighted parking	65	417
BL-M-336.4R	Columbia Point Marine Park boat launch	46.26387 -119.24973	660 Columbia Point Drive Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-336.1R , M-336.4R , M-335.8R	Marina and park lighted staging area with four boat ramps, each has a 7 degree grade	65	419
BL-M-337.8R	Howard Amon Park	46.28098 -119.27210	900 Amon Park Road North, Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-337.8R , M-337.3R	Paved lighted staging area and two ramps, each with a 7 degree grade	65	421
BL-M-340.3R	Leslie Groves Park boat launch	46.31439 -119.26056	2 Snyder Street Richland, WA 99354	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	M-342.8R , M-340.3R	Lighted paved staging area with three concrete boat ramps	65	423

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-M-340.7L	Selph Landing boat launch	46.32112 -119.24853	10099 Selph Landing Rd Pasco, WA 99301	USACE Ice Harbor pool Natural Resources Manager Ice Harbor Dam, WA 509-547-2048	M-340.7L	Primitive launch, gravel ramp 8 degree grade, with room for staging area	65	425
BL-MSN-1R	Sacajawea State Park boat launch	46.20166 -119.03835	2503 Sacajawea Park Road Pasco, WA 99301	Washington State Parks and Recreation Commission Sacajawea State Park Pasco, WA 99301 (509) 545-2361	M-325.6L , M-324.6M , M-324.44M , MSN-1R , MSN-1.56R , MSN-0.8M , M-326.1M , M-324.37M	State park staging area and boat launch, gated and fee. Call Park Manager, Christian Ford at (509) 366-5180	63	427
BL-MSN-2.2L	Grain Terminal Rd USACE boat launch	46.21070 -119.01784	577 S 2nd Street Burbank, WA 99323	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	MSN-2.1L , MSN-1.55L	1 concrete boat ramp, gated, open 4am-10pm, daily between Sept 15 and May 15. Shallow water vessels only	63	429
BL-MSN-2.3L	Hood Park USACE boat launch	46.21458 -119.01905	Pasco, WA 99301	USACE McNary pool Natural Resource Manager McNary Dam, OR (541) 922-2268	MSN-2.8L , MSN-4.5L , MSN-4M , MSN-4.6M	Paved 41,600 sq. ft. lot, lighted, 3 ramps at 6.5 degree grade with floating docks	64	431
BL-SIH-9.9R	Ice Harbor North Shore Recreation Area boat launch	46.25312, -118.87723	1240 Ice Harbor Rd Pasco, WA 99301	USACE Ice Harbor pool Natural Resources Manager Ice Harbor Dam, WA (509) 547-2048	MSN-9.5R	Paved staging area with two 7 degree concrete boat ramps	63	433

Strategy Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-WWR-4R	Madame Dorion Memorial Park US Fish and Wildlife boat launch	46.06231 -118.90348	324 Western Farmer Road Touchet, WA 99360	US Fish and Wildlife Service, McNary and Umatilla National Wildlife Refuges Property Contact Burbank, WA 99323 (509) 546-8300	WWR-4R , M-314.7L , M-314.5L	1 concrete boat ramp with gravel lot	62	435
BL-YAK-0.5R	Wye Park boat launch	46.23865 -119.22875	1600 Columbia Park Trail Richland, WA 99352	City of Richland Parks and Recreation Department Manages this boat launch Richland, WA 99352 (509) 942-7529	YAK-0.5R , M-335M	Wye Park has 1 gravel ramp 7 degree grade, and area for staging	65	437

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APPENDIX 4A
Response Strategy 2-Pagers

RESPONSE STRATEGIES LIST

M-292.6L	M-292.6R	M-292.63R	M-292.65R	M-292.7M
M-293.7R	M-298.7L	M-299.2L	M-299.4L	M-299.5M
M-299.8L	M-299.9R	M-300L	M-300.3L	M-300.9L
M-301.1L	M-301.5L	M-301.6L	M-302.3R	M-305.9L
M-308.8R	M-309.8R	M-310.3R	M-311.4R	M-311.9R
M-312L	M-314.5L	M-314.7L	M-317L	M-317.5R
M-317.8M	M-318.3R	M-319.2M	M-320.6L	M-320.7L
M-321.9L	M-322.6M	M-323.1M	M-323.2M	M-323.2R
M-323.4M	M-323.5M	M-323.9M	M-324.1M	M-324.37M
M-324.44M	M-324.6M	M-324.8R	M-325.5R	M-325.6L
M-325.6R	M-325.7R	M-325.89L	M-325.9L	M-326.1M
M-326.5L	M-327.1L	M-328L	M-328.4L	M-328.9R
M-329M	M-330.3R	M-331.4L	M-332.8R	M-334R
M-334.3M	M-334.5L	M-335M	M-335.8R	M-336.1R
M-336.4R	M-337.3R	M-337.8R	M-338.2L	M-340.3R
M-340.7L	M-342.8R	MSN-0.8M	MSN-1R	MSN-1.55L
MSN-1.56R	MSN-2R	MSN-2.1L	MSN-2.8L	MSN-2.9R
MSN-4M	MSN-4.5L	MSN-4.6M	MSN-8.4M	MSN-9.5R
WWR-4R	YAK-0.5R	YAK-2.1L	YAK-4.2L	

McNary Southshore Boat Launch

M-292.6L

Position - Location: 45° 55.613', -119° 17.587' 45° 55' 36.8", -119° 17' 35.2" 45.92688, -119.29311 Umatilla

Strategy Objective: Collection : Collect oil upstream of the dam and prevent oil from entering the fish ladder.

Implementation: Use 1000' of boom to divert oil from the E fish ladder and collect it on the L shore at the Western most corner of the Boat Launch (keep boat launches open).

Staging Area: Onsite: BL-M-292.6L/S McNary Dam Lots of parking and several launch ramps on site

Site Safety: Slips, Trips Falls, McNary Dam, Water Hazards

Field Notes: Launch boat from McNary Dam Southshore boat launch, BL-M-292.6L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Lock and Dam



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
4	Laborer

McNary Southshore Boat Launch

M-292.6L



M-292.6L Photo: Looking west towards collection area from boat ramp.



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

100 Launch Lane
 Umatilla, OR 97882

Driving Directions

Directions to M/292.6L/McNary Lock & Dam boat launch on the OR side of the Columbia River

1. Starting at I-82 take Exit 1 toward 6th Street
2. Turn right onto 6th St (0.7 mi)
3. Turn left onto Devore Rd (0.7 mi)
4. Turn right toward Deschutes Ave (171 ft)
5. Continue onto Deschutes Ave (0.1 mi)
6. Turn left (20 ft)
7. Turn right (312 ft), destination will be on the left

McNary Lock

M-292.6R

Position - Location: 45° 56.441', -119° 17.909' 45° 56' 26.4", -119° 17' 54.5" 45.94068, -119.29849 Kennewick

Strategy Objective: Exclusion : Prevent oil from entering the lock system.

Implementation: Angle boom from NW lock wall to SE lock wall.

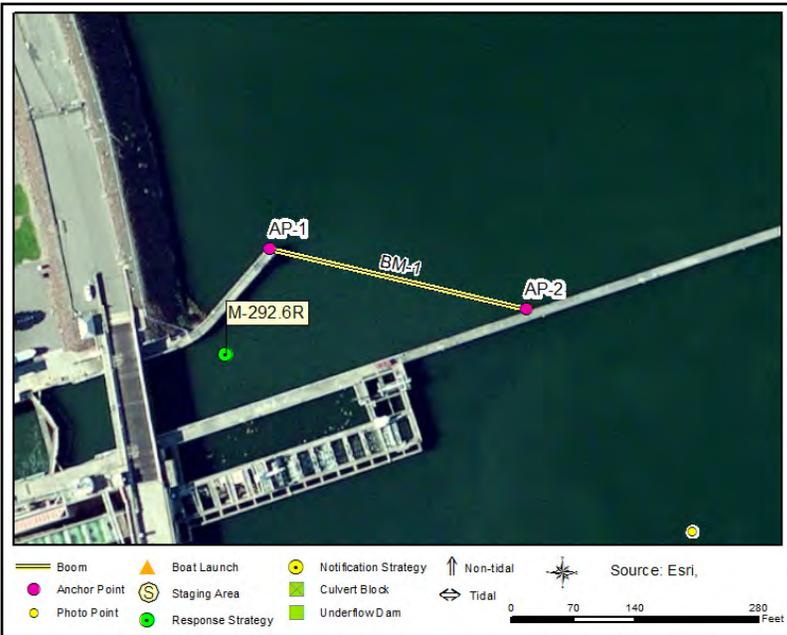
Staging Area: Onsite: Stage at SA-M-292.6R/N. Contractors must call McNary Dam control at 541-922-2231 to access site.

Site Safety: Slips, Trips, Falls, Water Hazard, McNary Dam

Field Notes: Launch boat from McNary Dam boat launch, BL-M-292.6R

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Lock and Dam



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

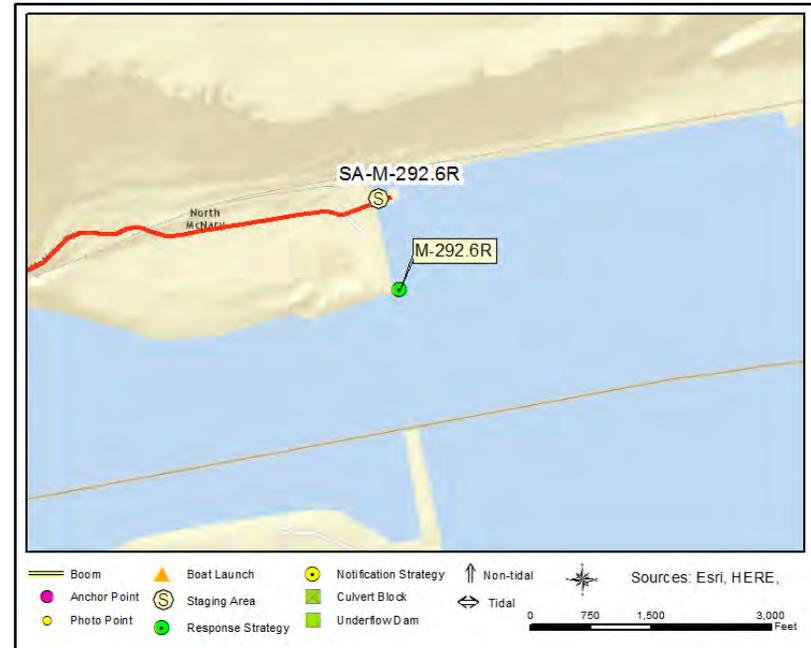
1	Boat Operator
2	Laborer

McNary Lock

M-292.6R



M-292.6R Photo: Aerial overview of McNary Lock system



Site Contact

USACE McNary Control Room
 Land/Property Contact :

 WA
 541-922-2231

Nearest Address

81222 McNary Road
 Kennewick, WA 99338

Driving Directions

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

McNary Dam Boat Launch

M-292.63R

Position - Location: 45° 56.625', -119° 17.892' 45° 56' 37.5", -119° 17' 53.5" 45.94375, -119.29821 Kennewick

Strategy Objective: Collection : Collect oil at boat launch area on Washington side of river.

Implementation: Use 1200' of boom. Angle one 400' section towards the shoreline from the collection point, and one 800' section towards the locks. Keep launch open unless oil is entering along the shoreline. Adjust angle of boom, placement & number of anchors according to conditions of the day.

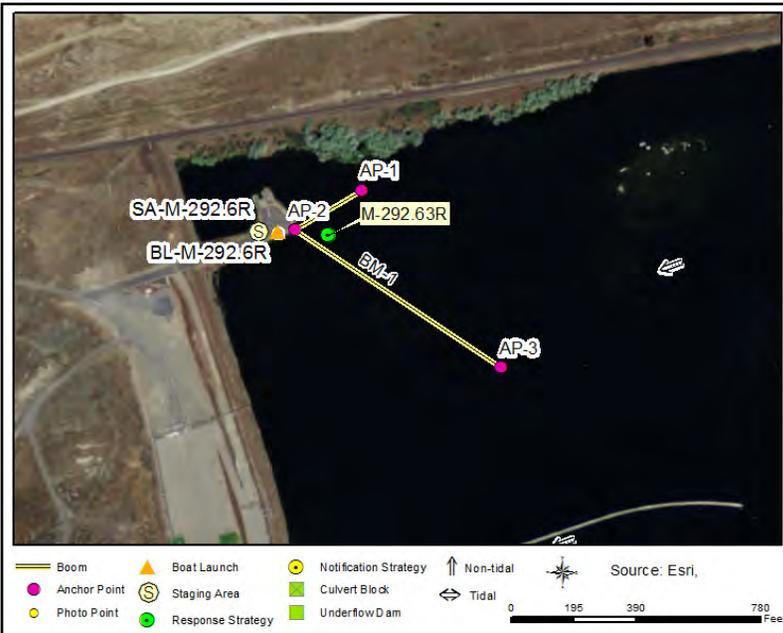
Staging Area: Onsite: SA-M-292.6R/N McNary Dam boat launch and parking on site

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

Field Notes: Launch boat from McNary Dam boat launch, BL-M-292.6R

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Osprey, Raptors, Waterfowl Concentrations



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1200	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
5	Laborer

McNary Dam Boat Launch

M-292.63R



M-292.63R Photo: View of boat launch and collection area.



Site Contact

USACE McNary Control Room
 Land/Property Contact :
 541-922-2231

Nearest Address

81226 Mc Nary Rd
 Kennewick, WA 99338

Driving Directions

Directions to McNary boat launch from S bound I-82

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

McNary Upstream fish ladder M-292.65R

Position - Location: 45° 56.425', -119° 17.868' 45° 56' 25.5", -119° 17' 52.1" 45.94041, -119.29780 Kennewick

Strategy Objective: Exclusion : Prevent oil from entering the fish ladder

Implementation: Angle 100' of boom from lock wall to SE corner of fish ladder.

Staging Area: Onsite: Stage at SA-M-292.6R/N. McNary Dam launch. Contractors must call McNary Dam control at 541-922-2231 to access site.

Site Safety: Slips, Trips, Falls, Water Hazard, McNary Dam

Field Notes: Launch boat from McNary Dam boat launch, BL-M-292.6R

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Fish Ladder(s)



Recommended Equipment

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

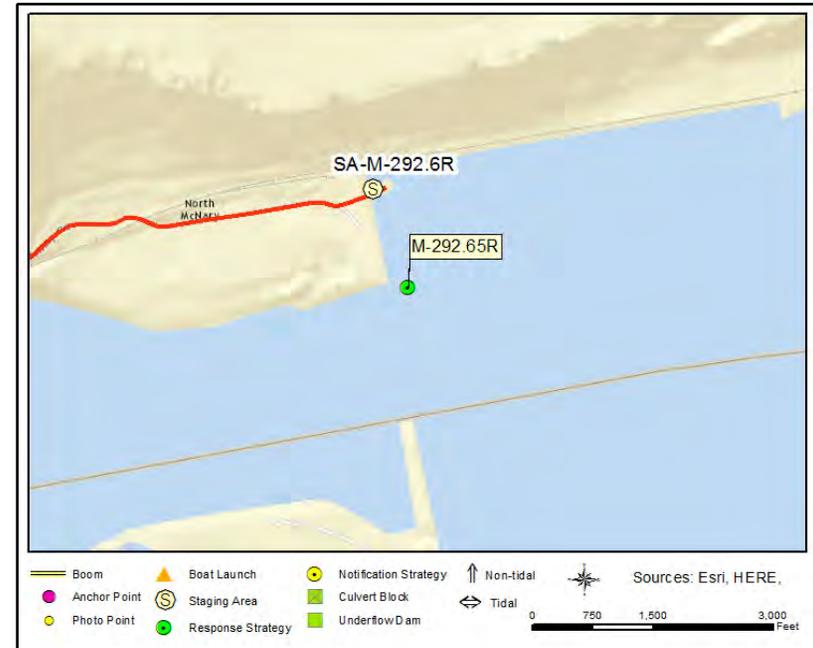
1	Boat Operator
2	Laborer

McNary Upstream fish ladder

M-292.65R



M-292.65R Photo: Aerial overview of fish ladder and lock system.



Site Contact

USACE McNary Control Room

Land/Property Contact :

WA
541-922-2231

Nearest Address

81226 Mc Nary Road
Kennewick, WA 99338

Driving Directions

Directions to McNary boat launch from S bound I-82

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

McNary Fish Ladder M-292.7M

Position - Location: 45° 55.723', -119° 17.643' 45° 55' 43.4", -119° 17' 38.6" 45.92872, -119.29404 Umatilla

Strategy Objective: Exclusion : Prevent oil from entering the south side upstream fish ladder.

Implementation: Use 100' of exclusion boom in a chevron formation to protect the fish ladder.

Staging Area: Onsite: S Shore McNary Dam parking lots on site

Site Safety: Slips, Trips, Falls, Water Hazard, McNary Dam

Field Notes: Launch boat from McNary Dam Southshore boat launch, BL-M-292.6L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Fish Ladder(s)



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
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

McNary Fish Ladder

M-292.7M



M-292.7M Photo: McNary south shore fish ladder



Site Contact

USACE McNary Control Room
Land/Property Contact :

WA
541-922-2231

Nearest Address

100 Launch Lane
Umatilla, OR 97882

Driving Directions

Directions from I-82 Northbound to McNary Southshore boat launch

1. Starting at I-82 take Exit 1 toward 6th Street
2. Turn right onto 6th St (0.7 mi)
3. Turn left onto Devore Rd (0.7 mi)
4. Turn right toward Deschutes Ave (171 ft)
5. Continue onto Deschutes Ave (0.1 mi)
6. Turn left (20 ft)
7. Turn right (312 ft), destination will be on the left

AgriNorthwest Pump Station M-293.7R

Position - Location: 45° 56.805', -119° 16.585' 45° 56' 48.3", -119° 16' 35.1" 45.94674, -119.27641 Kennewick

Strategy Objective: Deflection : Use 1000' of boom to deflect oil that is moving downriver away from the water intake.

Implementation: Anchor boom at shore east of the pump station. Tow boom downstream to a point SW of the water intake. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: SA-M-292.6R/N McNary Dam boat launch

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 boat from McNary Dam boat launch, BL-M-292.6R

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Osprey, Raptors, Waterfowl Concentrations



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1000	Each	Boom - B2 (Contractor Boom) or equivalent

Recommended Personnel

1	Boat Operator
3	Laborer

AgriNorthwest Pump Station

M-293.7R



M-293.7R Photo: M-293.7R Shoreside photo showing anchoring anchor permanently in place



Site Contact

AgriNorthwest
 Land/Property Contact :
 509-734-5252

USACE McNary Control Room
 Secondary Contact :
 541-922-2231

Nearest Address

81226 Mc Nary Rd
 Kennewick, WA 99338

Driving Directions

Directions to McNary boat launch from S bound I-82

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

Hat Rock State Park M-298.7L

Position - Location: 45° 55.275', -119° 10.359' 45° 55' 16.5", -119° 10' 21.6" 45.92125, -119.17266 Hermiston

Strategy Objective: Exclusion : Keep oil out of inlet and boat ramp near Hat Rock State Park.

Implementation: Deploy 2 - 700' legs of boom in cascading strategy. This will prevent oil from entering while allowing area to be used as a staging area. In the even product enters the exclusion area connect the two sections of boom to fully exclude. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Stage at SA-M-298.7L/Hat Rock

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

Field Notes: Launch at BL-M-298.7L/Hat Rock

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

6	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1400	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

Hat Rock State Park

M-298.7L



M-298.7L Photo: View of the channel heading into Hat Rock State Park from the boat launch



Site Contact

Hat Rock State Park
 Land/Property Contact :

 OR
 541-983-2277

Nearest Address

82200 Hat Rock Road
 Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Take the exit onto US-12 E toward Walla Walla (16.8 mi)
3. Slight right toward US-730 W (0.2 mi) watch for signs for US 730 W/ Pendleton
4. Slight right onto US-730 W Entering Oregon (17.1 mi)
5. Turn right onto Hat Rock Rd and continue to the end (1 mi)

McNary Yacht Club **M-299.2L**

Position - Location: 45° 55.223', -119° 9.802' 45° 55' 13.4", -119° 9' 48.1" 45.92038, -119.16336 Hermiston

Strategy Objective: Exclusion : Keep oil out of McNary Yacht Club while keeping the boat launch open

Implementation: Anchor 100' of boom to the S jetty and tow toward the N, anchoring it offshore of the N jetty, allow room for vessels to pass through the harbor entrance. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Carry an extra shoreside anchoring system in case the harbor needs to be closed off.

Staging Area: Onsite: McNary Yacht Club, SA-M-299.1L

Site Safety: Slips, Trips, Falls, Water Hazards, Large underwater rock on approach.

Field Notes: Launch boat from McNary Yacht Club, BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Marina, Public Recreation Site/Area, Shallow Water Habitat, Waterfowl and Shorebird Concentrations



Recommended Equipment

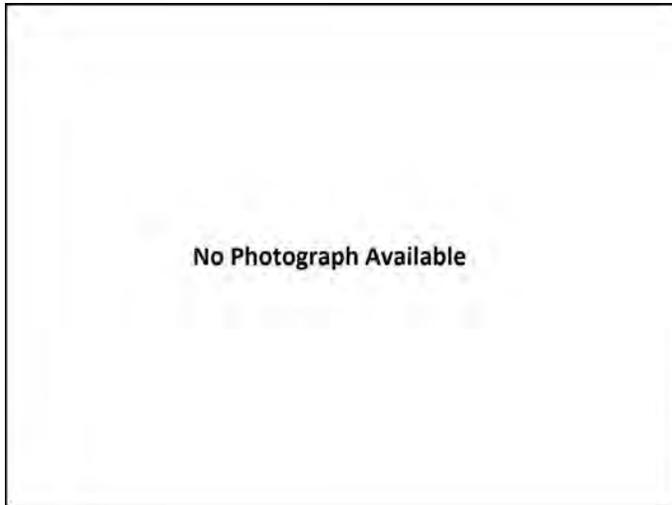
1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

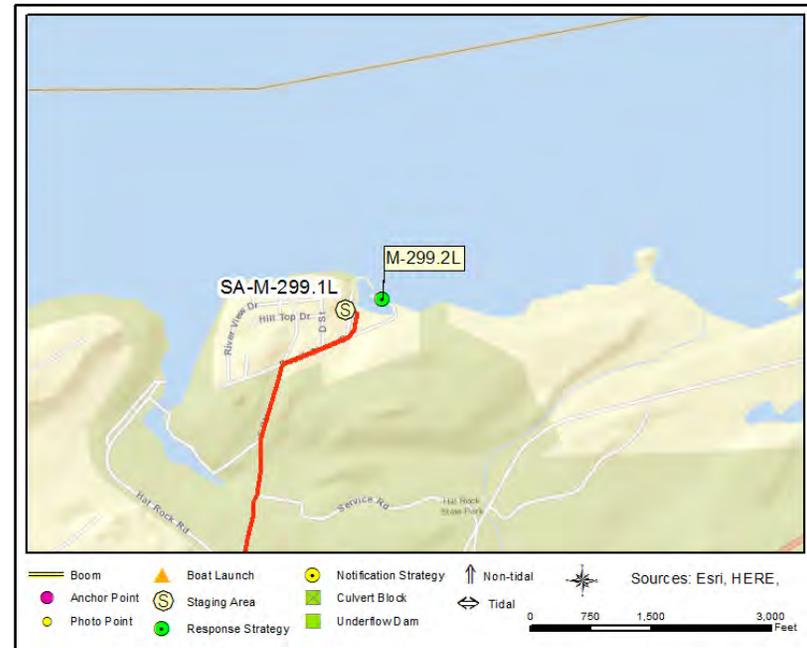
1	Boat Operator
1	Laborer

McNary Yacht Club

M-299.2L



M-299.2L Photo: Photo Not Available



Site Contact

McNary Yacht Club

Land/Property Contact : Lease property for club from USACE
541-567-5603

USACE McNary pool

Land/Property Owner : Natural Resource Manager
541-922-2268

Nearest Address

33900 Beach Shore Drive
Hermiston, OR 97838

Driving Directions

1. Directions to McNary Yacht Club/BL-M-299.1L, starting at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at McNary Yacht Club 34099 Beach Shore Drive, 97838

Channel upstream of McNary Yacht Club M-299.4L

Position - Location: 45° 55.213', -119° 9.623' 45° 55' 12.8", -119° 9' 37.4" 45.92021, -119.16038 Hermiston

Strategy Objective: Exclusion : Keep oil out of channel upstream of McNary Yacht Club

Implementation: Anchor 500' of boom between island and shore at the inlet just upstream of McNary Yacht Club

Staging Area: Remote: Stage at McNary Yacht Club/SA-M-299.1L

Site Safety: Slips, trips & fall, submerged rocks in channel

Field Notes: Launch at McNary Yacht Club/BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

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



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

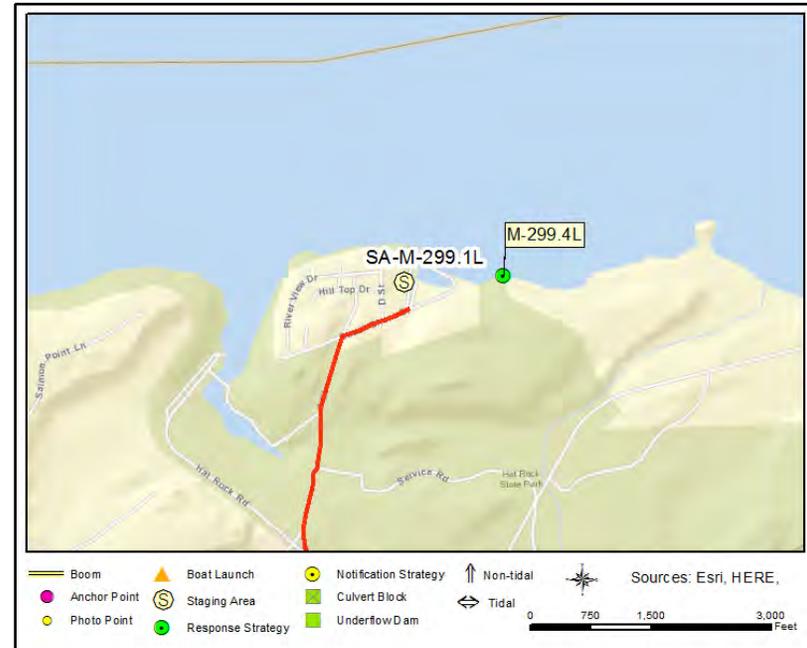
1	Boat Operator
3	Laborer

Channel upstream of McNary Yacht Club

M-299.4L



M-299.4L Photo: Island just upstream of McNary Yacht Club



Site Contact

McNary Yacht Club

Land/Property Contact : Lease property for club from USACE
541-567-5603

USACE McNary pool

Land/Property Owner : Natural Resource Manager
541-922-2268

Nearest Address

34099 Beach Shore Drive
Hermiston, OR 97838

Driving Directions

1. Directions to McNary Yacht Club/BL-M-299.1L, starting at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at McNary Yacht Club 34099 Beach Shore Drive, 97838

Islands E of Hat Rock State Park **M-299.5M**

Position - Location: 45° 55.338', -119° 9.409' 45° 55' 20.3", -119° 9' 24.6" 45.92230, -119.15682 Hermiston

Strategy Objective: Exclusion : Prevent oil from entering shallow water habitat on Oregon side of river.

Implementation: Use 500' of exclusion boom in between islands. Large tree and rock on shoreline to secure boom. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: McNary Yacht Club, SA-M-299.1L

Site Safety: Slips, Trips, Falls, Water Hazard, Shallow Water, Large underwater rocks on approach.

Field Notes: Launch boat from McNary Yacht Club, BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

1	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
2	Laborer

Islands E of Hat Rock State Park

M-299.5M



M-299.5M Photo: M-299.5M Exclusion



Site Contact

Hat Rock State Park
 Primary Contact :

 OR
 541-983-2277

Nearest Address

33900 Beach Shore Drive
 Hermiston, OR 97838

Driving Directions

Directions from Umatilla to McNary Yacht Club/BL-M-299.1L

1. Start at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at McNary Yacht Club 34099 Beach Shore Drive, 97838

Third Island E of Hat Rock State Park M-299.8L

Position - Location: 45° 55.354', -119° 9.142' 45° 55' 21.2", -119° 9' 8.5" 45.92257, -119.15237 Hermiston

Strategy Objective: Exclusion : Exclude oil from habitat behind small islands.

Implementation: Use 600' of boom for BM-1 and 200' of boom for BM-2 in order to exclude oil from behind the small island. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: McNary Yacht Club, SA-M-299.1L

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

Field Notes: Launch boat from McNary Yacht Club, BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

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

Recommended Personnel

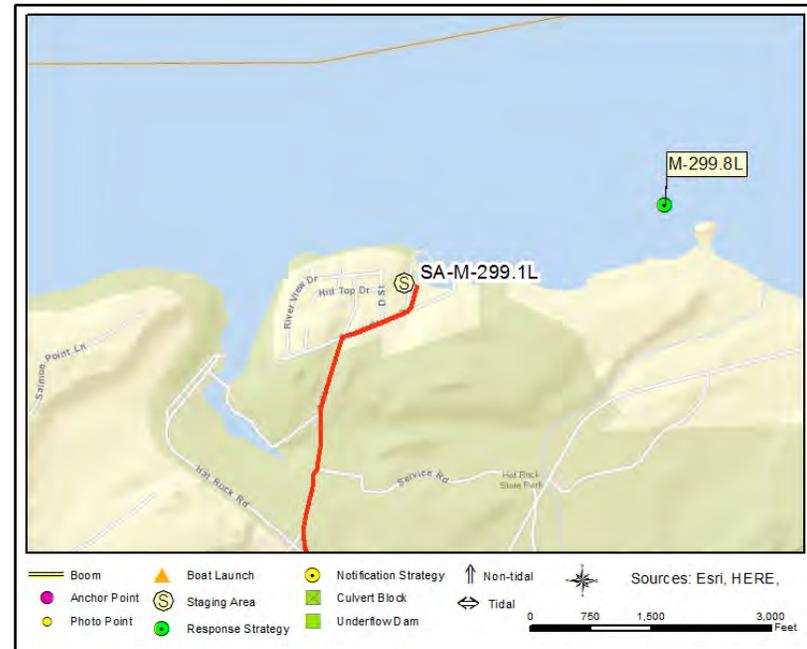
1	Boat Operator
3	Laborer

Third Island E of Hat Rock State Park

M-299.8L



M-299.8L Photo: Photo of the shoreline.



Site Contact

Hat Rock State Park
 Primary Contact :

 OR
 541-983-2277

Nearest Address

33900 Beach Shore Drive
 Hermiston, OR 97838

Driving Directions

Directions from Umatilla to McNary Yacht Club McNary Yacht Club, BL-M-299.1L

1. Start at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at McNary Yacht Club 34099 Beach Shore Drive, 97838

Easterday Farms **M-299.9R**

Position - Location: 45° 56.242', -119° 8.980' 45° 56' 14.5", -119° 8' 58.8" 45.93737, -119.14967 Hermiston

Strategy Objective: Deflection : Deflect oil that is moving downstream away from the water intake.

Implementation: Use 1000' of boom anchored to shore upstream of the water intake. Tow boom to a location SW of the intake. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: SA-M-298.7L Hat Rock State Park, site is on remote BNSF land

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 boat from Hat Rock State Park, BL-M-298.7L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Water Intakes



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer

Easterday Farms

M-299.9R



M-299.9R Photo: Aerial overview of collection location.



Site Contact

Burlington Northern Santa Fe Railroad

Security Contact :
800-832-5452

Easterday Farms

Land/Property Contact :
509-547-9600

Nearest Address

82200 Hat Rock Rd
Hermiston, OR 97838

Driving Directions

Directions from Pasco to Hat Rock State Park boat launch.

1. From Pasco take US-395 S
2. Take the exit onto US-12 E toward Walla Walla (16.8 mi)
3. Slight right toward US-730 W (0.2 mi) watch for signs for US 730 W/Pendleton
4. Slight right onto US-730 W Entering Oregon (17.1 mi)
5. Turn right onto Hat Rock Rd and continue to the end (1 mi)

Warehouse Beach West **M-300L**

Position - Location: 45° 55.209', -119° 8.634' 45° 55' 12.6", -119° 8' 38.1" 45.92015, -119.14391 Hermiston

Strategy Objective: Deflection : Prevent oil from entering shallow water habitat, keep boat launch open

Implementation: Use 800 feet of boom to deflect oil away from sensitive areas. Adjust quantity and placement of anchors based on conditions of the day

Staging Area: Onsite: SA-M-300L Warehouse Beach Recreation Area

Site Safety: Slips, Trips, Falls, Water hazard, shallow water with underwater boulders.

Field Notes: Launch boat from Warehouse Recreational Area, BL-M-300L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

Warehouse Beach West

M-300L



M-300L Photo: M-300.1L Deflection



Site Contact

Sand Station Recreation Area

Land/Property Contact :

OR
541-922-2268

Nearest Address

Landing Road
Hermiston, OR 97838

Driving Directions

Directions from Umatilla to Warehouse Rec Area boat launch.

1. Starting at I-82 in Umatilla, OR
2. Turn left onto US-395 S/US-730 E/6th St (signs for Mc Nary Dam/Hermiston)
Continue to follow US-730 E (9.2 mi)
3. Slight right onto OR-37 S (0.2 mi)
4. Turn left onto Landing Rd, Warehouse Beach Recreation Area will be on the right (0.6 mi)

Warehouse Beach East M-300.3L

Position - Location: 45° 55.310', -119° 8.106' 45° 55' 18.6", -119° 8' 6.4" 45.92183, -119.13511 Hermiston

Strategy Objective: Exclusion : Prevent oil from entering shallow water habitat and recreation area on Oregon side of the river.

Implementation: 1000' of boom to protect area behind Small Island. Area is very shallow and has many underwater rocks. Recommend skiff to assist larger workboat to secure boom. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Warehouse Beach Recreation Area

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

Field Notes: Launch boat from Warehouse Recreational Area, BL-M-300L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Public Recreation Site/Area, Shallow Water Habitat, 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	Workboat(s) - of adequate size for type and amount of boom
1	Each	Workboat(s) - (jon boat)

Recommended Personnel

2	Boat Operator
4	Laborer

Warehouse Beach East

M-300.3L



M-300.3L Photo: M-300.3L Exclusion strategy between small island and shore



Site Contact

Sand Station Recreation Area
 Land/Property Contact :

 OR
 541-922-2268

Nearest Address

100 Landing Road
 Hermiston, OR 97838

Driving Directions

Directions from Umatilla to Warehouse Rec Area boat launch.

1. Starting at I-82 in Umatilla, OR
2. Turn left onto US-395 S/US-730 E/6th St (signs for Mc Nary Dam/Hermiston)
 Continue to follow US-730 E (9.2 mi)
3. Slight right onto OR-37 S (0.2 mi)
4. Turn left onto Landing Rd, Warehouse Beach Recreation Area will be on the right (0.6 mi)

Peninsula east of Warehouse Beach **M-300.9L**

Position - Location: 45° 55.371', -119° 7.791' 45° 55' 22.3", -119° 7' 47.5" 45.92285, -119.12986 Hermiston

Strategy Objective: Deflection : Prevent oil from entering shallow water habitat on Oregon side of river.

Implementation: Deploy 500' of boom to deflect oil away from shallow water habitat. Adjust quantity and placement of anchors based on conditions of the day.

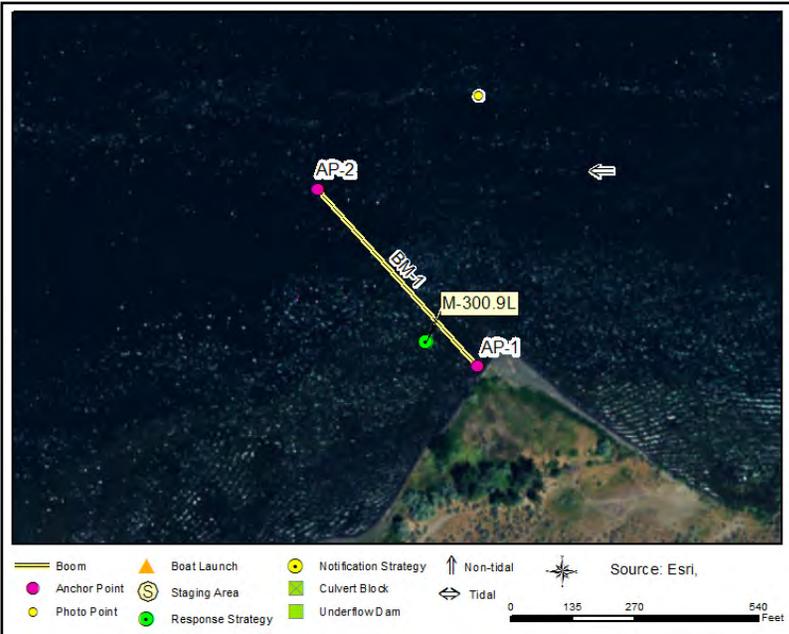
Staging Area: Remote: Sand Station Rec Area - bathroom, beach, lots of parking

Site Safety: Slips, Trips, Falls, Water hazard, Shallow water, steep bank, stumps

Field Notes: Launch boat from Warehouse Recreational Area, BL-M-300L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

2	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

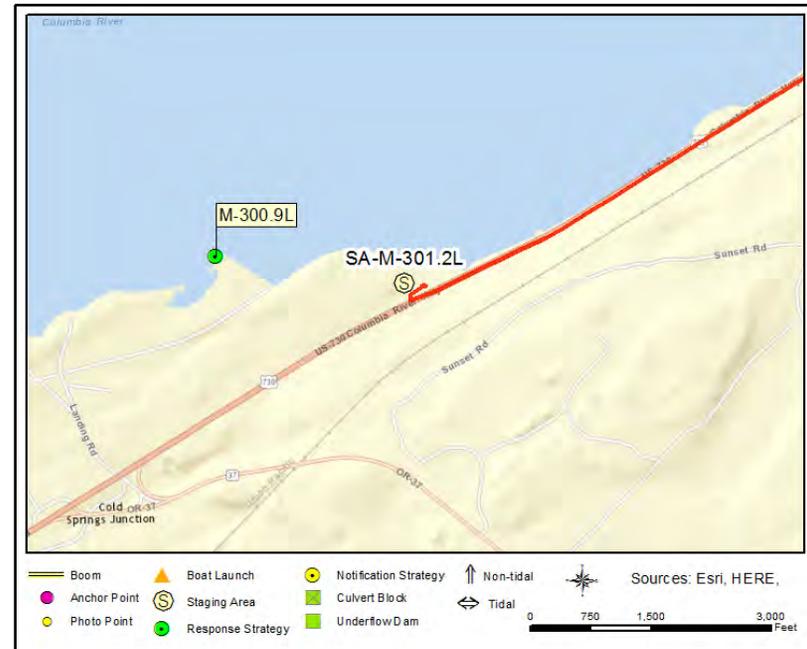
1	Boat Operator
2	Laborer

Peninsula east of Warehouse Beach

M-300.9L



M-300.9L Photo: M-300.9L looking toward headland



Site Contact

Sand Station Recreation Area

Land/Property Contact :

OR
541-922-2268

Nearest Address

Landing Road
Hermiston, OR 97838

Driving Directions

Directions from Pasco to Sand Station Rec Area

1. From Pasco take US-395 S
2. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
3. Continue onto US-12 E (17.0 mi)
4. Slight right toward US-730 W (0.2 mi)
5. Slight right onto US-730 W Entering Oregon, Sand Station Recreation Area will be on the right (14.8 mi)

Sand Station Recreation Area- West M-301.1L

Position - Location: 45° 55.371', -119° 7.239' 45° 55' 22.2", -119° 7' 14.4" 45.92284, -119.12066 Hermiston

Strategy Objective: Deflection : Prevent oil from entering shallow water habitat on Oregon side of river.

Implementation: Use 2 500' lengths of boom to deflect oil into the main channel. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Located at Sand Station Recreation Area - Can stage some equipment in the parking area.

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

Field Notes: Launch boat from McNary Yacht Club, BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

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



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer

Sand Station Recreation Area- West

M-301.1L



M-301.1L Photo: M-301.1L Sand Station Recreation Area



Site Contact

Sand Station Recreation Area
 Land/Property Contact :

 OR
 541-922-2268

Nearest Address

Landing Road
 Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
3. Continue onto US-12 E (17.0 mi)
4. Slight right toward US-730 W (0.2 mi)
5. Slight right onto US-730 W Entering Oregon, Sand Station Recreation Area will be on the right (14.8 mi)

Sand Station Recreation Area-East (deflection) M-301.5L

Position - Location: 45° 55.415', -119° 6.863' 45° 55' 24.9", -119° 6' 51.8" 45.92358, -119.11438 Hermiston

Strategy Objective: Deflection : Prevent oil from entering shallow water habitat on Oregon side of river.

Implementation: Use 700' of boom to deflect oil escaping collection strategy away from Sand Station and irrigation intake. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Pump station 1/4 mile east of Sand Station Rec Area - Can stage some equipment on site.

Site Safety: Slips, Trips, Falls, Water Hazards

Field Notes: Launch boat from McNary Yacht Club, BL-M-299.1L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	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

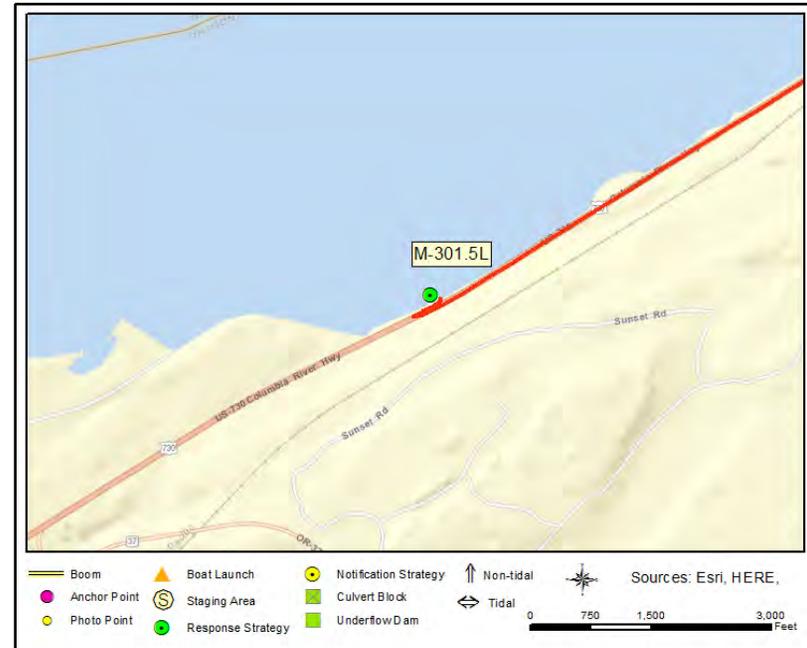
1	Boat Operator
3	Laborer

Sand Station Recreation Area-East (deflection)

M-301.5L



M-301.5L Photo: M-301.5L



Site Contact

Sand Station Recreation Area

Primary Contact :

OR
541-922-2268

Nearest Address

Landing Road
Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
3. Continue onto US-12 E (17.0 mi)
4. Slight right toward US-730 W (0.2 mi)
5. Slight right onto US-730 W Entering Oregon Destination will be on the right (13.3 mi)

Sand Station Recreation Area- East M-301.6L

Position - Location: 45° 55.420', -119° 6.813' 45° 55' 25.2", -119° 6' 48.8" 45.92366, -119.11355 Hermiston

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Use 500' of boom using the driveway and parking area of private irrigation intake for vacuum truck. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Pump station 1/4 mile east of Sand Station Rec Area - Can stage some equipment on site.

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Use McNary Yacht Club for boat launch

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
2	Laborer

Sand Station Recreation Area- East

M-301.6L



M-301.6L Photo: M-301.6L



Site Contact

Sand Station Recreation Area
 Land/Property Contact :

 OR
 541-922-2268

Nearest Address

Landing Road
 Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Turn right to merge onto I-182 E/ US-12 E toward Walla Walla (1.4 mi)
3. Continue onto US-12 E (17.0 mi)
4. Slight right toward US-730 W (0.2 mi)
5. Slight right onto US-730 W Entering Oregon Destination will be on the right (13.3 mi)

Creek above pump station **M-302.3R**

Position - Location: 45° 56.711', -119° 6.535' 45° 56' 42.6", -119° 6' 32.1" 45.94518, -119.10892 Hermiston

Strategy Objective: Exclusion : Keep oil away from mouth of creek

Implementation: Deploy 200' of boom in a chevron formation, anchor boom on either side of the creek (or culvert) below the railroad bridge. Adjust angle of boom, quantity, and placement of anchors depending on conditions of the day.

Staging Area: Remote: Stage from SA-M-300L/Warehouse Rec Area across the river

Site Safety: RSlips, 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-M-300L/Warehouse Rec Area

Watercourse: River - Above a Dam - McNary pool

Resources at Risk: Creek Estuary, Water Intakes, Waterfowl (Wintering and Production)



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

Creek above pump station

M-302.3R



M-302.3R Photo: Aerial view of pumphouse, creek & train bridge



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

McNary Dam, OR
 541-922-2268

Nearest Address

100 Landing Rd
 Hermiston, OR 97838

Driving Directions

1. Directions to Waterhouse Recreation Area. Starting at 6th St. Umatilla, OR
2. Go east toward 3rd St (0.23 miles)
3. Turn right at 3rd St (0.08 miles)
4. Continue on I St (0.03 miles)
5. Turn left on 5th St (0.11 miles)
6. Turn right on K St (0.05 miles)
7. Turn left on US-730 (6th St) (10.13 miles)
8. Make sharp right on OR-37 (Pendleton-Cold Springs Hwy) (0.05 miles)
9. Turn left (0.13 miles)
10. Turn left on Landing Rd (0.6 miles)
11. Finish at Warehouse Recreation Area, 100 Landing Rd, 97838

Juniper Canyon M-305.9L

Position - Location: 45° 57.499', -119° 2.248' 45° 57' 30.0", -119° 2' 14.9" 45.95832, -119.03747 Hermiston

Strategy Objective: Exclusion : Prevent oil from entering wetlands

Implementation: Use 300' to create a chevron that will keep oil out of the wetland. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: SA-M-298.7L Hat Rock 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: Limited access by land from Highway 730. Launch boat from Hat Rock State Park, BL-M-298.7L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
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

Juniper Canyon

M-305.9L



M-305.9L Photo: Area to be boomed off.



Site Contact

Nearest Address

82200 Hat Rock Rd
Hermiston, OR 97838

Driving Directions

- Directions from Pasco to Hat Rock State Park boat launch.
1. From Pasco take US-395 S
 2. Take the exit onto US-12 E toward Walla Walla (16.8 mi)
 3. Slight right toward US-730 W (0.2 mi) watch for signs for US 730 W/Pendleton
 4. Slight right onto US-730 W Entering Oregon (17.1 mi)
 5. Turn right onto Hat Rock Rd and continue to the end (1 mi)

No Name Pond **M-308.8R**

Position - Location: 45° 59.558', -119° .282' 45° 59' 33.5", -119° 0' 16.9" 45.99264, -119.00471 Touchet

Strategy Objective: Exclusion : Keep oil out of pond

Implementation: Anchor 100' of boom, in a chevron formation, on either side of the culvert. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Remote: Stage at SA-M-312.3L/Walla Walla Yacht Club

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-M-312.3L/Walla Walla Yacht Club

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
1	Laborer

No Name Pond

M-308.8R



M-308.8R Photo: Aerial view of No Name Pond



Site Contact

USACE Bonneville pool
 Land/Property Contact : Natural Resources Manager
 541-374-8344

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Walla Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Palmer Pond

M-309.8R

Position - Location: 46° .314', -118° 59.760' 46° 0' 18.9", -118° 59' 45.6" 46.00524, -118.99600 Touchet

Strategy Objective: Exclusion : Keep oil out of Palmer Pond

Implementation: Anchor 100' of boom in a chevron formation on either side of the culvert. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day.

Staging Area: Remote: Stage at SA-M-312.3L/Walla Walla Yacht Club

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-M-312.3L/Walla Walla Yacht Club

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

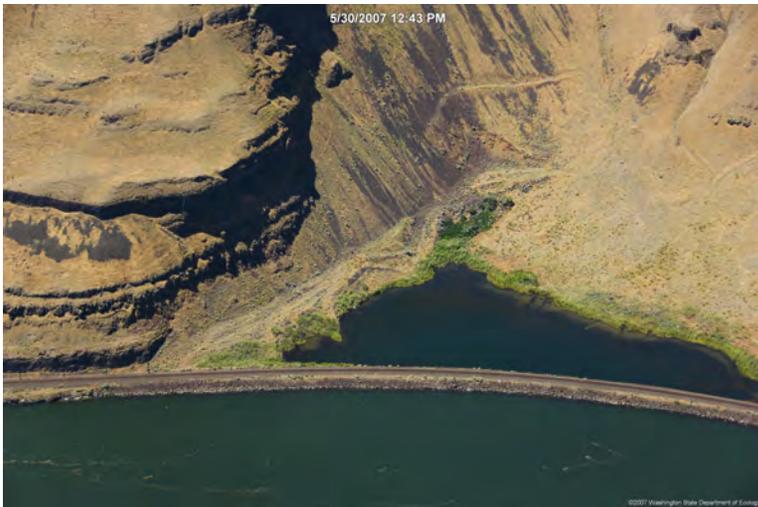
1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer

Palmer Pond

M-309.8R



M-309.8R Photo: Aerial view of Palmer Pond



Site Contact

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

USACE Bonneville pool
 Land/Property Contact : Natural Resources Manager
 541-374-8344

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Wall Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Switch Pond **M-310.3R**

Position - Location: 46° .621', -118° 59.367' 46° 0' 37.3", -118° 59' 22.0" 46.01036, -118.98944 Touchet

Strategy Objective: Exclusion : Keep oil out of Switch Pond

Implementation: Anchor 100' of boom in a chevron formation on either side of the culvert. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Culvert may be in a slightly different location than shown on map.

Staging Area: Remote: Stage at SA-M-312.3L/Walla Walla Yacht Club

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-M-312.3L/Walla Walla Yacht Club

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
1	Laborer

Switch Pond

M-310.3R



M-310.3R Photo: Aerial view of Switch Pond



Site Contact

USACE Bonneville pool
 Land/Property Contact : Natural Resources Manager
 541-374-8344

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

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Wall Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Yellepit Pond M-311.4R

Position - Location: 46° 1.324', -118° 58.370' 46° 1' 19.4", -118° 58' 22.2" 46.02206, -118.97284 Touchet

Strategy Objective: Exclusion : Keep oil out of Yellepit Pond

Implementation: Anchor 100' of boom in a chevron formation on either side of the culvert. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day.

Staging Area: Remote: Stage at SA-M-312.3L/Walla Walla Yacht Club

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-M-312.3L/Walla Walla Yacht Club

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
1	Laborer

Yellepit Pond

M-311.4R



M-311.4R Photo: Aerial view of Yellepit Pond



Site Contact

USACE McNary pool
 Land/Property Contact : Natural Resource Manager
 541-922-2268

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Wall Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Mound Pond

M-311.9R

Position - Location: 46° 1.696', -118° 57.843' 46° 1' 41.8", -118° 57' 50.6" 46.02826, -118.96406 Touchet

Strategy Objective: Exclusion : Keep oil/out of Mound Pond

Implementation: Anhor 100' of boom in a chevron formation on either side of the culvert. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Remote: Stage at SA-M-312.3L/Walla Walla Yacht Club

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-M-312.3L/Walla Walla Yacht Club

Watercourse: River - Above a Dam - McNary pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

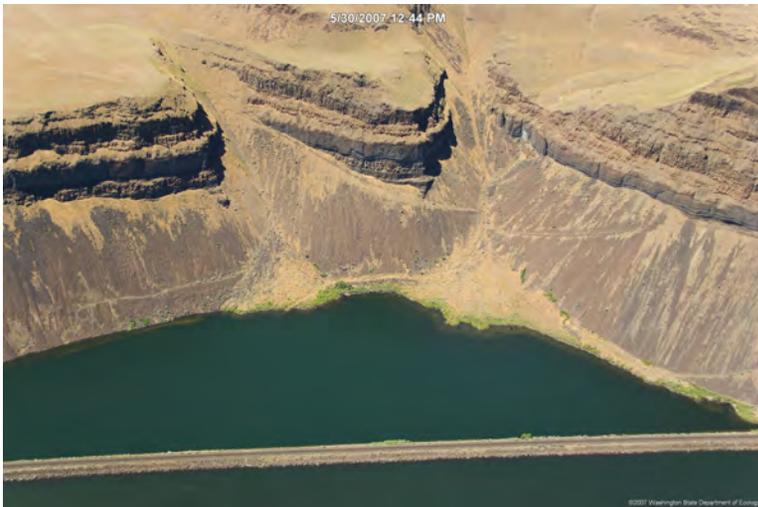
1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer

Mound Pond

M-311.9R



M-311.9R Photo: Aerial view of Mound Pond



Site Contact

USACE McNary pool
 Land/Property Contact : Natural Resource Manager
 541-922-2268

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Wall Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Port Kelley **M-312L**

Position - Location: 46° 1.268', -118° 56.697' 46° 1' 16.1", -118° 56' 41.8" 46.02113, -118.94494 Touchet

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

Implementation: Use 1000' of boom to divert oil towards shore for collection. Gravel road can be used to stage the vac truck and collection equipment. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Parking lots near site.

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

Field Notes: Launch boat from Walla Walla yacht club, BL-M-312.3L.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Recreational Use Area, Waterfowl



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

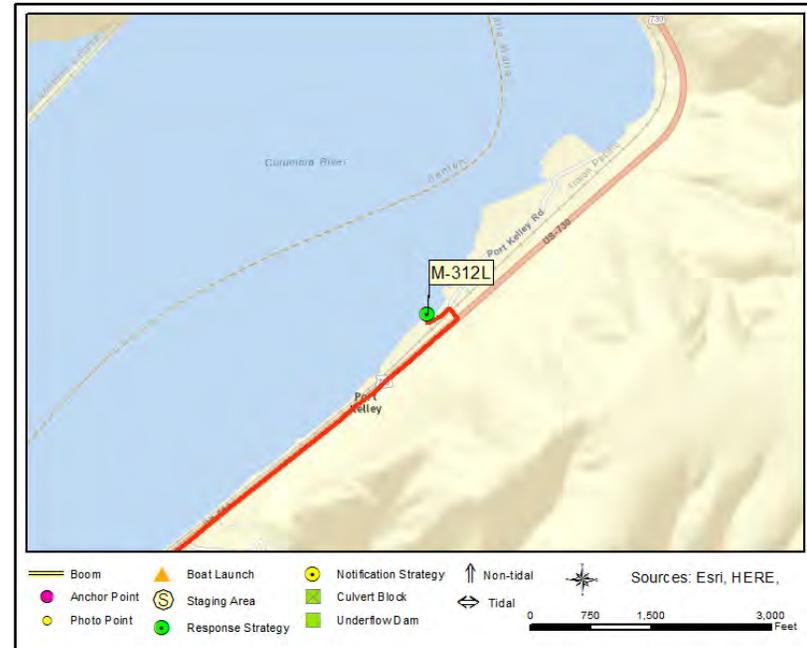
1	Boat Operator
5	Laborer

Port Kelley

M-312L



M-312L Photo: Collection area at shoreline.



Site Contact

USACE Port Kelly
 Land/Property Contact :
 541-922-2268

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

- Directions from Umatilla to strategy location.
1. Start at 1800 6th St, Umatilla, OR 97882
 2. Go east on US-730 (6th St) (21.65 miles)
 3. Make sharp left on Port Kelly Rd (0.26 miles)
 4. Finish at 299 Port Kelly Road, 99360, on the right

NW Grain Growers **M-314.5L**

Position - Location: 46° 3.650', -118° 55.260' 46° 3' 39.0", -118° 55' 15.6" 46.06083, -118.92100 Touchet

Strategy Objective: Collection : Collect oil that is moving downstream

Implementation: Use 1000' of boom to divert oil towards shore for collection. Gravel road can be used to stage vac truck and collection equipment. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Parking lots at facility, need to contact NW grain growers for access.

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 boat from Madam Dorian, BL-WWR-4R.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Bald Eagle, Bird Habitat, Deer Habitat, General Fish and Wildlife Resources, Herons and Other Wading Birds, National Wildlife Refuge,



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
5	Laborer

NW Grain Growers

M-314.5L



M-314.5L Photo: Looking at the backside of the collection area from the South.



Site Contact

Northwest Grain Growers
 Land/Property Contact :

 WA
 509-525-6510

Nearest Address

324 Western Farmer Road
 Touchet, WA 99360

Driving Directions

Directions from Umatilla to strategy location.

1. Start at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (24.86 miles)
3. Turn left on Western Farmer Rd (0.29 miles)
4. Finish at 324 Western Farmer Road, 99360, on the right

Walla Walla River mouth M-314.7L

Position - Location: 46° 3.994', -118° 54.970' 46° 3' 59.6", -118° 54' 58.2" 46.06657, -118.91617 Touchet

Strategy Objective: Exclusion : Prevent oil from travelling past the mouth of the Walla Walla River

Implementation: Anchor 500' of boom from the NE shore and tow it out toward the SW to deflect oil away from the mouth of the Walla Walla River but keep channel open for boat launch. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.

Staging Area: Remote: BL-WWR-4R Madam Dorian boat launch for staging

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 Madam Dorian, BL-WWR-4R.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Bald Eagle, Deer Habitat, Herons and Other Wading Birds, Osprey, Public Recreation Site/Area, Raptors, Resident Fish, Riparian Area,



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	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

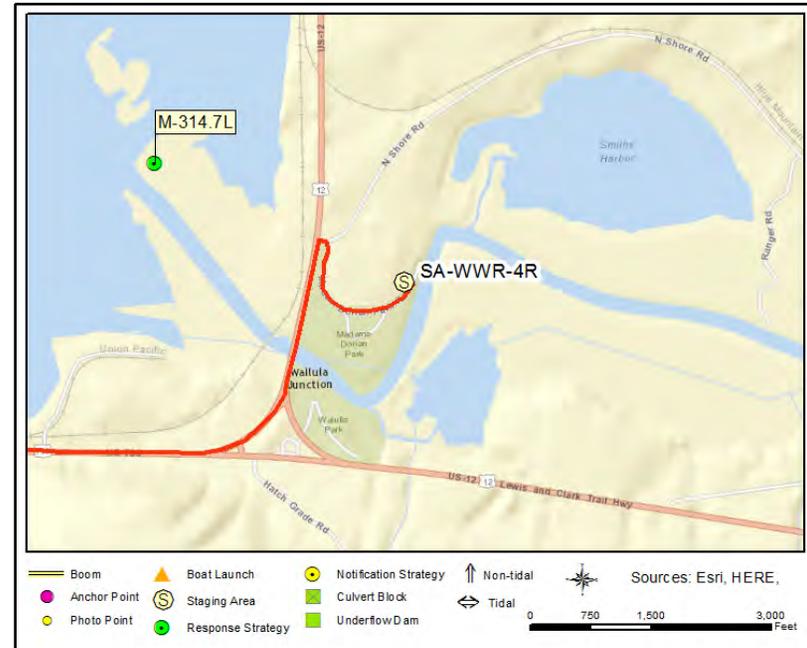
1	Boat Operator
3	Laborer

Walla Walla River mouth

M-314.7L



M-314.7L Photo: The mouth of the Walla Walla River



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges

Land/Property Contact : Property Contact

Burbank, WA 99323
509-546-8300

Nearest Address

324 Western Farmer Road
Touchet, WA 99360

Driving Directions

Directions from Umatilla to Madame Dorian boat launch

1. Head east on US-730 E/6th St toward Eisele Dr
Continue to follow US-730 (25.2 mi)
2. Slight left toward US-12 W (0.2 mi)
3. Turn left onto US-12 W (0.4 mi)
4. Turn right onto N Shore Rd (138 ft)
5. Take an immediate right on unnamed road for Madam Dorian boat launch on the right (0.3 mi)

Attalia **M-317L**

Position - Location: 46° 6.475', -118° 55.354' 46° 6' 28.5", -118° 55' 21.2" 46.10791, -118.92256 Wallula

Strategy Objective: Collection : Divert oil to shore for Collection

Implementation: Active rail yard, contact Union Pacific to access at 800-848-8715. Anchor 1000' of boom to shore, tow boom out to the NW and anchor offshore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.

Staging Area: Onsite: Active rail yard, contact Union Pacific to access at 800-848-8715. Room for parking at end of Attalia Road

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 upriver at BL-M-320.7L /Casey Pond

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources, Migratory Bird Populations, Waterfowl and Salmonid Concentrations and 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 (if collection)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

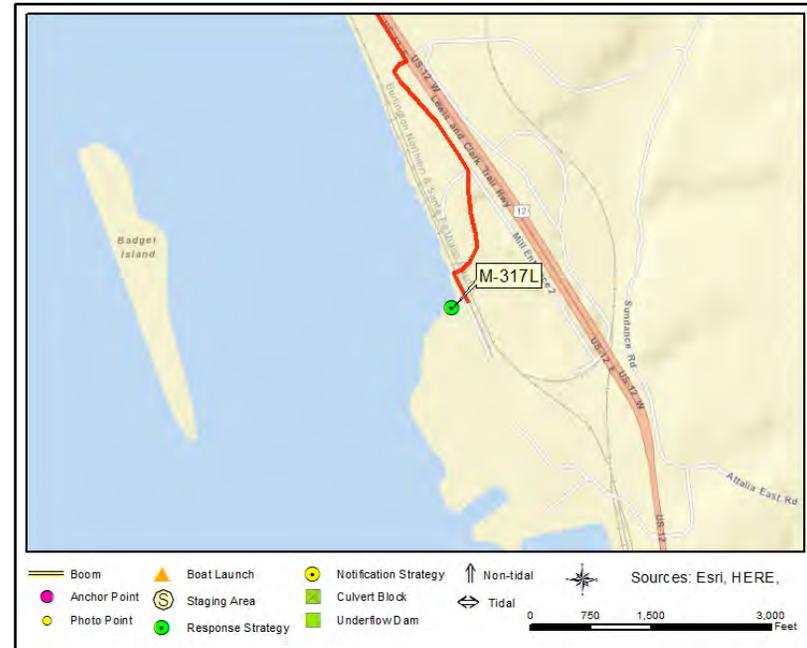
1	Boat Operator
3	Laborer
1	Supervisor

Attalia

M-317L



M-317L Photo: Aerial view of the Attalia railroad yard showing collection point.



Site Contact

Union Pacific Railroad
 Land/Property Owner :

 WA
 888-877-7267

Nearest Address

Attalia Road
 Wallula, WA 99363

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (12.6 miles)
7. Turn right on Attalia Road (0.3 miles), slight right to remain on Attalia Road, cross railroad tracks and go to the end of the road (0.5 miles)

Hover Park South **M-317.5R**

Position - Location: 46° 6.144', -118° 58.039' 46° 6' 8.6", -118° 58' 2.3" 46.10240, -118.96731 Kennewick

Strategy Objective: Exclusion : Prevent oil from entering shallow water area.

Implementation: Use 900' of boom from spit to point on south side of inlet. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage on-site at the end of Cushman Rd, Kennewick WA

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

Field Notes: Launch boat from Casey Pond, BL-M-320.7L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Bald Eagle, Deer Habitat, Fish and Wildlife Resources, Osprey, Public Recreation Site/Area, Resident Fish, Salmonid Concentrations and



Recommended Equipment

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

Recommended Personnel

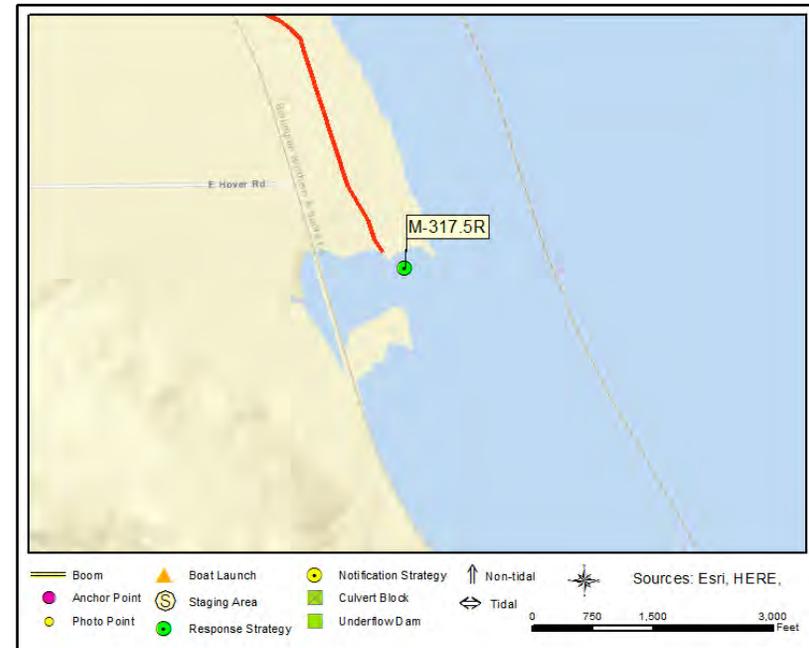
1	Boat Operator
3	Laborer

Hover Park South

M-317.5R



M-317.5R Photo: Looking at the northern anchor point from the beach.



Site Contact

Benton County Parks Department
 Land/Property Contact : Manage parks
 5600A West Canal Place, A101
 Kennewick, WA 99336
 509-783-3118

Nearest Address

Kennewick, WA 99337

Driving Directions

Directions from Kennewick to strategy location.

1. Head southeast on Chemical Rd toward E Cochran Rd (2.3 mi)
2. Continue onto E Riek Rd (0.3 mi)
3. Turn left onto Piert Rd (0.6 mi)
4. Slight left onto Meals Rd (1.4 mi)
5. Turn left onto E Toothaker Rd (0.8 mi)
6. Continue onto Cushman Rd (0.2 mi)
7. Stay straight on gravel road to the end at south eastern tip of park (0.8 mi)

Badger Island M-317.8M

Position - Location: 46° 6.826', -118° 56.412' 46° 6' 49.6", -118° 56' 24.7" 46.11377, -118.94019 Burbank

Strategy Objective: Deflection : Prevent oil from hitting shoreline of island. Extremely valuable migratory bird area.

Implementation: Badger Island is approximately 3000' long. Place 1000' of boom in a chevron formation at the head of the island. More boom may be required based on conditions to protect the entire island. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day.

Staging Area: Remote: Casey Pond SA-M-320.7L

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

Field Notes: Boat access only. Launch boat from Casey Pond, BL-M-320.7L

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

6	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

Badger Island

M-317.8M



M-317.8M Photo: Badger Island



Site Contact

Nearest Address

2955 Hanson Loop Rd
Burbank, WA 99323

Driving Directions

- Directions from Pasco to Casey Pond boat launch.
1. Start at US-395, Pasco, WA 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp left onto ramp to I-182/US-12 E
 5. Continue on I-182/US-12 E (1.4 mi)
 6. Continue on US-12 (8.2 mi)
 7. Make sharp right on Hanson Loop Rd (0.3 mi)
 8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Hover Park North **M-318.3R**

Position - Location: 46° 7.130', -118° 58.516' 46° 7' 7.8", -118° 58' 31.0" 46.11884, -118.97527 Kennewick

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

Implementation: Use 1000' of boom that is anchored to the shore and towed upstream to a point NE of shore anchor. Stage vac truck on gravel roads near collection point. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage on rough gravel road (4-wheel drive needed) in Hover Park.

Site Safety: Slips, Trips, Falls, Water Hazards

Field Notes: Launch boat from Casey Pond, BL-M-320.7L

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Bald Eagle, Deer Habitat, Osprey, Public Recreation Site/Area, Waterfowl and Shorebird Concentrations



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
3	Laborer

Hover Park North

M-318.3R



M-318.3R Photo: Collection area at shoreline.



Site Contact

Nearest Address

300000 Toothaker Rd
 Kennewick, WA 99337

Driving Directions

Directions from Kennewick to strategy location.

1. Head southeast on Chemical Rd toward E Cochran Rd (2.3 mi)
2. Continue onto E Riek Rd (0.3 mi)
3. Turn left onto Piert Rd (0.6 mi)
4. Slight left onto Meals Rd (1.4 mi)
5. Turn left onto E Toothaker Rd (0.8 mi)
6. Continue onto Cushman Rd (0.2 mi)
7. Turn left on gravel road to the end at north eastern most part of Hover Park (0.6 mi)

Southern Peninsula, W of Casey Pond **M-319.2M**

Position - Location: 46° 7.688', -118° 57.646' 46° 7' 41.3", -118° 57' 38.7" 46.12813, -118.96076 Burbank

Strategy Objective: Deflection : Protect marshlands, shallow water habitat inside refuge.

Implementation: Use 500' of boom to deflect oil. Beach landing is shallow and rocky, recommend waders. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Casey Pond

Site Safety: Slips, Trips, Falls, Water Hazard. Shallow water with large rocks.

Field Notes: Boat access only. Launch boat from Casey Pond, BL-M-320.7.

Watercourse: River - Above a Dam - McNary Pool

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



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
2	Laborer

Southern Peninsula, W of Casey Pond

M-319.2M



M-319.2M Photo: Southern tip of peninsula, anchor location.



Site Contact

Nearest Address

2955 Hanson Loop Rd
Burbank, WA 99323

Driving Directions

- Directions from Pasco to Casey Pond boat launch.
1. Start at US-395, Pasco, WA 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp left onto ramp to I-182/US-12 E
 5. Continue on I-182/US-12 E (1.4 mi)
 6. Continue on US-12 (8.2 mi)
 7. Make sharp right on Hanson Loop Rd (0.3 mi)
 8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Casey Pond **M-320.6L**

Position - Location: 46° 9.474', -118° 57.144' 46° 9' 28.4", -118° 57' 8.6" 46.15790, -118.95240 Burbank

Strategy Objective: Exclusion : Protect inner shallow waters of wildlife refuge.

Implementation: Deploy 100' of boom in a chevron configuration across opening in railroad trestle. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Casey Pond boat launch & staging area

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

Field Notes: Launch boat from Casey Pond, BL-M-320.7.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Recreational Fishery, Salmonid Concentrations and Habitat, Sensitive Nesting Species, Warm Water Fishery and Spawning, Waterfowl



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) - (jon boat)

Recommended Personnel

1	Boat Operator
1	Laborer

Casey Pond

M-320.6L



M-320.6L Photo: Aerial view of Casey Pond and train trestle.



Site Contact

Nearest Address

2955 Hanson Loop Rd
Burbank, WA 99323

Driving Directions

- Directions from Pasco to Casey Pond boat launch.
1. Start at US-395, Pasco, WA 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp left onto ramp to I-182/US-12 E
 5. Continue on I-182/US-12 E (1.4 mi)
 6. Continue on US-12 (8.2 mi)
 7. Make sharp right on Hanson Loop Rd (0.3 mi)
 8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Casey Pond East M-320.7L

Position - Location: 46° 9.850', -118° 56.895' 46° 9' 51.0", -118° 56' 53.7" 46.16417, -118.94825 Burbank

Strategy Objective: Exclusion : Protect inner shallow waters of wildlife refuge.

Implementation: Use 100' of boom to prevent oil from entering pond and backwaters at Highway 12. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Remote: Stage at Casey Pond boat launch

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

Field Notes: Launch boat from Casey Pond, BL-M-320.7.

Watercourse: Pond - Casey Pond

Resources at Risk: Backwater Habitat, Recreational Fishery, Salmonid Concentrations and Habitat, Sensitive Nesting Species, Warm Water Fishery and



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) - (jon boat)

Recommended Personnel

1	Boat Operator
1	Laborer

Casey Pond East

M-320.7L



M-320.7L Photo: Highway 12 crossing Casey Pond.



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges

Primary Contact : Property Contact

Burbank, WA 99323
509-546-8300

Nearest Address

2955 Hanson Loop Rd
Burbank, WA 99323

Driving Directions

Directions from Pasco to Casey Pond boat launch.

1. Start at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp left onto ramp to I-182/US-12 E
5. Continue on I-182/US-12 E (1.4 mi)
6. Continue on US-12 (8.2 mi)
7. Make sharp right on Hanson Loop Rd (0.3 mi)
8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Game Road **M-321.9L**

Position - Location: 46° 10.144', -118° 58.871' 46° 10' 8.6", -118° 58' 52.2" 46.16906, -118.98118 Burbank

Strategy Objective: Collection : Collect oil as it moves downstream before it reaches McNary Wildlife Refuge.

Implementation: Use 1000' of boom to direct oil towards the shore for collection. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Gravel road near the strategy can be used for staging.

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

Field Notes: Can hand launch a boat on site.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: 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

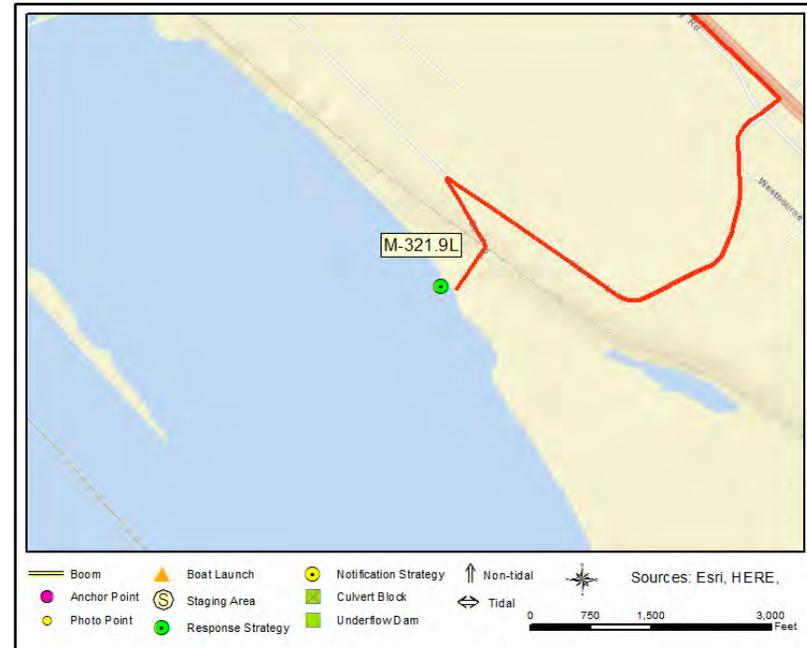
1	Boat Operator
3	Laborer

Game Road

M-321.9L



M-321.9L Photo: Shoreline launch & collection point.



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges
 Primary Contact : Property Contact

 Burbank, WA 99323
 509-546-8300

Nearest Address

Game Road
 Burbank, WA 99323

Driving Directions

1. Start at US 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (7.37 miles)
7. Make sharp right on Hanson Loop Rd (Hanson Loop) (1.19 miles)
8. Turn left on Game Rd (0.16 miles)
9. Cross the tracks and go straight through the 4-way intersection to a dirt/gravel drive at waterfront.

Foundation Island **M-322.6M**

Position - Location: 46° 10.315', -119° .251' 46° 10' 18.9", -119° 0' 15.1" 46.17191, -119.00419 Kennewick

Strategy Objective: Deflection : Prevent oil from hitting shoreline of island. Extremely valuable migratory bird area.

Implementation: Anchor two 500' sections of boom in a cascade formation at the very northern most point possible. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Shallow water, bring waders.

Staging Area: Remote: Two Rivers Park SA-M-324.3R

Site Safety: Slips, Trips, Falls, Water Hazards

Field Notes: Boat access only, shallow water around the islands. Launch boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

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

Foundation Island

M-322.6M



M-322.6M Photo: Northern point of Foundation Island



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

- Directions from Pasco to Two Rivers Boat Launch.
1. Start at US-395, pasco, wa 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp right on E A St
 5. Turn left on S 10th Ave
 6. Continue on WA-397 (Ed Hendler Brg)
 7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
 8. Turn left on E Finley Rd (2.2 mi)
 9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Vilard Pond **M-323.1M**

Position - Location: 46° 10.716', -119° .110' 46° 10' 43.0", -119° 0' 6.6" 46.17860, -119.00183 Burbank

Strategy Objective: Exclusion : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 300' of exclusion boom to prevent oil from entering Vilard Pond. Approach via water is extremely difficult due to shallow water and obstructions. Access via an unnamed dirt road, need waders to deploy from land. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: End of unnamed dirt road.

Site Safety: Slips, Trips, Falls, Water Hazards.

Field Notes: Access via water is difficult due to shallow water.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B2 (Contractor Boom) or equivalent

Recommended Personnel

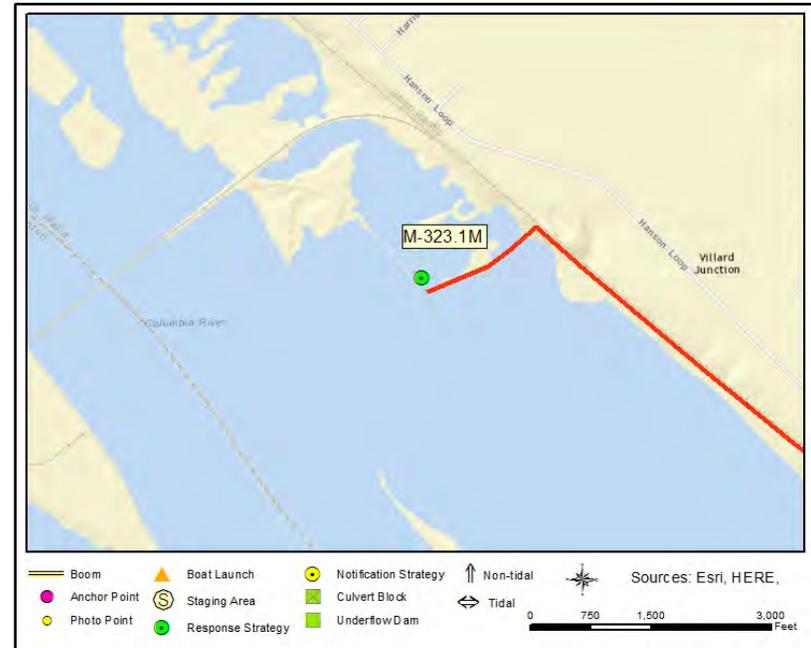
2	Laborer
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Vilard Pond

M-323.1M



M-323.1M Photo: Boom off opening to prevent oil from reaching inner pond.



Site Contact

Nearest Address

100 Game Road
Burbank, WA 99323

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (7.37 miles)
7. Make sharp right on Hanson Loop Rd (Hanson Loop) (1.19 miles)
8. Turn left on Game Rd (0.16 miles)
9. Cross the railroad tracks and make an immediate right on a dirt road, follow for (1.1 miles)
10. Turn left to onto a dirt berm - drive as far out to the end as possible. Finish at Vilard Pond on the right.

Burbank 8 **M-323.2M**

Position - Location: 46° 10.740', -119° .499' 46° 10' 44.4", -119° 0' 30.0" 46.17900, -119.00832 Kennewick

Strategy Objective: Deflection : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 2 - 500' sections of cascading boom to deflect oil back towards main channel. Water depth is very shallow and crew will need waders to access the beach. Adjust quantity and placement of anchors based on conditions of the day.

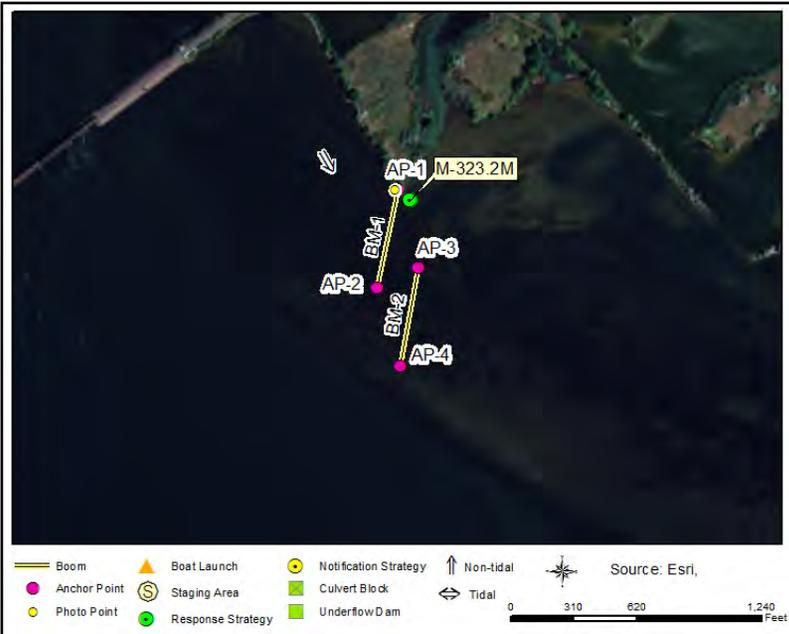
Staging Area: Remote: Two Rivers Park

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

Field Notes: Launch boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

5 Each	Anchor - Danforth (or other appropriate type)
1 Each	Anchoring System(s)- Shoreside
1000 Feet	Boom - B2 (Contractor Boom) or equivalent

Recommended Personnel

1	Boat Operator
4	Laborer

Burbank 8

M-323.2M



M-323.2M Photo: Northern anchor area



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

Directions from Pasco to Two Rivers Boat Launch.

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp right on E A St
5. Turn left on S 10th Ave
6. Continue on WA-397 (Ed Hendler Brg)
7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
8. Turn left on E Finley Rd (2.2 mi)
9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

JR Simplot Co. M-323.2R

Position - Location: 46° 10.428', -119° 1.100' 46° 10' 25.7", -119° 1' 6.0" 46.17380, -119.01833 Kennewick

Strategy Objective: Collection : Collect oil as it moves downstream

Implementation: Use 800' of boom to deflect oil to shoreline for collection. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: JR Simplot Co.-large open areas near site can be used for staging

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: Use Two Rivers boat launch BL-M-324.3R

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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
3	Laborer

JR Simplot Co.

M-323.2R



M-323.2R Photo: Aerial overview of collection area.



Site Contact

JR Simplot Co.
 Land/Property Owner : Property owners @ collection strategy M-325.3R
 227120 E Hedges Rd
 Kennewick, WA 99337-7111
 509-585-8512

Nearest Address

227120 E Hedges Rd
 Kennewick, WA 99337-7111

Driving Directions

1. Start at US 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.84 miles)
4. Make sharp right on E A St (1.16 miles)
5. Turn left on S 10th Ave (0.45 miles)
6. Continue on WA-397 (Ed Hendler Brg) (0.53 miles)
7. At fork keep left on WA-397 (N Gum St) (3.75 miles)
8. Bear left on E Perkins Rd (1.54 miles)
9. Turn right on E Hedges Rd (0.12 miles)
10. Turn left past tanks, and then right at the waterfront - to the end of the pavement.

Burbank 7

M-323.4M

Position - Location: 46° 10.780', -119° .840' 46° 10' 46.8", -119° 0' 50.4" 46.17967, -119.01400 Kennewick

Strategy Objective: Deflection : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Good upriver anchor point at train trestle. Water depth is good all the way to the shore for boats. Use 700' of boom to deflect oil into main channel. Could be a good collection point but all recovery would have to be via water. Adjust quantity and placement of anchors based on conditions of the day.

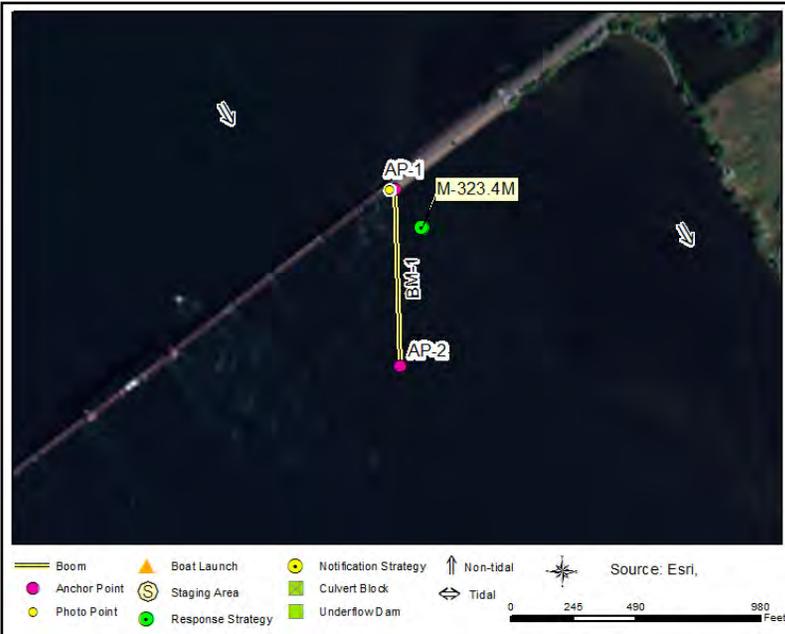
Staging Area: Remote: Two Rivers Park

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 boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
1	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

Burbank 7

M-323.4M



M-323.4M Photo: Northern anchor area



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

Directions from Pasco to Two Rivers Boat Launch.

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp right on E A St
5. Turn left on S 10th Ave
6. Continue on WA-397 (Ed Hendler Brg)
7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
8. Turn left on E Finley Rd (2.2 mi)
9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Burbank 6 **M-323.5M**

Position - Location: 46° 10.931', -119° .731' 46° 10' 55.8", -119° 0' 43.8" 46.18218, -119.01218 Kennewick

Strategy Objective: Exclusion : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 700' of boom to exclude oil from reaching sensitive habitat. Connect south end of boom to the train trestle to prevent oil pushing behind the boom. Adjust quantity and placement of anchors based on conditions of the day.

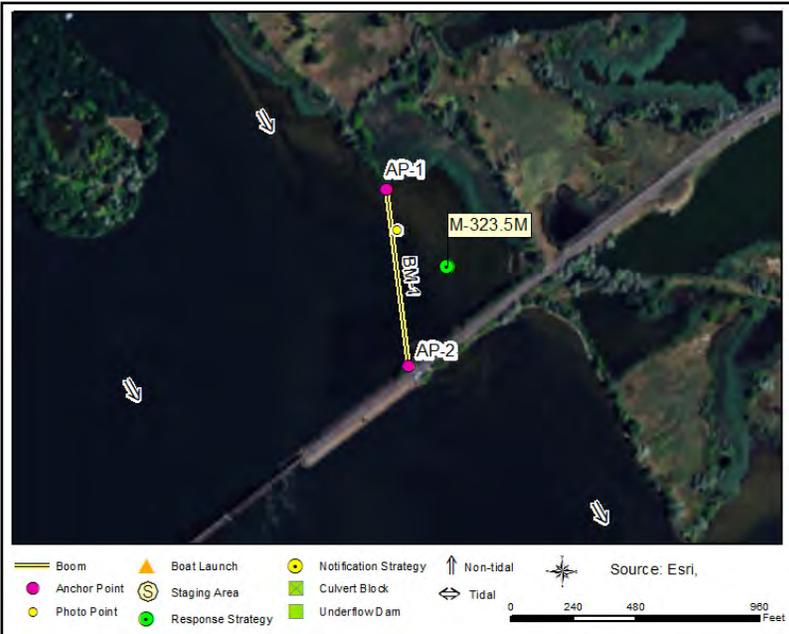
Staging Area: Remote: Two Rivers Park

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: Boat Access Only. Launch boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



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

Burbank 6

M-323.5M



M-323.5M Photo: Area to be boomed is to the left of the train trestle.



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

- Directions from Pasco to Two Rivers Boat Launch.
1. Start at US-395, pasco, wa 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp right on E A St
 5. Turn left on S 10th Ave
 6. Continue on WA-397 (Ed Hendler Brg)
 7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
 8. Turn left on E Finley Rd (2.2 mi)
 9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Burbank 5 **M-323.9M**

Position - Location: 46° 11.283', -119° 1.008' 46° 11' 17.0", -119° 1' .5" 46.18804, -119.01680 Kennewick

Strategy Objective: Exclusion : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 500' of boom to exclude oil from sensitive habitat. Water is very shallow and there is often active hunting in the area. Waders will be needed. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Two Rivers Park

Site Safety: Slips, Trips, Falls, Water Hazards, Shallow Water, Hunting

Field Notes: Boat access only. Launch boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

4	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
2	Laborer

Burbank 5

M-323.9M



M-323.9M Photo: Aerial photo of area to be boomed.



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

Directions from Pasco to Two Rivers Boat Launch.

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp right on E A St
5. Turn left on S 10th Ave
6. Continue on WA-397 (Ed Hendler Brg)
7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
8. Turn left on E Finley Rd (2.2 mi)
9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Burbank 4 **M-324.1M**

Position - Location: 46° 11.433', -119° 1.173' 46° 11' 26.0", -119° 1' 10.4" 46.19055, -119.01954 Kennewick

Strategy Objective: Deflection : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 700' of boom to deflect oil from downstream habitat. Shallow water but boat can get fairly close to shore. Waders are needed to reach the shore. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Two Rivers Park

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

Field Notes: Launch boat from Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	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
2	Laborer

Burbank 4

M-324.1M



M-324.1M Photo: Northern anchor area.



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

- Directions from Pasco to Two Rivers Boat Launch.
1. Start at US-395, pasco, wa 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp right on E A St
 5. Turn left on S 10th Ave
 6. Continue on WA-397 (Ed Hendler Brg)
 7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
 8. Turn left on E Finley Rd (2.2 mi)
 9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Burbank 3

M-324.37M

Position - Location: 46° 11.663', -119° 1.244' 46° 11' 39.8", -119° 1' 14.7" 46.19438, -119.02074 Pasco

Strategy Objective: Exclusion : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 1000' of boom. Thick vegetation on the beach, will need machetes to clear brush. Very shallow water, will need waders to access the beach. Due to the shallow water additional fence posts may take place of the anchor systems. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Sacajawea Park

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

Field Notes: Boat access only. Launch boat from Sacajawea Park, BL-MSN-1R.

Watercourse: River - Above a Dam - McNary Pool

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



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

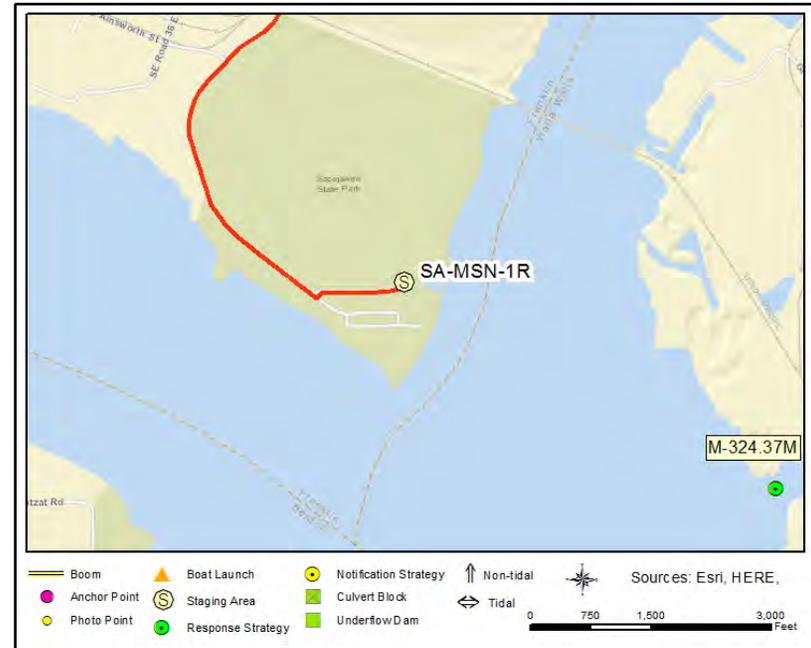
1	Boat Operator
4	Laborer

Burbank 3

M-324.37M



M-324.37M Photo: Aerial photo of area to be boomed.



Site Contact

Nearest Address

2503 Sacajawea Park Road
Pasco, WA 99301

Driving Directions

Directions from Pasco to Sacajawea State Park.

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Burbank 2

M-324.44M

Position - Location: 46° 11.768', -119° 1.367' 46° 11' 46.1", -119° 1' 22.0" 46.19614, -119.02278 Pasco

Strategy Objective: Deflection : Prevent oil from entering valuable bird resting and feeding area.

Implementation: Use 1000' of boom to deflect oil away from sensitive habitat. Shallow water, waders are needed to access shoreline. Due to depth of water additional fence posts may replace anchor systems. Adjust quantity and placement of anchors based on conditions of the day.

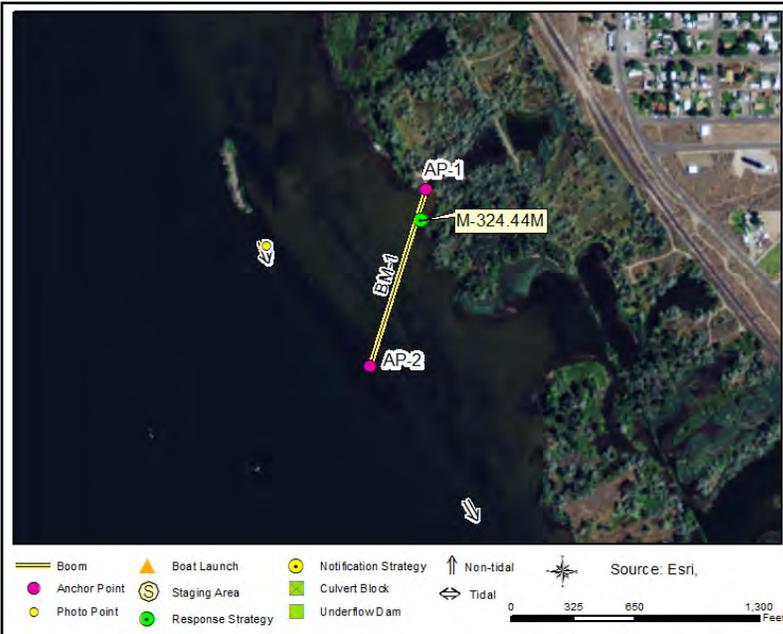
Staging Area: Remote: Stage at Sacajawea Park SA-MSN-1R

Site Safety: Slips, Trips, Falls, Water Hazards, Shallow Water, Hunting

Field Notes: Possible access via trail from Burbank but launch boat from Sacajawea Park, BL-MSN-1R.

Watercourse: River - Above a Dam - McNary Pool

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



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

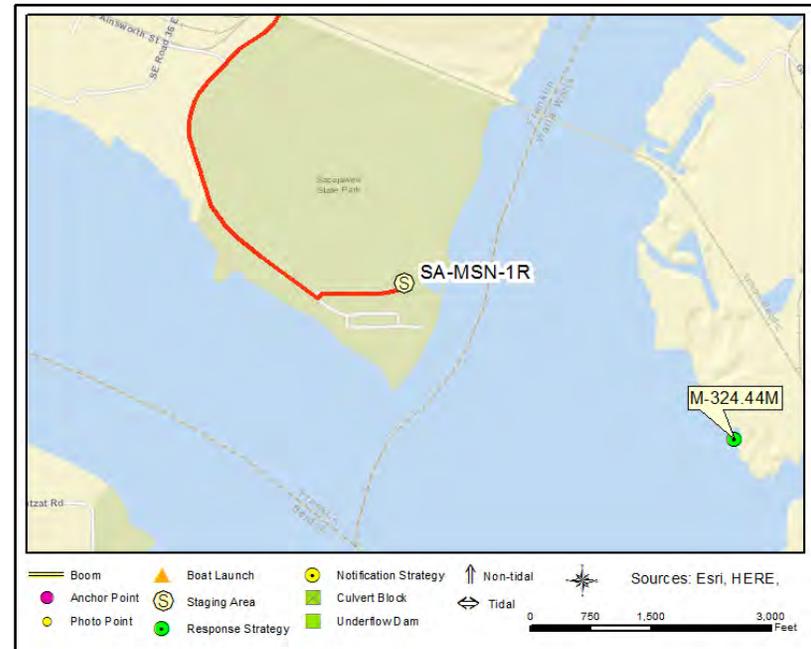
1	Boat Operator
2	Laborer

Burbank 2

M-324.44M



M-324.44M Photo: View of shoreline including northern anchor area.



Site Contact

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

Directions from Pasco to Sacajawea State Park.

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Burbank 1 **M-324.6M**

Position - Location: 46° 11.917', -119° 1.479' 46° 11' 55.0", -119° 1' 28.8" 46.19862, -119.02466 Pasco

Strategy Objective: Exclusion : Prevent oil from entering valuable bird resting and feeding areas.

Implementation: Use 1000' of boom. Vegetation will act as a standoff so minimal anchors will be needed. If MSN-0.8M is deployed this strategy may not be needed. Boat cannot get close so waders will be needed. Adjust quantity and placement of anchors based on conditions of the day.

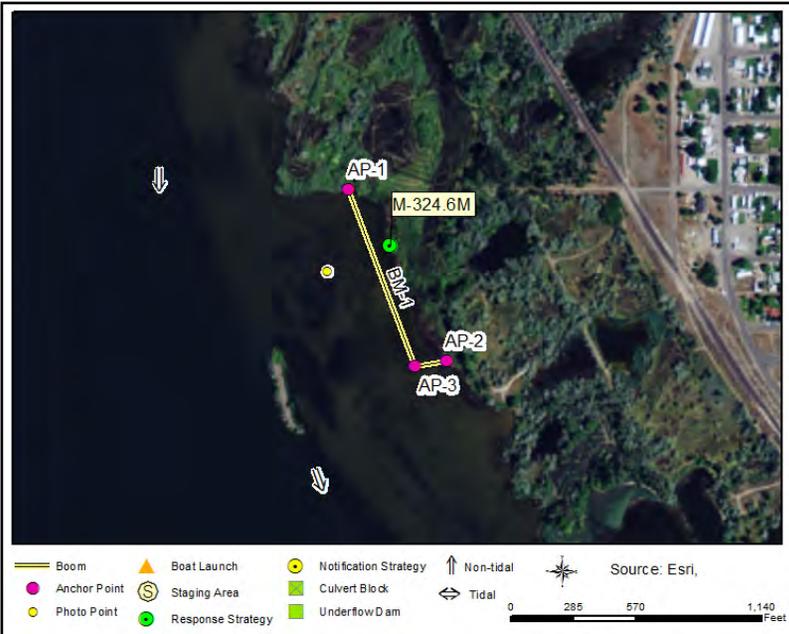
Staging Area: Remote: Sacajawea State Park

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

Field Notes: Boat Access Only. Launch boat from Sacajawea Park, BL-MSN-1R.

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

1	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

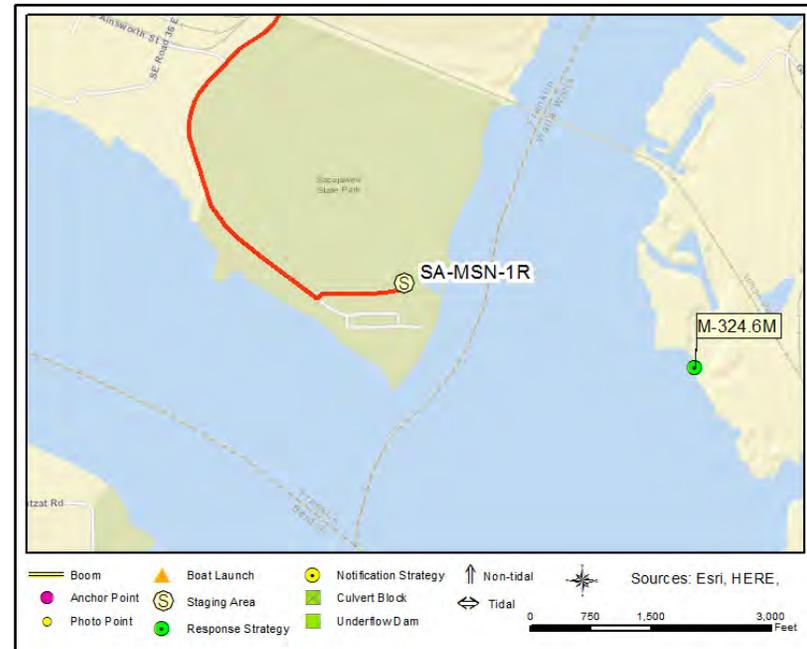
1	Boat Operator
2	Laborer

Burbank 1

M-324.6M



M-324.6M Photo: Aerial photo of area to be boomed



Site Contact

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

Directions from Pasco to Sacajawea State Park.

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Two Rivers Park South **M-324.8R**

Position - Location: 46° 11.282', -119° 2.324' 46° 11' 16.9", -119° 2' 19.4" 46.18804, -119.03873 Kennewick

Strategy Objective: Exclusion : Keep oil out of shallow water habitat

Implementation: Use 700'-800' of boom. Up river anchor point is a sandy beach. Down river anchor point is a gravel beach. Large underwater rock on approach to down river anchor point. Difficult to tell where opening to inlet is due to vegetation. Adjust quantity and placement of anchors based on conditions of the day.

Staging Area: Remote: Two Rivers Park

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Boat access only - use BL-M-324.3R Two Rivers Park boat launch

Watercourse: River - Above a Dam - McNary Pool

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



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer

Two Rivers Park South

M-324.8R



M-324.8R Photo: Aerial photo fo area to be boomed.



Site Contact

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

- Directions from Pasco to Two Rivers Boat Launch.
1. Start at US-395, pasco, wa 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp right on E A St
 5. Turn left on S 10th Ave
 6. Continue on WA-397 (Ed Hendler Brg)
 7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
 8. Turn left on E Finley Rd (2.2 mi)
 9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Two Rivers Park M-325.5R

Position - Location: 46° 11.531', -119° 2.962' 46° 11' 31.8", -119° 2' 57.7" 46.19218, -119.04937 Kennewick

Strategy Objective: Deflection : Protect shallow water habitat around Two Rivers Park

Implementation: Use two sections of boom. The first (BM-1) is 500' to excluded oil from small cove. The second (BM-2) is 800' of boom to deflect oil away from the park. Do not anchor downstream end to the shoreline to keep access to boat launch. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Two Rivers Park

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

Field Notes: Launch boat onsite at Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: City Park, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

7 Each	Anchor - Danforth (or other appropriate type)
3 Each	Anchoring System(s)- Shoreside
1300 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

Two Rivers Park

M-325.5R



M-325.5R Photo: View from the west bank at Two Rivers Park



Site Contact

Nearest Address

Glynn Wheeler Lane
 Kennewick, WA 99337

Driving Directions

- Directions from Pasco to Two Rivers Boat Launch.
1. Start at US-395, pasco, wa 99301
 2. Go south on US-395 toward W Vineyard Dr
 3. Continue on WA-397
 4. Make sharp right on E A St
 5. Turn left on S 10th Ave
 6. Continue on WA-397 (Ed Hendler Brg)
 7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
 8. Turn left on E Finley Rd (2.2 mi)
 9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

SW side of Sacajawea State Park **M-325.6L**

Position - Location: 46° 12.113', -119° 2.839' 46° 12' 6.8", -119° 2' 50.3" 46.20188, -119.04731 Pasco

Strategy Objective: Deflection : Keep oil away from the park shoreline.

Implementation: Use 800' of boom with one anchor point on the shoreline and the downstream anchor out towards the center of the channel. Adjust angle of boom, placement & number of anchors according to conditions of the day.

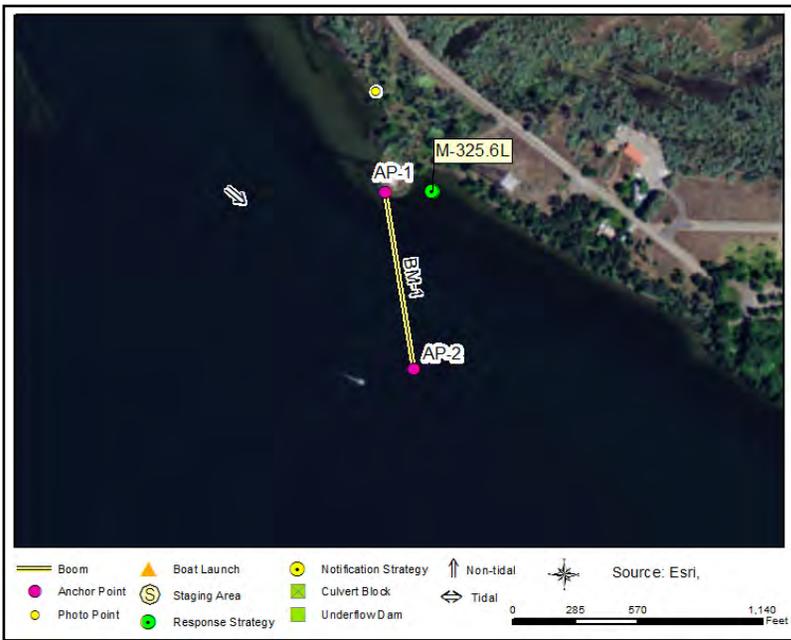
Staging Area: Onsite: Plenty of staging available onsite at Sacajawea State Park.

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

Field Notes: Use BL-MSN-1R Sacajawea State Park boat launch

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: State Park, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

SW side of Sacajawea State Park

M-325.6L



M-325.6L Photo: View of shoreline anchor point



Site Contact

Sacajawea State Park
 Land/Property Contact : Park Manager
 2503 Sacajawea Park Road
 Pasco, WA 99301
 509-366-5180

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Start at Us 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (2.07 miles)
7. Make sharp right on E A St (0.28 miles)
8. Turn left on S Road 40 E (1 miles)
9. Bear right (0.02 miles)
10. Bear right on Sacajawea Park Rd (0.8 miles)
11. Finish at 2503 Sacajawea Park Road, 99301, on the left

Two Rivers Park North M-325.6R

Position - Location: 46° 11.689', -119° 3.209' 46° 11' 41.3", -119° 3' 12.5" 46.19481, -119.05348 Kennewick

Strategy Objective: Deflection : Protect downstream shallow water habitat.

Implementation: Use 800' of deflection boom at point north of shallow water inlet. Angle boom out from the shoreline to the channel. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage at Two Rivers Park

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

Field Notes: Launch boat onsite at Two Rivers Park, BL-M-324.3R.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: City Park, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

Two Rivers Park North

M-325.6R



M-325.6R Photo: Deflection strategy shoreline anchor area at Two Rivers Park



Site Contact

Nearest Address

10204 South Haney Road
Kennewick, WA 99337

Driving Directions

1. Start at US 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.84 miles)
4. Make sharp right on E A St (1.16 miles)
5. Turn left on S 10th Ave (0.45 miles)
6. Continue on WA-397 (Ed Henderl Brg) (0.53 miles)
7. At fork keep left on WA-397 (N Gum St) (2.25 miles)
8. Turn left on E Finley Rd (1.15 miles)
9. Turn left on E Schuster Rd (0.08 miles)
10. Turn left on S Haney Rd (0.1 miles)
11. Turn right onto gravel access road located at 11314 South Haney Road on the left
12. Follow the access road to the left (0.3 miles)

North of E Matzat Rd **M-325.7R**

Position - Location: 46° 11.737', -119° 3.272' 46° 11' 44.2", -119° 3' 16.3" 46.19561, -119.05454 Kennewick

Strategy Objective: Deflection : Protect downstream shallow water habitat.

Implementation: Use 800' of boom that is anchored to the shoreline. Downstream anchor point should be angled towards the center of the channel. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: N corner of Two Rivers Park

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

Field Notes: Launch at BL-M-324.3R/Two Rivers

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk:



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

North of E Matzat Rd

M-325.7R



M-325.7R Photo: Shoreline anchor area



Site Contact

Nearest Address

11314 South Haney Road
 Kennewick, WA 99337

Driving Directions

1. Start at US 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.84 miles)
4. Make sharp right on E A St (1.16 miles)
5. Turn left on S 10th Ave (0.45 miles)
6. Continue on WA-397 (Ed Hendlr Brg) (0.53 miles)
7. At fork keep left on WA-397 (N Gum St) (2.25 miles)
8. Turn left on E Finley Rd (1.15 miles)
9. Turn left on E Schuster Rd (0.08 miles)
10. Turn left on S Haney Rd (0.1 miles)
11. Turn right onto gravel access road located at 11314 South Haney Road on the left
12. Follow the access road to the left (0.3 miles)

Tidewater CCP **M-325.89L**

Position - Location: 46° 12.363', -119° 3.068' 46° 12' 21.8", -119° 3' 4.1" 46.20605, -119.05113 Pasco

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

Implementation: Deploy 600' of boom to divert oil to the shoreline for collection. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Large parking areas available nearby.

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

Field Notes: Use BL-M-328.1L Pasco Boat Basin boat launch

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
600	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

Tidewater CCP

M-325.89L



M-325.89L Photo: View of the collection area on Tidewater Columbia River shoreline



Site Contact

Nearest Address

3305 East Commerce Street
Pasco, WA 99301

Driving Directions

Directions from Richland to Strategy Location.

1. Start at US 12 Richland
2. Go southeast on WA-240-BR (George Washington Way) (0.77 miles)
3. Bear right onto ramp to I-182 toward Pasco/Yakima (0.1 miles)
4. At fork keep left on I-182 E toward Pasco (0.13 miles)
5. Take ramp and go east on I-182 (US-12 E) (10.43 miles)
6. Continue on US-12 (2.07 miles)
7. Make sharp right on E A St (0.28 miles)
8. Turn left on S Road 40 E (1 miles)
9. Bear right (0.02 miles)
10. Bear right on Sacajawea Park Rd (0.24 miles)
11. Turn right on E Ainsworth St (0.15 miles)
12. Turn left on SE Road 36 E (0.31 miles)
13. Bear right on E Commerce St ()
14. Finish at 3305 East Commerce Street, 99301, on the right

Sacajawea Park Foot Bridge M-325.9L

Position - Location: 46° 12.428', -119° 3.176' 46° 12' 25.7", -119° 3' 10.5" 46.20713, -119.05293 Pasco

Strategy Objective: Collection : Prevent oil from reaching the Columbia River

Implementation: Deploy boom in drainage canal at Sacajawea Park Foot Bridge. Acces via footpath at intersection with Sacajawea Park Road. 100' of boom is enough to go back and forth across the ditch several times.

Staging Area: Onsite: Parking lots nearby could be used for staging.

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

Field Notes: No boat needed for strategy.

Watercourse: Ditch - Ditch leading to Columbia River

Resources at Risk:



Recommended Equipment

4 Each	Anchoring System(s)- Shoreside
100 Feet	Boom - B2 (Contractor Boom) or equivalent
1 Each	Vac Truck or Skimmer and Storage

Recommended Personnel

2	Laborer
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Sacajawea Park Foot Bridge

M-325.9L



M-325.9L Photo: Looking up the drainage ditch from the foot bridge.



Site Contact

Nearest Address

3305 East Commerce Street
Pasco, WA 99301

Driving Directions

1. Start at Us 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (2.07 miles)
7. Make sharp right on E A St (0.28 miles)
8. Turn left on S Road 40 E (1 miles)
9. Bear right (0.02 miles)
10. Bear right on Sacajawea Park Rd (0.24 miles)
11. Turn right on E Ainsworth St (0.15 miles)
12. Turn left on SE Road 36 E (0.31 miles)
13. Bear right on E Commerce St ()
14. Finish at 3305 East Commerce Street, 99301, on the right

Indian Island

M-326.1M

Position - Location: 46° 12.245', -119° 3.470' 46° 12' 14.7", -119° 3' 28.2" 46.20409, -119.05783 Pasco

Strategy Objective: Deflection : Keep oil moving downstream off of Indian Island

Implementation: Use 1000' in a chevron configuration at the head of the island. Adjust number and location of anchors based on conditions of the day.

Staging Area: Remote: Sacajawea State Park

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

Field Notes: Launch boat from Sacajawea Park, BL-MSN-1R.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

6	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
3	Laborer

Indian Island

M-326.1M



M-326.1M Photo: M-326.1M View of Indian Island from upstream water intake facility.



Site Contact

Nearest Address

2503 Sacajawea Park Road
Pasco, WA 99301

Driving Directions

Directions from Pasco to Sacajawea State Park.

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

SE Rd 27 Water Intake **M-326.5L**

Position - Location: 46° 12.553', -119° 3.916' 46° 12' 33.2", -119° 3' 55.0" 46.20921, -119.06527 Pasco

Strategy Objective: Deflection : Deflect oil away from water intake & Sacajawea State Park shoreline

Implementation: Anchor 800' of deflection boom on the NW corner of the water intake facility, run boom south toward the center of the river. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Paved parking area for staging, will need bolt cutters to access pump house deck.

Site Safety: Slips, trips, falls, water hazard

Field Notes: Launch boat from Pasco Boat Basin, BL-M-328.1L.

Watercourse: River - Above a Dam - Middle Columbia River

Resources at Risk: Downstream Resources, Water Intakes



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

SE Rd 27 Water Intake

M-326.5L



M-326.5L Photo: Facing SE Rd 27 water intake facility



Site Contact

Nearest Address

100 E Dock Street
Pasco, WA 99301

Driving Directions

Directions from Pasco to Strategy Location

1. Start at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (2.45 miles)
4. Turn left on E Ainsworth St (0.14 miles)
5. Continue on E Dock St (0.47 miles)
6. Turn right on SE Rd27 and go to the end (0.2 mi)

East Dock Street **M-327.1L**

Position - Location: 46° 12.774', -119° 4.504' 46° 12' 46.4", -119° 4' 30.2" 46.21290, -119.07506 Pasco

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

Implementation: Deploy 800' of boom to deflect oil towards the shoreline for collection at the end of the jetty. Adjust angle of boom, placement & number of anchors according to conditions of the day.

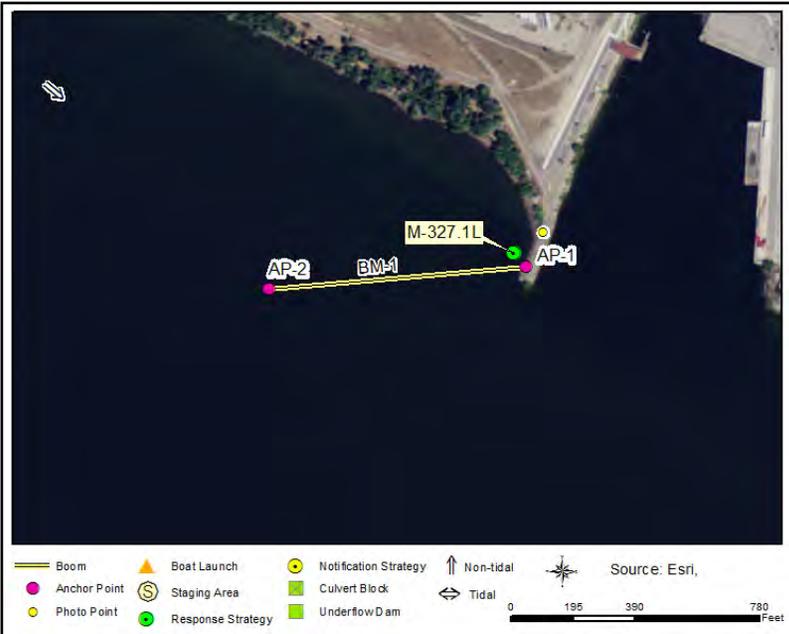
Staging Area: Onsite: Parking lots near site, boat launch at Pasco Boat Basin

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

Field Notes: Launch boat from Pasco Boat Basin, BL-M-328.1L.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

East Dock Street

M-327.1L



M-327.1L Photo: Looking down the pier at the collection area.



Site Contact

Nearest Address

E Dock Street
Pasco, WA 99301

Driving Directions

1. Start at Us 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (2.45 miles)
4. Turn left on E Ainsworth St (0.14 miles)
5. Continue on E Dock St (0.4 miles)
6. Turn right into parking area

Pasco Boat Basin M-328L

Position - Location: 46° 13.091', -119° 5.482' 46° 13' 5.5", -119° 5' 28.9" 46.21819, -119.09136 Pasco

Strategy Objective: Deflection : Keep oil out of Pasco Boat Basin

Implementation: Deploy 300' of boom from the western jetty towards river center to deflect oil away from the entrance to the Pasco Boat Basin. Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage on site at SA-M-328.1L/Pasco Boat Basin

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

Field Notes: Launch on site at BL-M-328.1L/Pasco Boat Basin

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Recreational Boating



Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
1	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

Pasco Boat Basin

M-328L



M-328L Photo: Aerial view of the Pasco Boat Basin showing strategy location



Site Contact

City of Pasco Recreation Service
 Primary Contact :

 Pasco, WA 99301
 509-545-3456

Nearest Address

1315 South 4th Ave.
 Pasco, WA 99301

Driving Directions

1. Start at US-395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (2.87 miles)
4. Turn left on S 2nd Ave (0.09 miles)
5. Turn right on E Washington St (0.13 miles)
6. Turn left on S 4th Ave (0.01 miles)
7. Finish at 1315 South 4th Ave., 99301, on the left

10th Ave Bridge/N Gum St **M-328.4L**

Position - Location: 46° 13.196', -119° 6.033' 46° 13' 11.8", -119° 6' 2.0" 46.21993, -119.10055 Pasco

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

Implementation: Deploy 800' of boom from N Gum St shoreside anchoring position to the 10th Ave bridge to divert oil towards shore for collection. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Paved roadside parking and pier available for staging

Site Safety: Water and road hazards, slips, trips & falls.

Field Notes: Launch at BL-M-328.1L/Pasco Boat Basin

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Bridle(s) - Bridge Pier (appropriately sized for boom)
100	Feet	Line - 1/2" poly line
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

10th Ave Bridge/N Gum St

M-328.4L



M-328.4L Photo: View of shoreside anchoring position



Site Contact

Nearest Address

720 W River St
Pasco, WA 99301

Driving Directions

1. Start at US-395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.84 miles)
4. Make sharp right on E A St (0.66 miles)
5. Turn left on S 4th Ave (0.42 miles)
6. Turn left on S 5th Ave (0.2 miles)
7. Continue on W River St (0.2 miles)
8. Turn left onto N Gum St (400 ft) you will see the pier on the right.

Clover Island S

M-328.9R

Position - Location: 46° 12.924', -119° 7.046' 46° 12' 55.4", -119° 7' 2.7" 46.21539, -119.11743 Kennewick

Strategy Objective: Collection : Collect oil that is moving downstream and deflect oil from shore of Clover Island

Implementation: Use 1000' of boom to divert oil towards western shore for collection. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Will need bolt cutters to remove padlock on post by shoreside anchor pt. Stage on site at SA-M-328.9R/Clover Island

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Launch on site at BL-M-328.9R/Clover Island

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources, Economic Resource, Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and 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

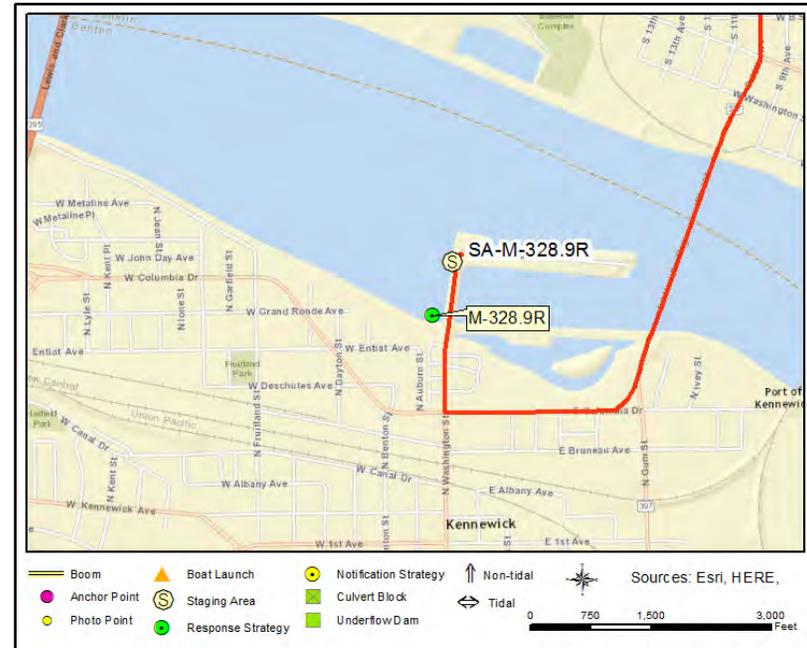
1	Boat Operator
4	Laborer

Clover Island S

M-328.9R



M-328.9R Photo: View of shoreside anchor point with padlocked post on roadway



Site Contact

Port of Kennewick 509-586-1186
 Primary Contact : Manages Clover Island boat launch (they have boom)

 Kennewick, WA 99336

Nearest Address

350 Clover Island Dr.
 Kennewick, WA 99336

Driving Directions

1. Directions to Clover Island, starting from US-395, Pasco, Wa 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.85 miles)
4. Make sharp right on E A St (1.16 miles)
5. Turn left on S 10th Ave (0.45 miles)
6. Continue on WA-397 (Ed Hendlr Brg) (0.53 miles)
7. Continue on E Columbia Dr (0.51 miles)
8. Turn right on N Washington St (Clover Island Dr) (0.05 miles)
9. Continue on Clover Island Dr (0.51 miles)
10. Finish at 350 Clover Island Dr., 99336, on the right

Clover Island N M-329M

Position - Location: 46° 13.082', -119° 6.875' 46° 13' 4.9", -119° 6' 52.5" 46.21804, -119.11459 Kennewick

Strategy Objective: Deflection : Keep oil off Clover Island shoreline - divert to collection point downstream

Implementation: Anchor 800' of boom from the shore below the NE tip of the parking lot across the street from the boat launch; tow boom out toward the ENE to deflect oil away from Clover Island shoreline and toward a collection point downstream. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

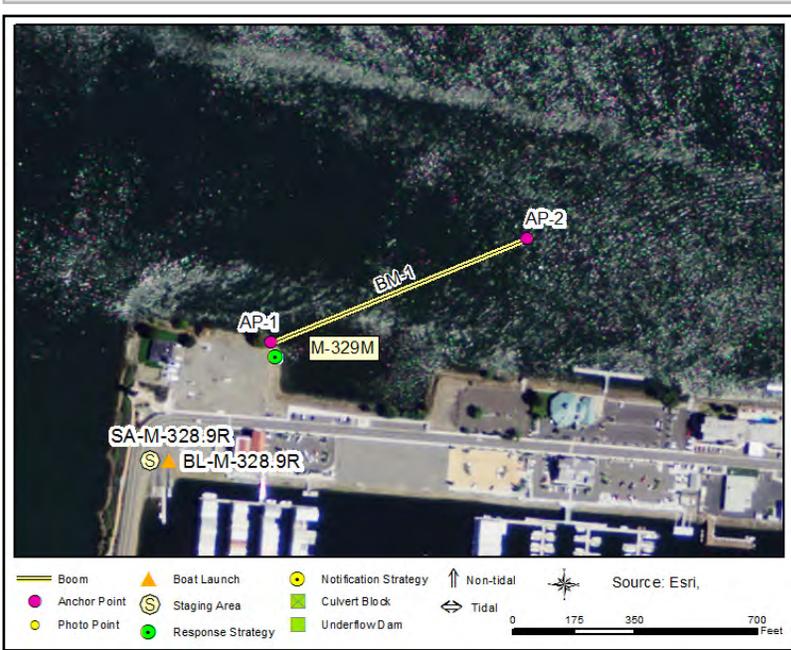
Staging Area: Onsite: Stage at SA-M-328.9R/Clover Island, parking lot across the street from the boat launch.

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch from BL-M-328.9R/Clover Island

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Economic Resource, Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
800	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

Clover Island N

M-329M



M-329M Photo: View of strategy anchor point at the NE corner of the W parking lot on Clover Island



Site Contact

Port of Kennewick 509-586-1186
 Land/Property Contact : Manages Clover Island boat launch (they have boom)

 Kennewick, WA 99336

Nearest Address

350 Clover Island Dr.
 Kennewick, WA 99336

Driving Directions

1. Directions to Clover Island, starting from US-395, Pasco, Wa 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.85 miles)
4. Make sharp right on E A St (1.16 miles)
5. Turn left on S 10th Ave (0.45 miles)
6. Continue on WA-397 (Ed Hendlr Brg) (0.53 miles)
7. Continue on E Columbia Dr (0.51 miles)
8. Turn right on N Washington St (Clover Island Dr) (0.05 miles)
9. Continue on Clover Island Dr (0.51 miles)
10. Finish at parking lot on the left across from the boat launch, Clover Island Dr.,99336

Columbia Park East (Kennewick)

M-330.3R

Position - Location: 46° 13.340', -119° 8.325' 46° 13' 20.4", -119° 8' 19.5" 46.22234, -119.13875 Kennewick

Strategy Objective: Exclusion : Keep oil out of boat launch, creek & off park shoreline

Implementation: Deploy 600' of boom from point of land on the W side of the boat launch, anchor to bridge using bridle & line, keep the boat launch open; use 100' of boom in a chevron formation anchored on either side of the creek to keep oil out of the creek. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Stage on site at SA-M-330.2R/Columbia Park East (Kennewick)

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch on site at BL-M-330.2R/Columbia Park East (Kennewick)

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Boat Launch/Ramp, City Park, Creek Habitat, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
3	Laborer

Columbia Park East (Kennewick)

M-330.3R



M-330.3R Photo: View from anchor point on spit of land W of launch downstream to the bridge



Site Contact

City of Kennewick Parks, Rec & Tourism
 Primary Contact : Manages boat launches
 Kennewick, WA 99352

Nearest Address

1106 Columbia Park Trail
 Kennewick, WA 99336

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Continue straight to stay on US-395 S (signs for Kennewick Pendleton) (0.2 mi)
6. Take the exit toward W Columbia Dr (0.1 mi)
7. Continue onto Columbia Park Trail (453 ft)
8. At the traffic circle, take the 1st exit and stay on Columbia Park Trail (0.2 mi)
9. At the next traffic circle, take the 2nd exit and stay on Columbia Park Trail (0.5 mi)
10. Stay on Columbia Park Trail, your destination will be on your left (0.5 mi)

Wade Park

M-331.4L

Position - Location: 46° 13.946', -119° 9.754' 46° 13' 56.8", -119° 9' 45.2" 46.23244, -119.16256 Pasco

Strategy Objective: Collection : Collect oil moving downstream while protecting the water intake facility

Implementation: Use 800' of boom to divert oil towards shore for collection (keep boat launch open), and 100' of boom in a chevron formation to protect the water intake facility. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Stage on site at SA-M-331.4L/Wade Park

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Launch on site at BL-M-331.4L/Wade Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Boat Launch/Ramp, City Park, Downstream Resources, Water Intakes, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
3	Each	Anchoring System(s)- Shoreside
900	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

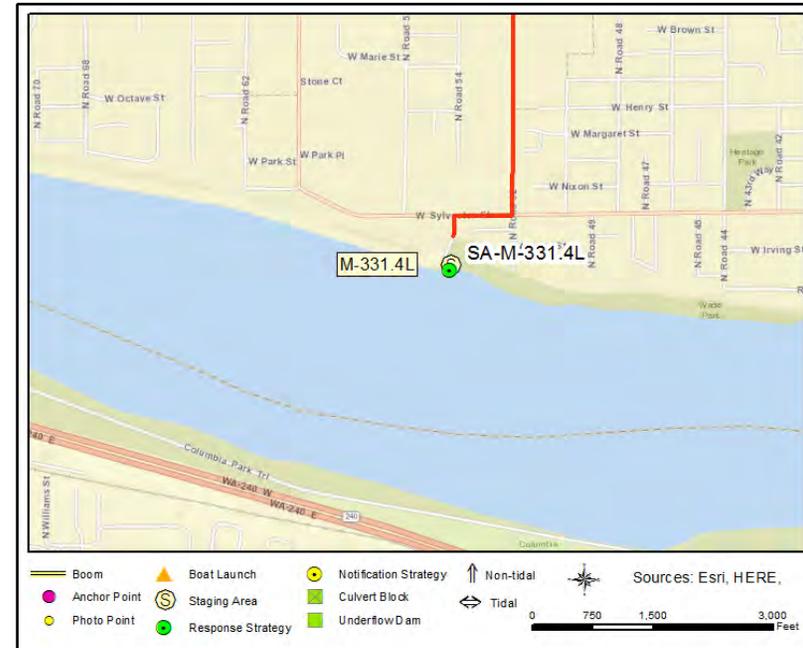
1	Boat Operator
4	Laborer

Wade Park

M-331.4L



M-331.4L Photo: View of shoreside anchor point on the west side of Wade Park boat launch.



Site Contact

City of Pasco Recreation Service
 Primary Contact :
 Pasco, WA 99301
 509-545-3456

Nearest Address

601 Road 54
 Pasco, WA 99301

Driving Directions

1. Start at US-395, Pasco, Wa 99301
2. Go south on US-395 toward W Vineyard Dr (4.52 miles)
3. Take ramp on the right and go on I-182 W/US-395 S toward Richland/Pendleton (2.37 miles)
4. At exit 12A take ramp on the right and go on US-395 S toward Kennewick/Pendleton (0.83 miles)
5. Take ramp on the right to Court St. (0.32 miles)
6. Turn right on W Court St (1.38 miles)
7. Turn left on N Road 52 (0.5 miles)
8. Turn right on W Sylvester St (0.14 miles)
9. Turn left on N Road 54 (0.05 miles)
10. Finish at 601 Road 54, 99301, on the left

Columbia Park West (Kennewick)

M-332.8R

Position - Location: 46° 13.878', -119° 11.513' 46° 13' 52.7", -119° 11' 30.8" 46.23131, -119.19188 Kennewick

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

Implementation: Anchor 800' of boom to anchor point at boat launch then tow boom upriver to the NW to anchor off-shore. Adjust angle of boom, as well as quantity and placement of anchors, based on conditions of the day.

Staging Area: Onsite: Stage on site at SA-M-332.8R/Columbia Park West (Kennewick)

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Launch on site at BL-M-332.8R/Columbia Park West (Kennewick)

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Boat Launch/Ramp, Downstream Resources, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
1	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

Columbia Park West (Kennewick)

M-332.8R



M-332.8R Photo: Anchor point at boat launch



Site Contact

City of Kennewick Parks, Rec & Tourism
 Primary Contact : Manages boat launches

 Kennewick, WA 99352

Nearest Address

1548 N Edison St.
 Kennewick, WA 99336

Driving Directions

1. Starting at US-395 S in Pasco
2. Turn right to merge onto I-182 W/US-12 W toward Kennewick/Richland/Yakima (0.5 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington240 W/Richland (2.6 mi)
6. Take the Edison St exit (0.3 mi)
7. Turn right onto N Edison St (0.1 mi)
8. Turn right onto Columbia Park Trail (79 ft) , boat launch is on the left.

Columbia Park West Marina **M-334R**

Position - Location: 46° 14.401', -119° 13.168' 46° 14' 24.0", -119° 13' 10.1" 46.24001, -119.21947 Richland

Strategy Objective: Exclusion : Keep oil from entering marina; keep boat launch and gas pumps open

Implementation: Anchor 800' of boom to shoreline at the SE corner of Bateman Island and run it SE to anchor offshore. Adjust angle of boom, as well as quantity & placement of anchors based on conditions of the day. Keep boat launch & gas pumps accessible.

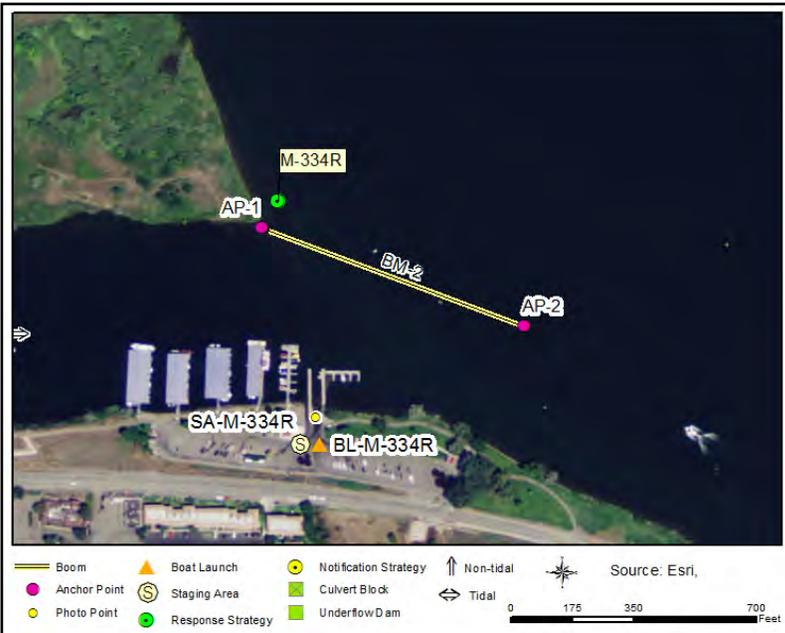
Staging Area: Onsite: Stage on site at SA-M-334R/Columbia Park Marina

Site Safety: Water hazard, fuel pumps, slips, trips & falls

Field Notes: Launch on site at BL-M-334R/Columbia Park Marina

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Boat Basin/Marina, Recreational Boating, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

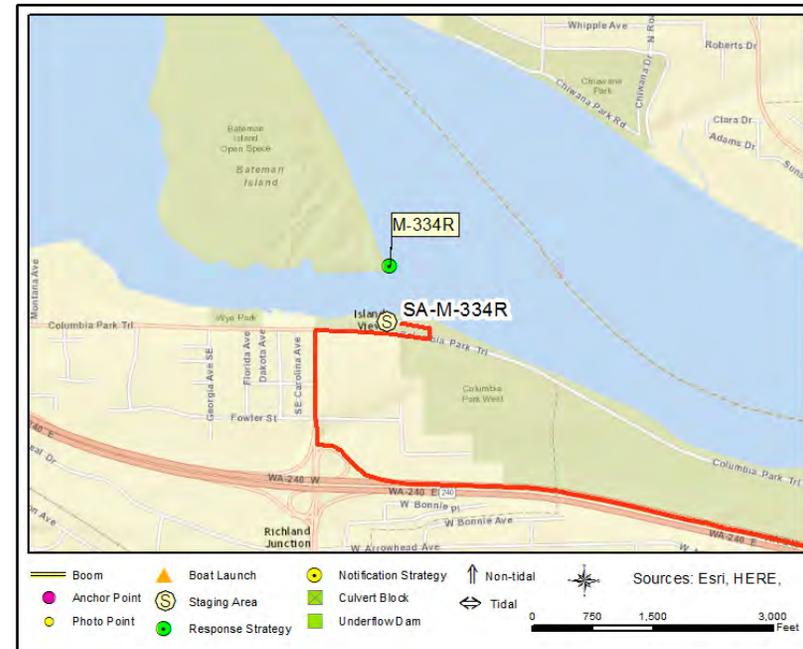
1	Boat Operator
3	Laborer

Columbia Park West Marina

M-334R



M-334R Photo: View of Columbia Park boat launch, fuel pumps, and location of Bateman Island where 2nd boom is to be anchored



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

1776 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton
Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/Richland (4.2 mi)
6. Take the Columbia Center Blvd exit (0.2 mi)
7. Turn right on N Columbia Center Blvd (0.3 mi)

Bateman Island Creek **M-334.3M**

Position - Location: 46° 14.576', -119° 13.281' 46° 14' 34.5", -119° 13' 16.8" 46.24293, -119.22135 Richland

Strategy Objective: Exclusion : Keep oil out of creek on Bateman Island

Implementation: Anchor 200' of boom on either side of the creek mouth in a chevron formation to keep oil out. Stay as far off the shoreline & as close to the water as possible while still achieving objective. Adjust angle of boom, placement & number of anchors according to conditions of the day.

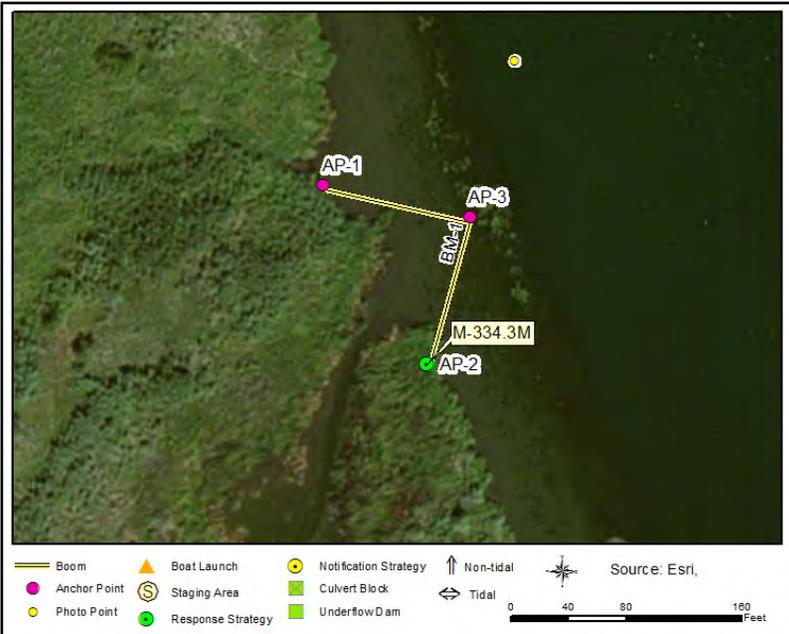
Staging Area: Remote: Stage at SA-M-334R/Columbia Park Marina

Site Safety: Water hazards, slips, trips, & falls

Field Notes: Use BL-M-334R/Columbia Park Marina

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring Post(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

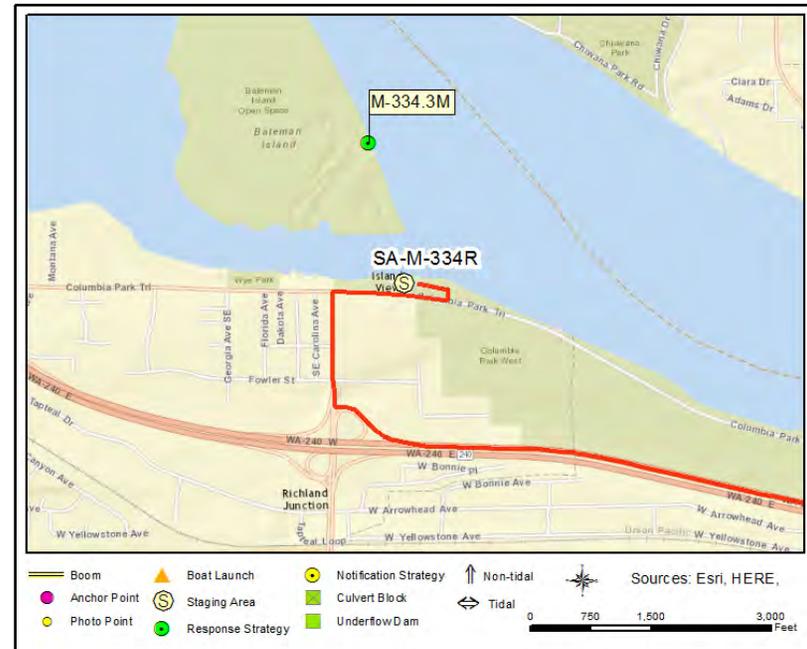
1	Boat Operator
2	Laborer

Bateman Island Creek

M-334.3M



M-334.3M Photo: Aerial view of Bateman Island creeks



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

1776 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton
Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington240 W/Richland (4.2 mi)
6. Take the Columbia Center Blvd exit (0.2 mi)
7. Turn right on N Columbia Center Blvd (0.3 mi)

Chiawana Park Pier **M-334.5L**

Position - Location: 46° 14.875', -119° 13.021' 46° 14' 52.5", -119° 13' 1.2" 46.24791, -119.21701 Pasco

Strategy Objective: Collection : Keep oil off park shoreline

Implementation: Anchor 800' of boom to the downstream base of the pier and run it out to the SSE to deflect uncaptured oil away from park shoreline. Existing flag poles on either side of the pier may work as anchor posts. Adjust angle of boom, as well as quantity & placement of anchors based on conditions of the day.

Staging Area: Onsite: You can stage at large paved parking area adjacent to the pier (may need bolt cutters if gate is locked)

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch boat at BL-M-333.9L/Chiawana Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: City Park, Downstream Resources, Recreational Shoreline Area, Waterfowl and Shorebird Concentrations



Recommended Equipment

8	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1600	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

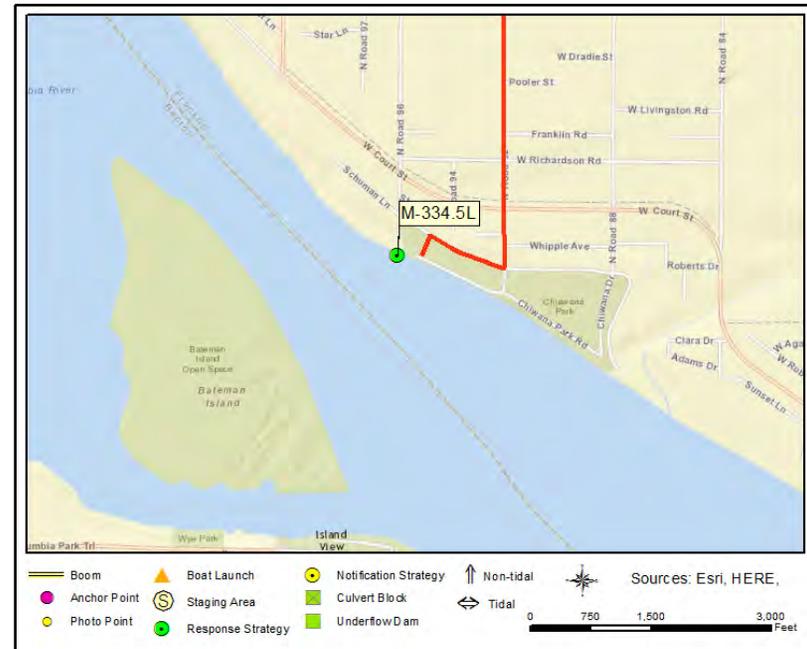
1	Boat Operator
4	Laborer

Chiawana Park Pier

M-334.5L



M-334.5L Photo: View of Chiawana pier and upstream



Site Contact

City of Pasco Recreation Service

Primary Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

100 Chiawana Park Rd
Pasco, WA 99301

Driving Directions

1. Start at us-395, pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.52 miles)
3. Take ramp on the right and go on I-182 W/US-395 S toward Richland/Pendleton (4.89 miles)
4. At exit 9 take ramp on the right to Road 68 (0.48 miles)
5. Turn left on N Road 68 (0.78 miles)
6. Turn right on Argent Rd (1.52 miles)
7. Turn left on N Road 92 (0.69 miles)
8. Turn right on Chiawana Park Rd (0.2 miles)
9. Finish at parking lot for pier on the right

N tip of Bateman Island M-335M

Position - Location: 46° 15.083', -119° 13.856' 46° 15' 5.0", -119° 13' 51.4" 46.25139, -119.23093 Richland

Strategy Objective: Collection : Keep oil off the E shore of Bateman Island

Implementation: Anchor 1000' of boom on cobblestone shore at the N tip of the island, tow boom to the SE and anchor to divert oil away from shore. Adjust angle of boom, placement and quantity of anchors, based on conditions of the day.

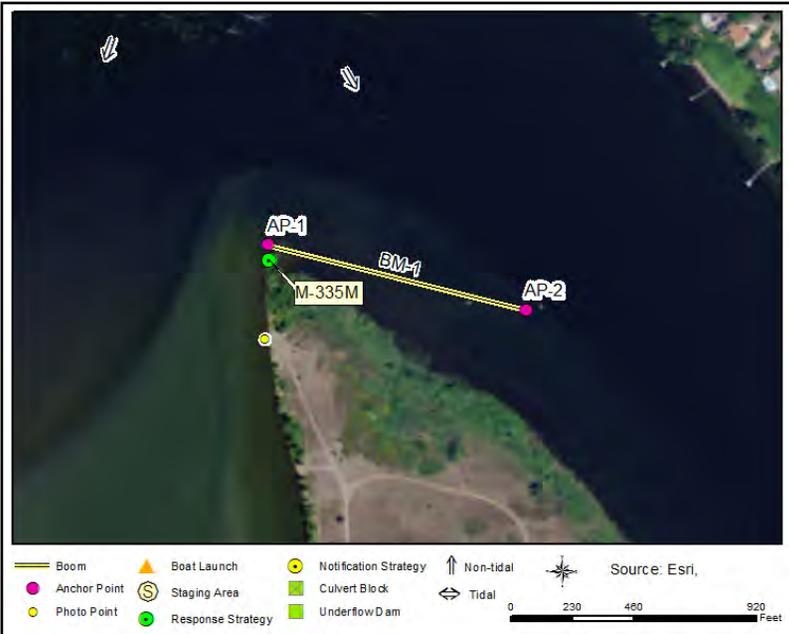
Staging Area: Onsite: Stage at SA-YAK-0.5R/Wye Park. You CAN drive to site (two locked gates & need 4-wheel drive)

Site Safety: Slips, trips, falls, water hazard

Field Notes: Launch at BL-YAK-0.5R/Wye Park

Watercourse: River - Above a Dam - McNary Pool, confluence with the Yakima River

Resources at Risk: City Park, Critical Waterfowl, Shorebird Nesting, and Brooding Area, Downstream Resources, Fish and Wildlife Resources, General Fish



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

N tip of Bateman Island

M-335M



M-335M Photo: View towards the west from strategy shoreside anchor point.



Site Contact

City of Richland Parks and Recreation Department
Land/Property Contact : Manages this boat launch

Richland, WA 99352
509-942-7529

Nearest Address

1600 Columbia Park Trail
Richland, WA 99352

Driving Directions

1. Using a 4-wheel drive vehicle, head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/Richland (4.2 mi)
6. Take the Columbia Center Boulevard exit (0.2 mi)
7. Turn right onto N Columbia Center Blvd (0.3 mi)
8. Turn left onto Columbia Park Trail (0.1 mi)
9. Turn right into parking area on the right across from Dakota Ave and drive through lot, across paved walkway, to a gate at the entrance to the causeway (bring bolt cutters if City Park staff are unavailable).
10. Follow the main gravel drive, staying to the left, to your destination (1 mi)
11. Finish at (Lat) N 46.250597, (Long) W -119.230919

N shore confluence of the Columbia & Yakima Rivers M-335.8R

Position - Location: 46° 15.556', -119° 14.462' 46° 15' 33.3", -119° 14' 27.7" 46.25926, -119.24104 Richland

Strategy Objective: Deflection : Deflect oil away from the Yakima River mouth

Implementation: Anchor boom on the southernmost point on the peninsula (sensitive resources in the area); run 800' of deflection boom to the ESE to keep oil away from Yakima River estuary. Adjust angle of boom, as well as placement and quantity of anchors based on conditions of the day.

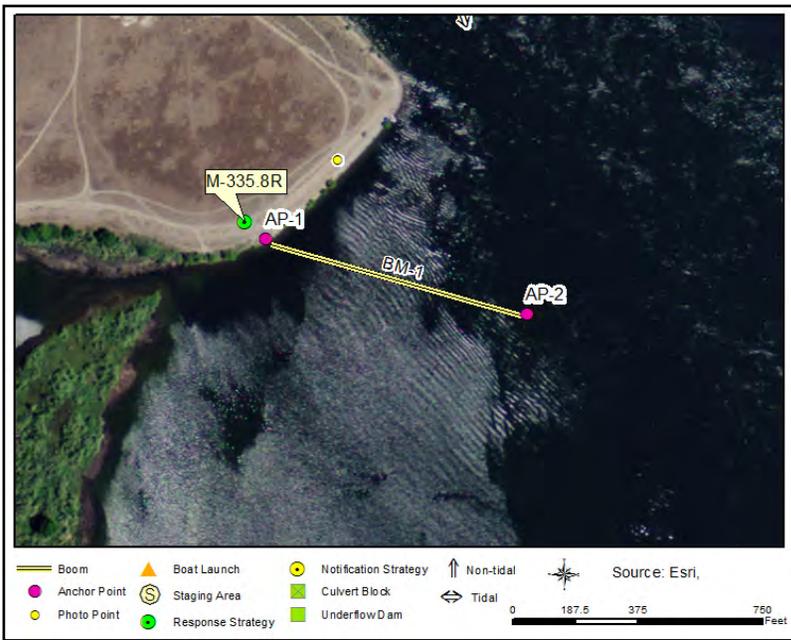
Staging Area: Remote: Stage at SA-M-336.4R/Columbia Pt Marine Park

Site Safety: Slips, trips, falls, water hazard

Field Notes: Launch boat from BL-M-336.4R/Columbia Pt Marine Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Critical Waterfowl, Shorebird Nesting, and Brooding Area, Estuary Resources, Federally Protected Area/Lands, Habitat Management



Recommended Equipment

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

Recommended Personnel

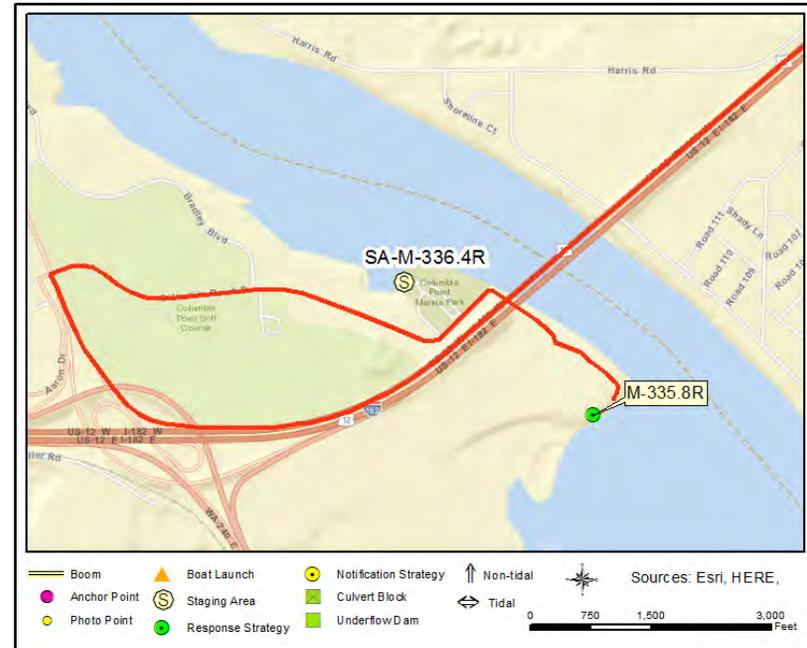
1	Boat Operator
3	Laborer

N shore confluence of the Columbia & Yakima Rivers

M-335.8R



M-335.8R Photo: Photo of shoreside anchoring point looking downstream



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

660 Columbia Point Drive
 Richland, WA 99352

Driving Directions

Directions to SA-M-336.4R/Columbia Pt Marine Park
 1. Head south on US-395 S
 2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
 3. Take exit 5B to merge onto George Washington Way (0.8 mi)
 4. Turn right onto Columbia Point Drive, destination will be through the (locked) gate, along the gravel road, left at the first two forks and stay right at the third fork (2 mi)
 5. Boat launch is at the marina to the left of the (locked) gate - 660 Columbia Point Drive, 99352

Hwy I-182 Bridge **M-336.1R**

Position - Location: 46° 15.787', -119° 14.707' 46° 15' 47.2", -119° 14' 42.4" 46.26312, -119.24512 Richland

Strategy Objective: Collection : Collect oil that is moving downstream and deflect uncollected oil away from the mouth of the Yakima River downstream

Implementation: Anchor on shore on the SE side of the bridge, run 800' of boom to the N to divert oil to vac truck or portable skimmer at anchor point, run an additional 800' of boom to the E to deflect excess oil away from shore. Adjust angle of boom, as well as placement and quantity of anchors based on conditions of the day.

Staging Area: Onsite: Locked gate by marina parking lot, call City of Richmond but bring bolt cutters in case of delay

Site Safety: Slips, trips, falls, water hazard

Field Notes: Use BL-M-336.4R/Columbia Pt Marine Park

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

8	Each	Anchor - Danforth (or other appropriate type)
1	Each	Anchoring System(s)- Shoreside
1600	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

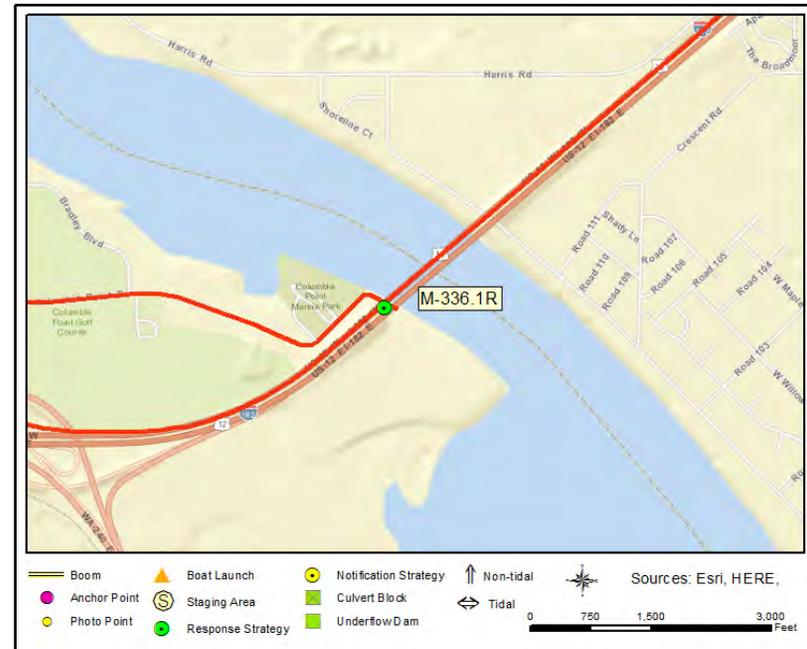
1	Boat Operator
4	Laborer

Hwy I-182 Bridge

M-336.1R



M-336.1R Photo: Location for vac truck to park by spot for shoreside anchoring



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

660 Columbia Point Drive
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (0.8 mi)
4. Turn right onto Columbia Point Drive, destination will be through the (locked) gate and under the bridge (1 mi)
5. Marina next to the strategy location is at 660 Columbia Point Drive, 99352

Columbia Point Marine Park **M-336.4R**

Position - Location: 46° 15.911', -119° 15.038' 46° 15' 54.7", -119° 15' 2.3" 46.26518, -119.25063 Richland

Strategy Objective: Exclusion : Keep oil out of marine park

Implementation: Use 200' of boom to divert oil away from boat launch opening and deploy 200' of boom to close off the opening on the NW end of marine park to exclude oil from entering (you may be able to use existing anchor posts here). Adjust angle of boom, placement & number of anchors according to conditions of the day.

Staging Area: Onsite: Stage on site at SA-M-336.4R/Columbia Pt Marine Park - huge parking lot & all amenities

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Launch on site at BL-M-336.4R/Columbia Pt Marine Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Marina, Recreational Boating, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

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

Recommended Personnel

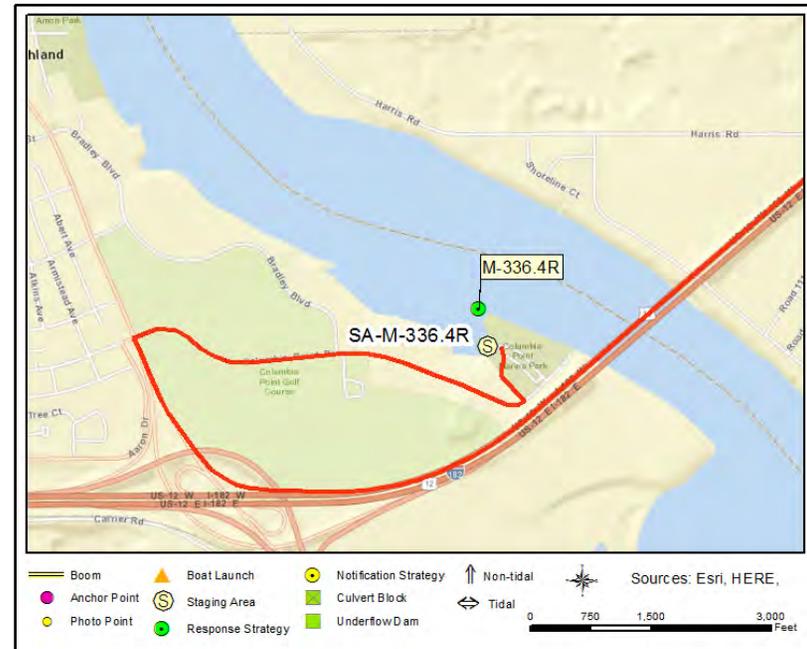
1	Boat Operator
2	Laborer

Columbia Point Marine Park

M-336.4R



M-336.4R Photo: Facing berm at the boat launch opening of Columbia Point Marine Park



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

660 Columbia Point Drive
 Richland, WA 99352

Driving Directions

1. Start at Hwy 12 Pasco, WA 99301
2. Go west on I-182 (US-12 W) toward 12a (6.89 miles)
3. At exit 5B take ramp on the right to Geo. Washington Way (0.61 miles)
4. Continue on WA-240-BR (George Washington Way) (0.2 miles)
5. Turn right on Columbia Point Dr (0.97 miles)
6. Finish at 660 Columbia Point Drive, 99352, on the left

South end of Howard Amon Park M-337.3R

Position - Location: 46° 16.306', -119° 16.075' 46° 16' 18.4", -119° 16' 4.5" 46.27177, -119.26791 Richland

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

Implementation: Use 800' of boom to divert oil towards shore for collection. Adjust angle of boom, & quantity and placement of anchors based on conditions of the day. Also deploy 400' of deflection boom from the pier north of the collection point to keep oil off park lands.

Staging Area: Onsite: Stage on site, area has a large gravel parking area and an abandoned boat launch

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: BL-M-337.8R/Howard Ammon Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources, Recreational Shoreline Area, Waterfowl and Shorebird Concentrations



Recommended Equipment

8	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1200	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

South end of Howard Amon Park

M-337.3R



M-337.3R Photo: Southern most anchor point (AP-1)



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

400 Bradley Blvd
 Richland, WA 99352

Driving Directions

1. Start at Hwy 12 Pasco, WA 99301
2. Go west on I-182 (US-12 W) toward 12a (6.89 miles)
3. At exit 5B take ramp on the right to Geo. Washington Way (0.61 miles)
4. Continue on WA-240-BR (George Washington Way) (0.45 miles)
5. Turn right on Comstock St (0.09 miles)
6. Turn left on Bradley Blvd (0.11 miles)
7. Turn into the parking lot at 400 Bradley Blvd on the left, go to the back of the lot by the water where you will the site location at an abandoned boat ramp.

Howard Ammon Park **M-337.8R**

Position - Location: 46° 16.844', -119° 16.259' 46° 16' 50.7", -119° 16' 15.5" 46.28074, -119.27099 Richland

Strategy Objective: Collection : Collect oil that is moving downstream. Keep oil off of park shoreline.

Implementation: Anchor 1000' of boom to shore just north of the boat launch and tow to the NE to divert oil towards shore for collection. Adjust angle of boom, & quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: SA-M-337.8R/Howard Ammon Park

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: BL-M-337.8R/Howard Ammon Park

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

7	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1600	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

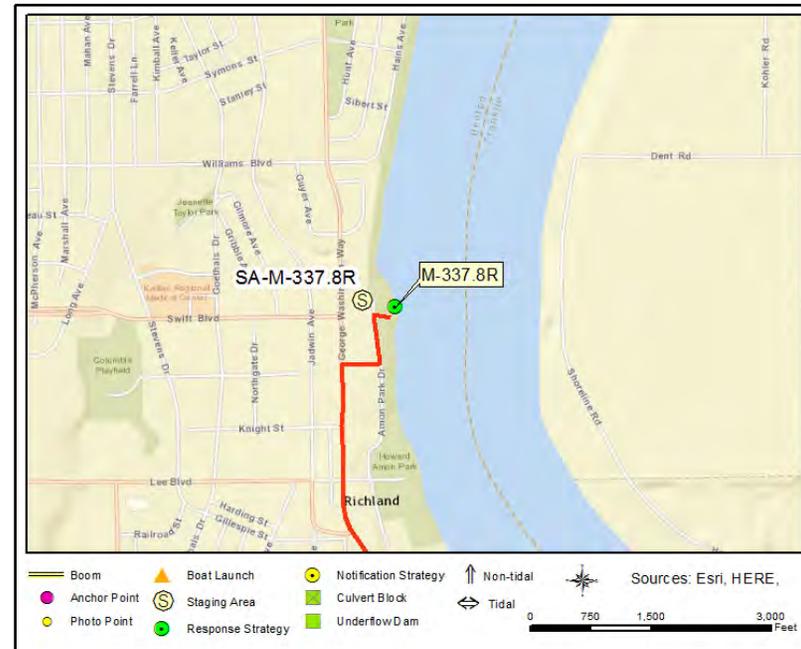
1	Boat Operator
4	Laborer

Howard Ammon Park

M-337.8R



M-337.8R Photo: View of the southern most shoreside anchoring spot for M-337.8R



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

900 Amon Park Road North
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton
Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (1.8 mi)
4. Turn right onto Newton St (486 ft)
5. Take the 1st left onto Amon Park Rd N, destination will be on the right (0.1 mi)

USACE land, Burns family dock **M-338.2L**

Position - Location: 46° 17.130', -119° 15.772' 46° 17' 7.8", -119° 15' 46.3" 46.28550, -119.26287 Pasco

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

Implementation: Use 800' of boom to divert oil towards shore for collection. Adjust angle of boom, & quantity and placement of anchors based on conditions of the day.

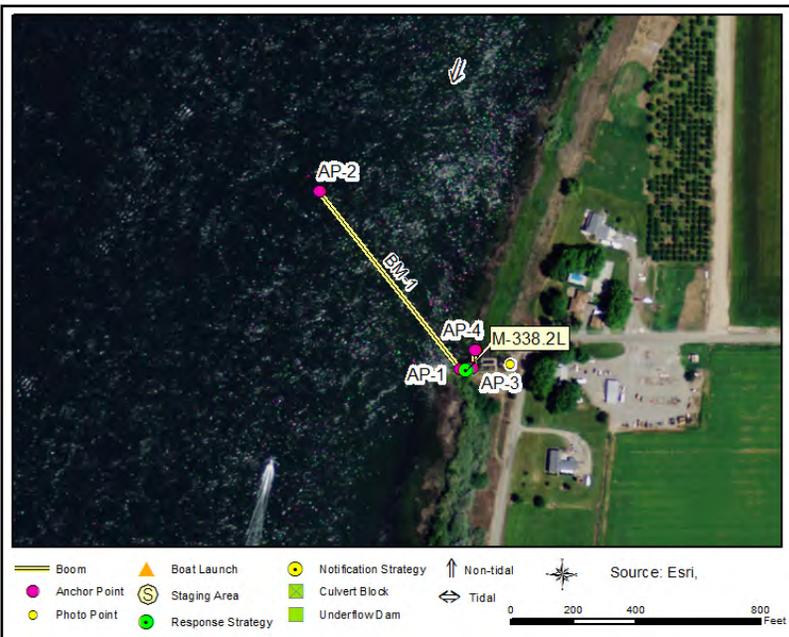
Staging Area: Onsite: Stage on site, owned by USACE, leased by the Burn's family (who live across the street). Dock/equipment private

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Boat launch on site

Watercourse: River - Above a Dam - McNary Pool

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



Recommended Equipment

4	Each	Anchor - Danforth (or other appropriate type)
3	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

USACE land, Burns family dock

M-338.2L



M-338.2L Photo: Collection strategy at USACE boat launch & Burn's dock



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

Ice Harbor Dam, WA
 509-547-2048

Nearest Address

13000 Shoreline Drive
 Pasco, WA 99301

Driving Directions

1. Start at Hwy 12 Pasco, WA 99301
2. Go west on I-182 (US-12 W) toward 12a (4.59 miles)
3. At exit 7 take ramp on the right to Broadmoor Blvd (0.35 miles)
4. Turn right on Broadmoor Blvd (0.09 miles)
5. Turn left on Harris Rd (2.16 miles)
6. Continue on Shoreline Rd (1.8 miles)
7. Finish at the intersection of Dent Rd & Shoreline Drive, 99301, on the left.

Leslie Groves Park **M-340.3R**

Position - Location: 46° 18.983', -119° 15.603' 46° 18' 59.0", -119° 15' 36.2" 46.31639, -119.26006 Richland

Strategy Objective: Deflection : Collect oil that is moving downstream. Keep oil from reaching water intake facility.

Implementation: Use 800' of boom to divert oil towards shore for collection & 300' of boom to deflect it away from the water intake facility. Adjust angle of boom, & quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: SA-M-340.3R/Leslie Groves Park

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: BL-M-340.3R/Leslie Groves Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Boat Launch/Ramp, Downstream Resources, Recreational Shoreline Area, Water Intakes, 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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

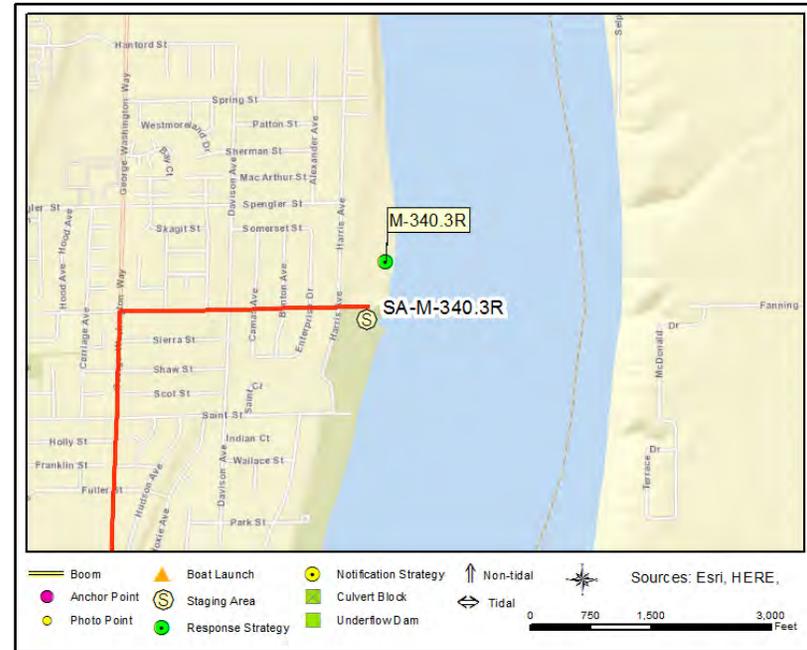
1	Boat Operator
4	Laborer

Leslie Groves Park

M-340.3R



M-340.3R Photo: View of shoreline from the road at the strategy location



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

2 Snyder Street
 Richland, WA 99354

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (4.3 mi)
4. Turn right onto Snyder St (0.6 mi)
5. Turn right into the parking lot of the Leslie Groves Park boat launch

Selph Landing M-340.7L

Position - Location: 46° 19.265', -119° 14.929' 46° 19' 15.9", -119° 14' 55.7" 46.32108, -119.24881 Pasco

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

Implementation: Use 800' of boom to divert oil towards shore for collection. Adjust angle of boom, & quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: SA-M-340.7L/Selph Landing, lots of parking along gravel road

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Launch on-site at BL-M-340.7L/Selph Landing

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Downstream Resources, Waterfowl and Shorebird Concentrations



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
3	Laborer

Selph Landing

M-340.7L



M-340.7L Photo: Looking upstream from Selph Landing toward where collection boom is to be placed



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

 Ice Harbor Dam, WA
 509-547-2048

Nearest Address

10099 Selph Landing Road
 Pasco, WA 99301

Driving Directions

1. Start at I 182 in Pasco
2. Go west on I-182 (US-12 W) (4.4 miles)
3. At exit 9 take ramp on the right to Road 68 (0.48 miles)
4. Turn right on N Road 68 (1.29 miles)
5. Continue on Taylor Flats Rd (1.04 miles)
6. Turn left on Columbia River Rd (2.53 miles)
7. Bear left on Selph Landing Rd (1.56 miles)
8. Finish at 10099 Selph Landing Road, 99301, on the left

Port of Benton C-Ave Docking Area **M-342.8R**

Position - Location: 46° 20.916', -119° 15.994' 46° 20' 55.0", -119° 15' 59.6" 46.34860, -119.26657 Richland

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

Implementation: Use 800' of boom to divert oil towards shore for collection. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Gated off landing area - with paved parking (Call Port of Benton for access but bring bolt cutters)

Site Safety: Slips, Trips, Falls, Water Hazard

Field Notes: Use BL-M-340.3R/Leslie Groves Park

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Critical Waterfowl, Shorebird Nesting, and Brooding Area, Great Blue Heron Rookeries, Waterfowl and Shorebird Concentrations



Recommended Equipment

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

Recommended Personnel

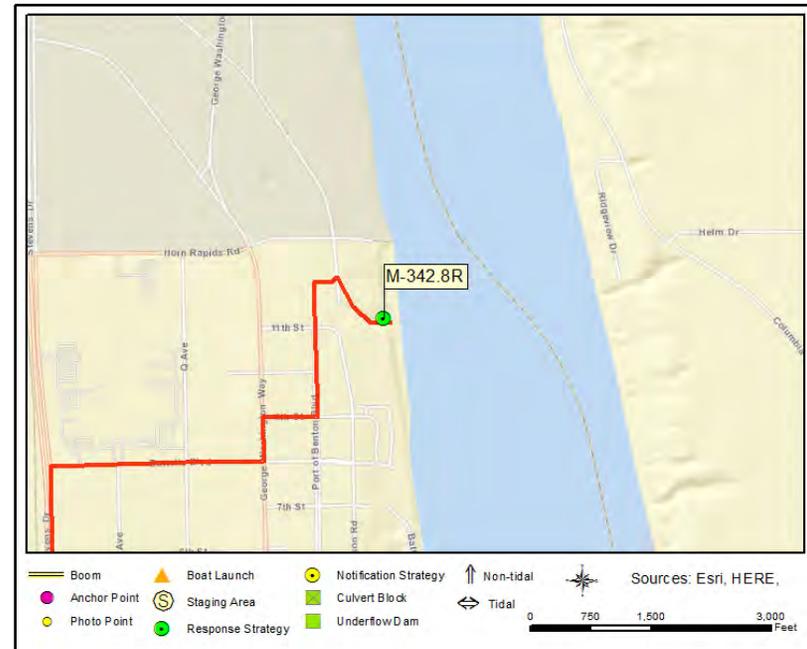
1	Boat Operator
3	Laborer

Port of Benton C-Ave Docking Area

M-342.8R



M-342.8R Photo: Port of Benton docking area



Site Contact

Port of Benton

Primary Contact : Manages boat launches
 3100 George Washington Way
 Richland, WA 99354
 509-375-3060

Nearest Address

3110 Port of Benton Blvd
 Richland, WA 99354

Driving Directions

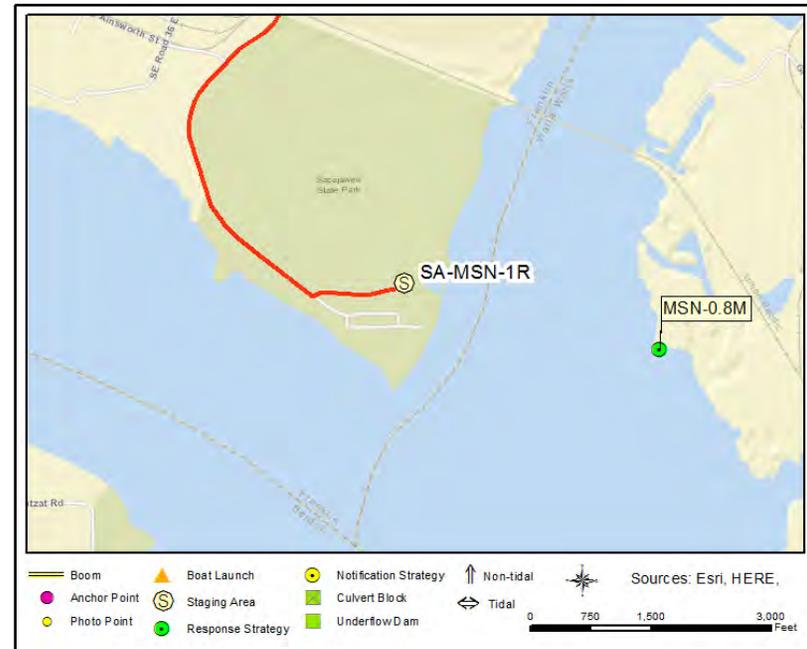
1. From I-182 W/ US-12 W toward Kennewick/ Richland/ Yakima, take exit 6B to merge onto George Washington Way (6.7 mi)
2. Turn right onto 11th (0.1 mi)
3. Turn left onto Port of Benton Blvd (0.1 mi)
4. Turn right on the gravel road just past the USS Triton Submarine Memorial Park (335 ft)
5. Turn right again to get to the old boat launch (0.1 mi)

Second inlet below railroad bridge

MSN-0.8M



MSN-0.8M Photo: View of beach at N anchor point



Site Contact

Sacajawea State Park
 Primary Contact : Park Manager
 2503 Sacajawea Park Road
 Pasco, WA 99301
 509-366-5180

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Directions to SA-MSN-1R/Sacajawea State Park, starting in Pasco, WA, go south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA 99301

Sacajawea State Park Boat Basin MSN-1R

Position - Location: 46° 12.105', -119° 2.203' 46° 12' 6.3", -119° 2' 12.2" 46.20175, -119.03672 Pasco

Strategy Objective: Collection : Divert oil to shoreside collection point while keeping it out of the launch area and off the downstream shoreline

Implementation: Deploy a 1000' section of boom in a chevron formation with the center of the boom anchored to the upstream point of land at the mouth of the Sacajawea State Park boat basin. Anchor the upstream half of the boom out 500' to the NE and the downstream half 500' to the SE, keep the boat launch open. Adjust angle of boom, number and placement of anchors according to conditions of the day.

Staging Area: Onsite: Stage on site at SA-MSN-1R/Sacajawea State Park. Call Park Manager at 509-366-5180

Site Safety: Water hazard, slips, trips & falls

Field Notes: Launch on site at BL-MSN-1R/Sacajawea State Park.

Watercourse: River - Below a Dam - Snake River below the Ice Harbor Dam but in the McNary pool

Resources at Risk: Boat Launch/Ramp, Downstream Resources, Recreational Shoreline Area, State Park, Waterfowl and Salmonid Concentrations and



Recommended Equipment

10	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

Sacajawea State Park Boat Basin

MSN-1R



MSN-1R Photo: View of Harry Chichester standing where a vac truck can be parked near the shoreside anchor point at the mouth of the Sacajawea State Park boat basin



Site Contact

Nearest Address

2503 Sacajawea Park Road
Pasco, WA 99301

Driving Directions

1. Drive to SA-MSN-1R/Sacajawea State Park from Pasco, WA. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Schnitzer Steel **MSN-1.55L**

Position - Location: 46° 12.404', -119° 1.608' 46° 12' 24.3", -119° 1' 36.5" 46.20674, -119.02680 Burbank

Strategy Objective: Exclusion : Keep oil out of wetlands behind Schnitzer Steel

Implementation: Deploy 300' of boom by boat. Anchor boom to the SW corner of the Schnitzer Steel retaining wall, and downstream anchor to the ground at the base of the railroad bridge piling closest to shore. Boom should block the inlet. Adjust placement and number of anchors according to conditions of the day.

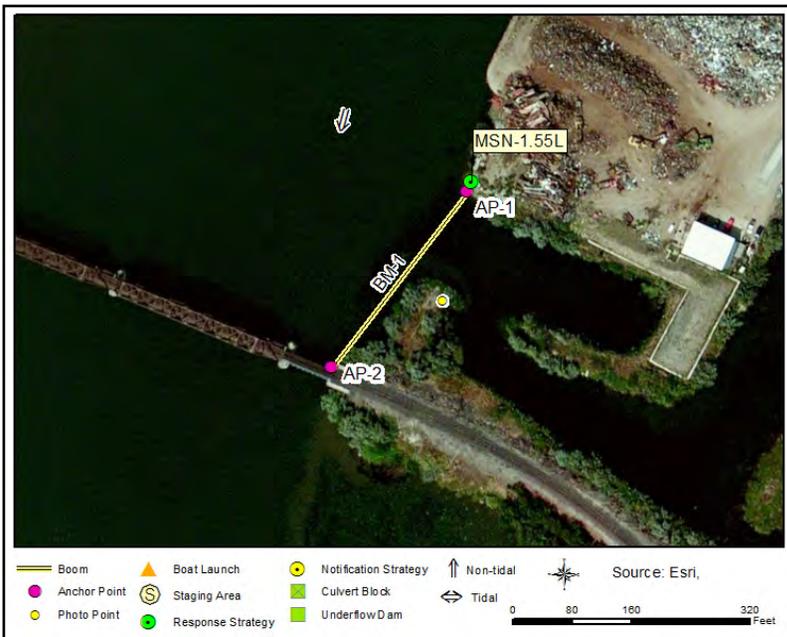
Staging Area: Remote: Stage out of SA-MSN-2.2L/Grain Terminal Road

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-MSN-2.2L/Grain Terminal, beware of shallow water.

Watercourse: River - Below a Dam - Snake River below the Ice Harbor Dam but in the McNary pool

Resources at Risk: Sensitive Wetland Habitat, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
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

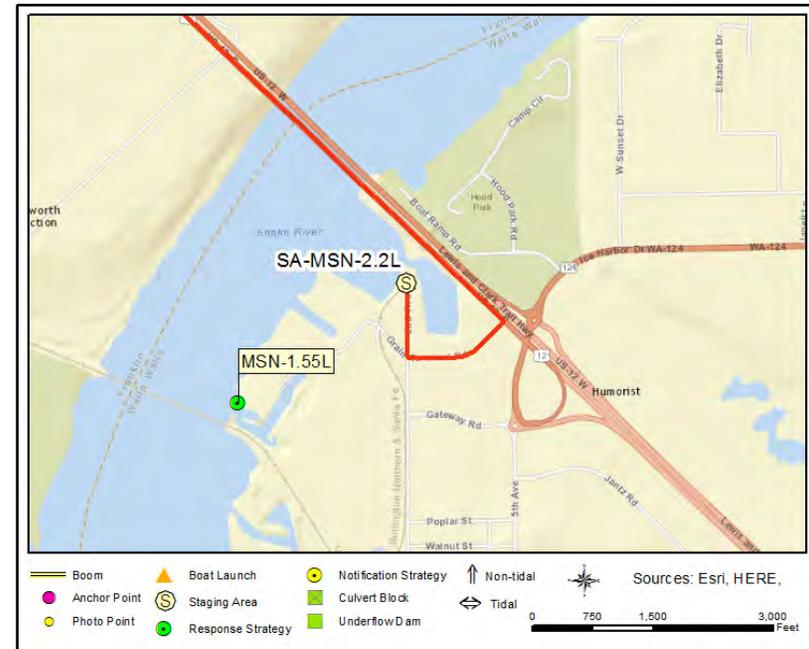
1	Boat Operator
2	Laborer

Schnitzer Steel

MSN-1.55L



MSN-1.55L Photo: Schnitzer Steel scrap yard inlet to wetlands



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

 Ice Harbor Dam, WA
 509-547-2048

Nearest Address

577 S 2nd Street
 Burbank, WA 99323

Driving Directions

1. Directions to SA-MSN-2.2L/Grain Terminal Rd. Starting at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn right on Grain Terminal Rd (0.26 miles)
8. Turn right on 2nd Ave (0.2 miles)
9. Finish at Grain Terminal Road USACE boat launch on the right.

North of train bridge & Sacajawea Park **MSN-1.56R**

Position - Location: 46° 12.510', -119° 1.977' 46° 12' 30.6", -119° 1' 58.6" 46.20850, -119.03296 Pasco

Strategy Objective: Deflection : Keep oil off park shoreline

Implementation: Anchor one end of 600' of boom on shore (sandy with low vegetation) at 46.209 N, -119.032 W and the other end to the first piling on the railroad bridge from shore. Adjust number and placement of anchors according to conditions of the day. May need waders to access beach due to shallow water.

Staging Area: Remote: Stage at SA-MSN-1R/Sacajawea State Park. Call Park Manager at 509-366-5180 if gate closed/unlocked

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-MSN-1R/Sacajawea State Park, good beach access from boat but may be shallow so bring waders.

Watercourse: River - Below a Dam - Snake River below the Ice Harbor Dam but in the McNary pool

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



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	Bridle(s) - Piling (appropriately sized for boom)
100	Feet	Line - 3/8" poly line
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

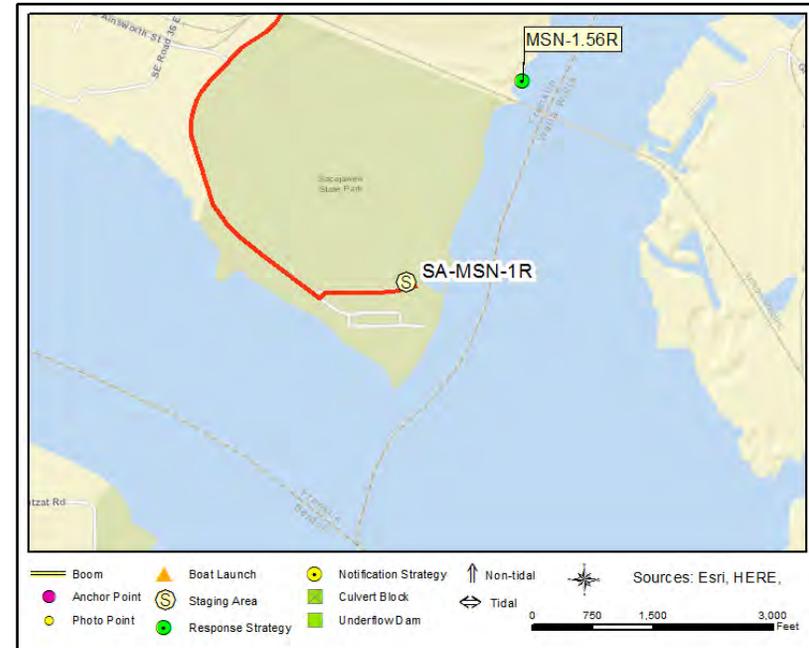
1	Boat Operator
3	Laborer

North of train bridge & Sacajawea Park

MSN-1.56R



MSN-1.56R Photo: View of the railroad bridge and shoreline on the NE side of Sacajawea State Park



Site Contact

Sacajawea State Park
 Primary Contact : Park Manager
 2503 Sacajawea Park Road
 Pasco, WA 99301
 509-366-5180

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Start at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (2.07 miles)
7. Make sharp right on E A St (0.28 miles)
8. Turn left on S Road 40 E (1 miles)
9. Bear right (0.02 miles)
10. Bear right on Sacajawea Park Rd (1 mile)
11. Take the first left after entering the park and then an immediate right toward the boat launch/staging area (0.4 mi). Finish at 2503 Sacajawea Park Road, 99301

Tesoro Facility **MSN-2R**

Position - Location: 46° 12.817', -119° 1.687' 46° 12' 49.0", -119° 1' 41.2" 46.21362, -119.02812 Pasco

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

Implementation: Anchor 1000' of boom to the Tesoro dock by their boat launch, run the boom out to the NE and anchor with 500' of line and a bridle to the bridge piling. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Must contact Tesoro for access to property. They have a boat and boom on site.

Site Safety: Water hazards, slips, trips & falls

Field Notes: Launch on-site. Tesoro staff should deploy this strategy and have the boat and boom on site.

Watercourse: River - Below a Dam - Snake River below the Ice Harbor Dam but in the McNary pool

Resources at Risk: Downstream Resources, Economic Resource



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	Bridle(s) - Piling (appropriately sized for boom)
500	Feet	Line - 3/8" poly line
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

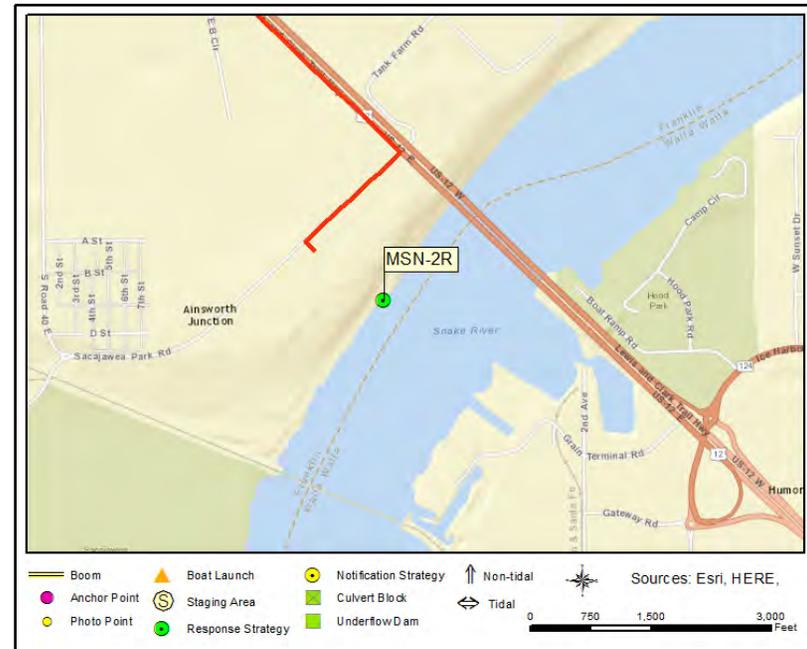
1	Boat Operator
4	Laborer

Tesoro Facility

MSN-2R



MSN-2R Photo: View from the Tesoro dock toward the bridge



Site Contact

Tesoro, Pasco Facility
 Pre-Notification Required : Contingency Plan Holder
 2900 Sacajawea Park Rd
 Pasco, WA 99301
 509-543-6100

Nearest Address

2900 Sacajawea Park Rd
 Pasco, WA 99301

Driving Directions

1. Directions to Tesoro's Pasco facility starting at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (4 miles)
7. Turn right on Sacajawea Park Rd (2 miles)
8. Finish at 2900 Sacajawea Park Rd, 99301, on the right

Grain Terminal MSN-2.1L

Position - Location: 46° 12.823', -119° 1.236' 46° 12' 49.4", -119° 1' 14.2" 46.21371, -119.02061 Burbank

Strategy Objective: Exclusion : Keep oil out of Grain Terminal bay while keeping area open for boats (BL-MSN-2.2L)

Implementation: Deploy 600' of boom from the base of the Hwy 12 bridge on river left running to the SW, and another 500' of boom parallel to it from the riverbank directly opposite, just downstream on river left, running to the NE. Leave enough room between the two booms (where they overlap) so that boats safely navigate through (beware of shallow water). Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day. Waders may be needed for deployment of boom or anchors.

Staging Area: Remote: Stage at SA-MSN-2.2L/Grain Terminal in the parking area near the launch ramp.

Site Safety: Water hazard, Slips, trips, & falls, shallow water.

Field Notes: Launch from BL-MSN-2.2L/Grain Terminal

Watercourse: River - Below a Dam - Snake River below Ice Harbor Dam but in the McNary pool

Resources at Risk: Recreational Use Area, Sensitive Wetland Area, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

5	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1100	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

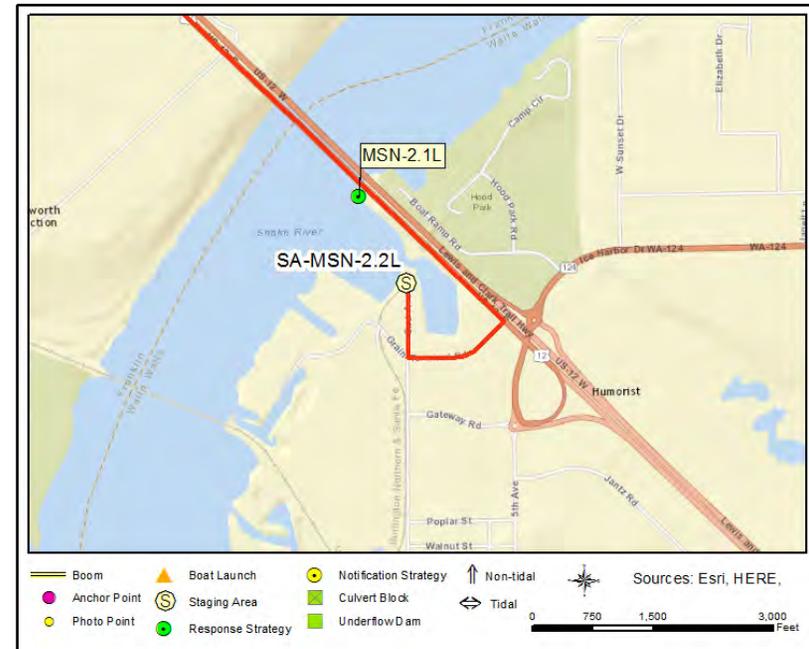
1	Boat Operator
4	Laborer

Grain Terminal

MSN-2.1L



MSN-2.1L Photo: Bridge beside the grain terminal



Site Contact

Nearest Address

577 S 2nd Street
Burbank, WA 99323

Driving Directions

1. Directions to SA-MSN-2.2L/Grain Terminal Rd., starting at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn right on Grain Terminal Rd (0.26 miles)
8. Turn right on 2nd Ave (0.2 miles)
9. Finish at Grain Terminal Rd. USACE boat launch on the right

Hood Park North **MSN-2.8L**

Position - Location: 46° 13.152', -119° .605' 46° 13' 9.1", -119° 0' 36.3" 46.21920, -119.01008 Burbank

Strategy Objective: Deflection : Keep oil off of Hood Park Shoreline

Implementation: Deploy 1000' of boom from the northern most part of the park shoreline, run the boom out to the west toward river center. Adjust angle of boom, as well as quantity and placement of anchors, based on conditions of the day.

Staging Area: Onsite: Stage on site at SA-MSN-2.3L/Hood Park. Can drive boom close to the onshore anchoring spot if no campers nearby.

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

Field Notes: Launch on site at BL-MSN-2.3L/Hood Park

Watercourse: River - Below a Dam - Snake River below Ice Harbor Dam but in the McNary pool

Resources at Risk: Recreational Shoreline Area, Sensitive Resources, USACE Management Area, Waterfowl and Salmonid Concentrations and 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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer

Hood Park North

MSN-2.8L



MSN-2.8L Photo: Hood Park shoreline



Site Contact

Nearest Address

100 Hood Park Rd
Burbank, WA 99323

Driving Directions

1. Driving directions to SA-MSN-2.3L/Hood Park, starting at US-395, Pasco, WA99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn left (0.02 miles)
8. Continue on WA-124 (Ice Harbor Dr) (0.05 miles)
9. Make sharp left on Hood Park Rd (0.12 miles)
10. Turn left on Boat Launch Road (0.2 miles)
11. Finish at 100 Hood Park Rd, 99323

Tidewater's Pasco Facility MSN-2.9R

Position - Location: 46° 13.490', -119° .728' 46° 13' 29.4", -119° 0' 43.7" 46.22483, -119.01213 Pasco

Strategy Objective: Deflection : Keep oil moving downstream away from Tidewater facility & oil moving upstream away from Strawberry Island

Implementation: Deploy 600' of boom from the NE corner of the Tidewater property toward the SE. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

Staging Area: Onsite: Contact Tidewater facility and wear appropriate PPE to access site

Site Safety: Water hazard, slips trips & falls

Field Notes: Tidewater staff may implement strategy with their own boat & boom, if not use Hood Park BL-MSN-2.3L

Watercourse: River - Below a Dam - McNary Pool of the Snake River

Resources at Risk: Economic Resource, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat, Wildlife Refuge



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

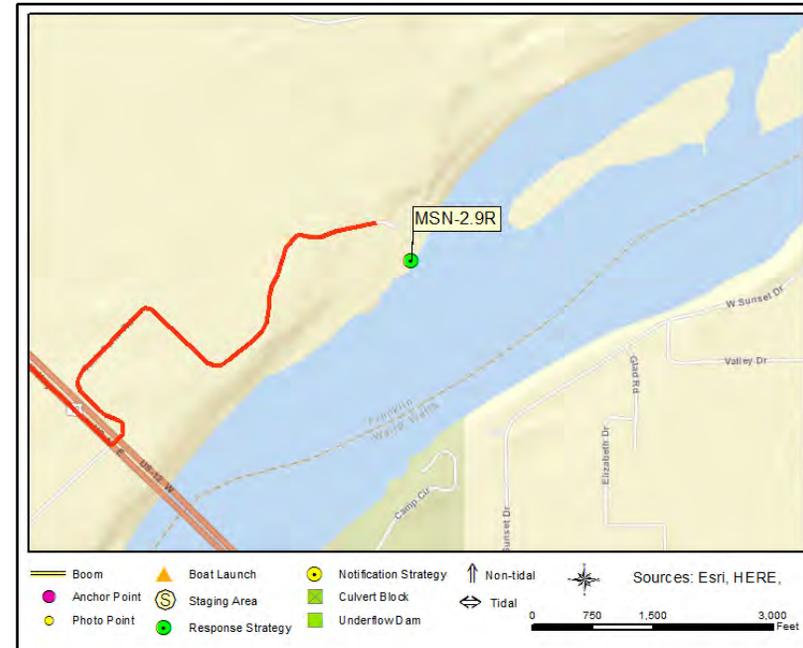
1	Boat Operator
3	Laborer

Tidewater's Pasco Facility

MSN-2.9R



MSN-2.9R Photo: View of shoreline anchor point looking east toward Strawberry Island



Site Contact

Tidewater, Pasco Facility
 Land/Property Contact : Contingency Plan Holder
 671 Tank Farm Road
 Pasco, WA 99301
 509-547-7701

Nearest Address

671 Tank Farm Road
 Pasco, WA 99301

Driving Directions

1. Directions to Tidewater's Pasco facility starting at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (2.87 miles)
7. Turn left on Sacajawea Park Rd (0.02 miles)
8. Continue on Tank Farm Rd (1.22 miles)
9. Finish at 671 Tank Farm Road, 99301, on the right. Call through intercome box at 2nd gate for access.

Strawberry Island (Part of McNary Wildlife Refuge) MSN-4M

Position - Location: 46° 13.733', -118° 59.690' 46° 13' 44.0", -118° 59' 41.4" 46.22888, -118.99483 Burbank

Strategy Objective: Exclusion : Keep oil off of the Strawberry Island shoreline

Implementation: Deploy 700' of boom between N shore of channel bisecting Strawberry Island and the jetty. Adjust quantity and placement of anchors based on conditions of the day. Deploy 100' of boom between each the jetty and the offshore berm to the west of it. Deploy 100' of boom between each of the other 4 offshore berms a total of five 100' sections. May need waders to access the berms depending on water level.

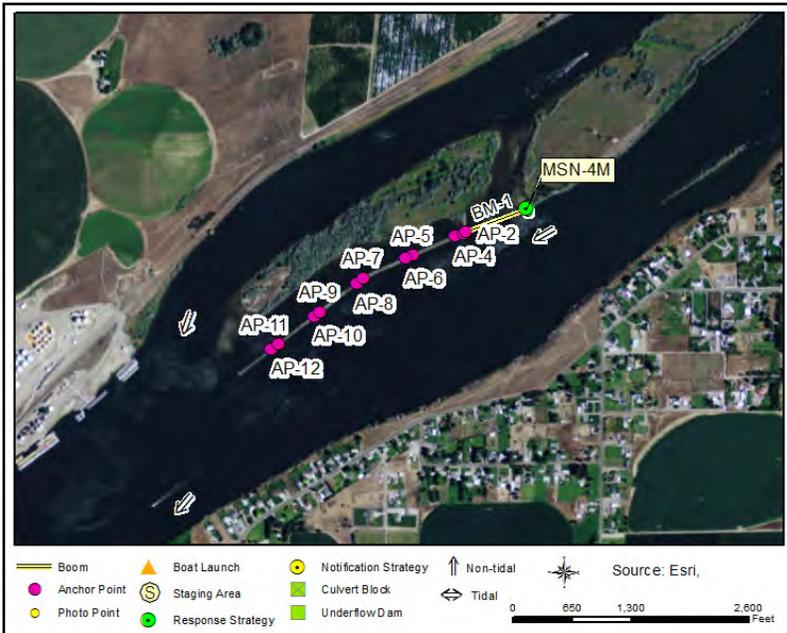
Staging Area: Remote: Stage at SA-MSN-2.3L/Hood Park

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

Field Notes: Launch at BL-MSN-2.3L/Hood Park

Watercourse: River - Below a Dam - Snake River below Ice Harbor Dam in the McNary Pool

Resources at Risk: Great Blue Heron, State Protected Area/Lands, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat, Wildlife Refuge



Recommended Equipment

3	Each	Anchor - Danforth (or other appropriate type)
12	Each	Anchoring System(s)- Shoreside
1200	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

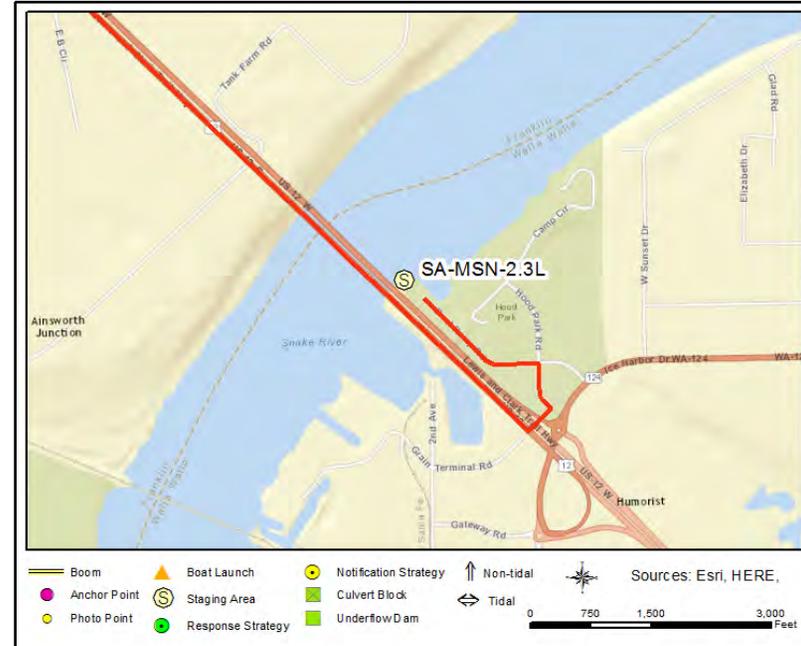
1	Boat Operator
4	Laborer

Strawberry Island (Part of McNary Wildlife Refuge)

MSN-4M



MSN-4M Photo: Aerial view of Strawberry Island south side offshore berms



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

 Ice Harbor Dam, WA
 509-547-2048

Nearest Address

100 Hood Park Road
 Burbank, WA 99323

Driving Directions

1. Start at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn left (0.02 miles)
8. Continue on WA-124 (Ice Harbor Dr) (0.05 miles)
9. Make sharp left on Hood Park Rd (0.12 miles)
10. Turn left to onto Boat Ramp Rd (0.2 miles)
11. Finish at 100 Hood Park Rd, 99323

Pumping Plant Rd

MSN-4.5L

Position - Location: 46.23239, -118.98160 Burbank

Strategy Objective: Exclusion : Keep oil away from water intake facility

Implementation: Deploy 200' of boom in a chevron configuration in front of water intake facility. Adjust angle of boom, placement & number of anchors depending on conditions of the day.

Staging Area: Onsite: Stage on-site next to water intake facility. Room for several vehicles, boom, and other equipment.

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

Field Notes: Launch from BL-MSN-2.3L/Hood Park

Watercourse: River - Below a Dam - McNary Pool of the Snake River

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



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

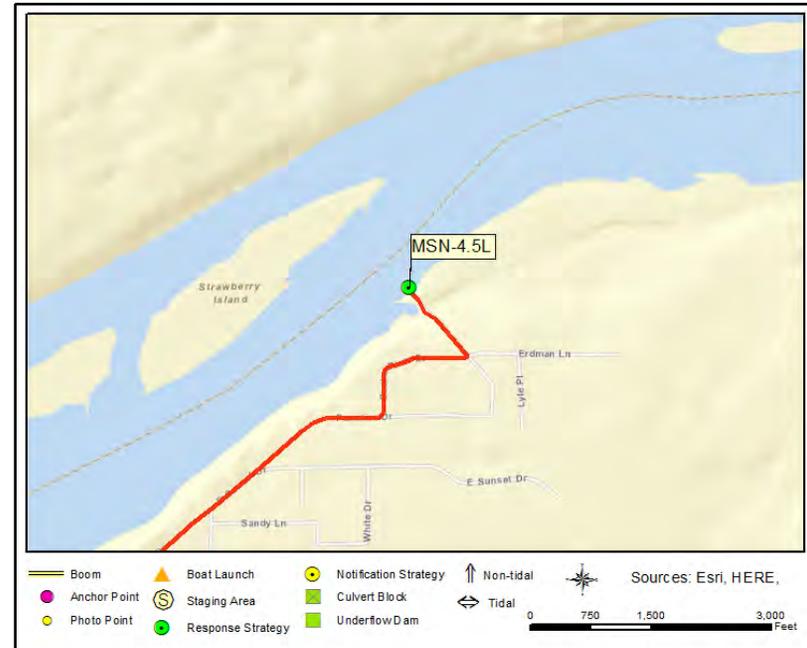
1	Boat Operator
2	Laborer

Pumping Plant Rd

MSN-4.5L



MSN-4.5L Photo: Picture of water intake.



Site Contact

Nearest Address

100 Pumping Plant Rd
Burbank, WA 99323

Driving Directions

1. Start at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn left (0.02 miles)
8. Continue on WA-124 (Ice Harbor Dr) (0.3 miles)
9. Turn left on W Sunset Dr (1.53 miles)
10. Continue on Paradise Dr (0.33 miles)
11. Bear left on Snake River Dr (0.32 miles)
12. Make sharp left on Pumping Plant Rd (0.1miles)
13. Finish at 100 Pumping Plant Rd, 99323, on the right

N tip of Strawberry Island MSN-4.6M

Position - Location: 46° 14.168', -118° 58.964' 46° 14' 10.1", -118° 58' 57.9" 46.23614, -118.98274 Burbank

Strategy Objective: Deflection : Keep oil off Strawberry Island shoreline

Implementation: Run 900' of exclusion boom between river right and the N tip of Strawberry Island & 800' of deflection boom from the N tip of the island toward the SSE. Bring waders if water is shallow to take boom into shore to anchor. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

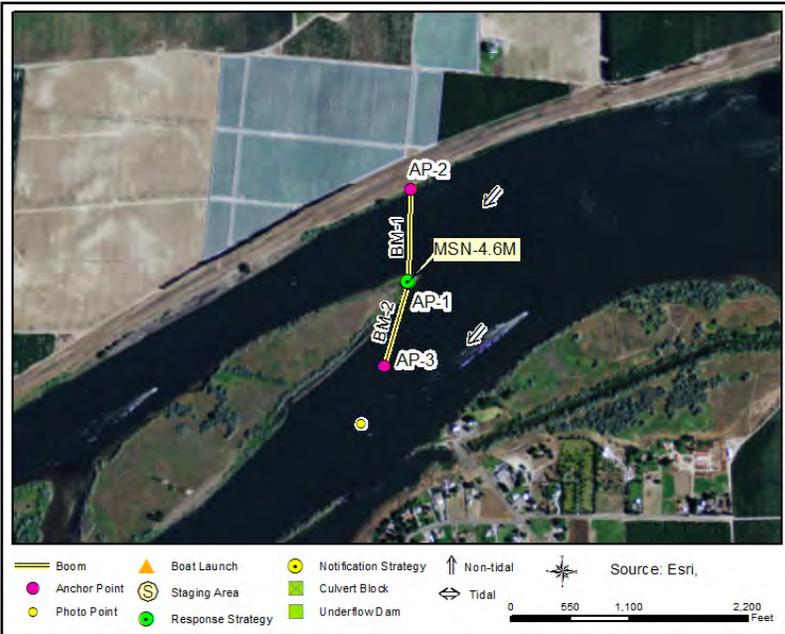
Staging Area: Remote: Stage at SA-MSN-2.3L/Hood Park

Site Safety: Water hazard, ships, trips & falls

Field Notes: Launch from BL-MSN-2.3L/Hood Park

Watercourse: River - Below a Dam - McNary Pool of the Snake River

Resources at Risk: Great Blue Heron, Migratory Waterfowl, Riparian Habitat, Sensitive Resources, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

8	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
1700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

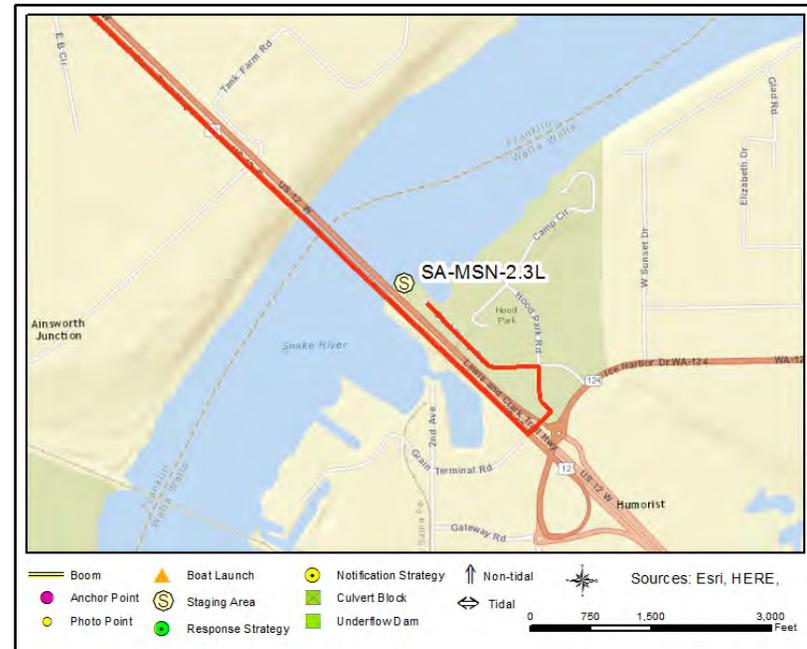
1	Boat Operator
4	Laborer

N tip of Strawberry Island

MSN-4.6M



MSN-4.6M Photo: Aerial view of Strawberry Island



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

 Ice Harbor Dam, WA
 509-547-2048

Nearest Address

100 Hood Park Road
 Burbank, WA 99323

Driving Directions

1. From Pasco take US-395 S
2. Turn right onto N 20th Ave (0.3 mi)
3. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
4. Continue onto US-12 E (5.0 mi)
5. Take the Washington124 exit toward Burbank/ Waitsburg (0.2 mi)
6. Keep right at the fork and merge onto Ice Harbor Dr (0.3 mi)
7. Slight right to stay on Ice Harbor Dr(0.1 mi)
8. Turn left onto Hood Park Rd- go straight to the launch at the end (0.5 mi)

Goose Island

MSN-8.4M

Position - Location: 46° 14.693', -118° 54.196' 46° 14' 41.6", -118° 54' 11.8" 46.24488, -118.90327 Burbank

Strategy Objective: Deflection : Keep oil off of Goose Island shoreline

Implementation: Deploy two 500' lengths of boom in a cascade formation from river left upstream toward island and from island toward river right downstream. Will need waders to access shallow water around island. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day.

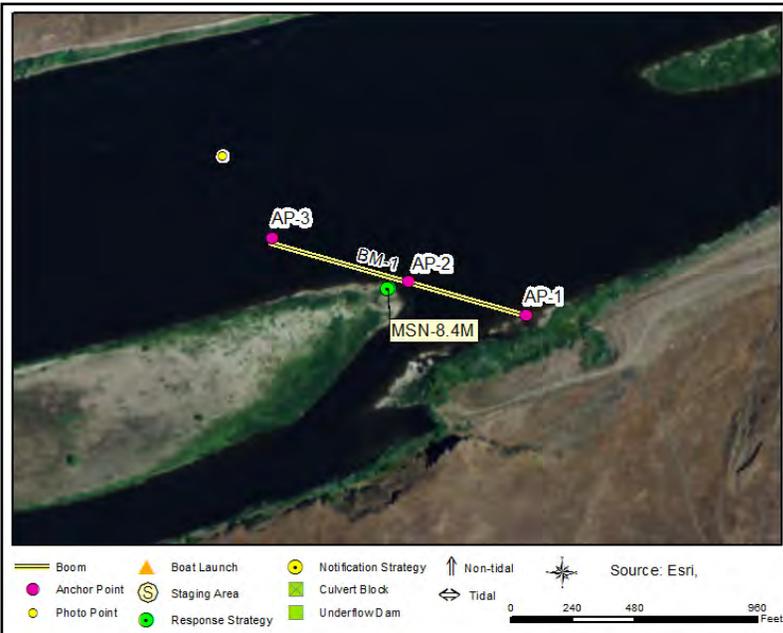
Staging Area: Remote: Stage at SA-MSN-2.3L/Hood Park

Site Safety: Slips trips falls, slippery rocks, water hazard, thick vegetation, possible fast water if dam is spilling

Field Notes: Launch from BL-MSN-2.3L/Hood Park

Watercourse: River - Below a Dam - McNary Pool of the Snake River

Resources at Risk: Waterfowl and Salmonid Concentrations and Habitat



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	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

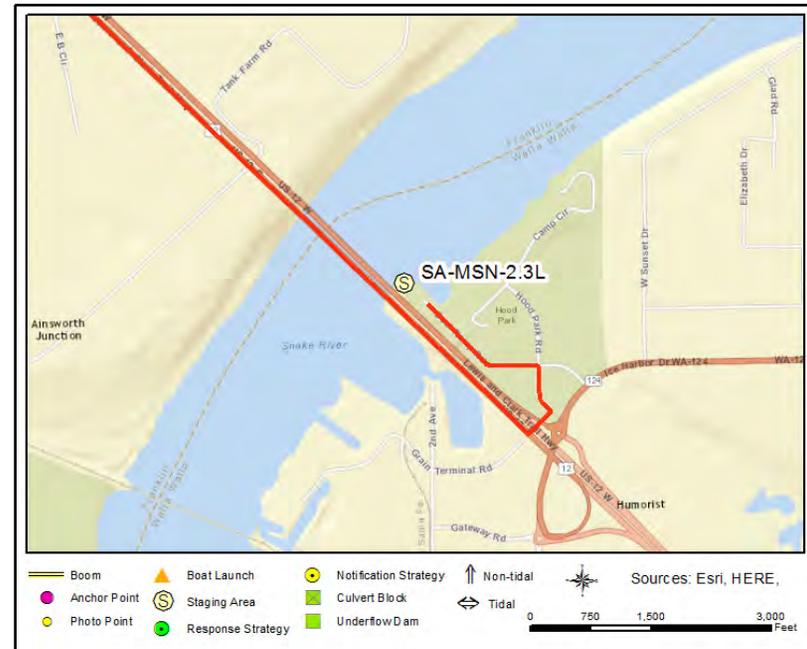
1	Boat Operator
4	Laborer

Goose Island

MSN-8.4M



MSN-8.4M Photo: Aerial view of Goose Island



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager
 541-922-2268

Nearest Address

100 Hood Park Road
 Burbank, WA 99323

Driving Directions

- Directions to SA-MSN-2.3L/Hood Park
1. From Pasco take US-395 S
 2. Turn right onto N 20th Ave (0.3 mi)
 3. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
 4. Continue onto US-12 E (5.0 mi)
 5. Take the Washington 124 exit toward Burbank/ Waitsburg (0.2 mi)
 6. Keep right at the fork and merge onto Ice Harbor Dr (0.3 mi)
 7. Slight right to stay on Ice Harbor Dr (0.1 mi)
 8. Turn left onto Hood Park Rd- go straight to the launch at the end (0.5 mi)

Ice Harbor Lock **MSN-9.5R**

Position - Location: 46° 15.070', -118° 53.070' 46° 15' 4.2", -118° 53' 4.2" 46.25117, -118.88451 Pasco

Strategy Objective: Collection : Collect oil coming downstream to or through the Ice Harbor Lock

Implementation: Deploy a 300' section of boom on the downstream end of the lock, by running the boom from one side of the lock to the other angled from the SE toward the NW. Provide either a vac truck or skimmer and portable storage at the NW corner of the boom to collect oil. Adjust angle of boom, as well as quantity and placement of anchors based on conditions of the day. If unable to pass a boat through the lock the downstream boom can be deployed using a line throwing gun. Work with Dam Safety Staff to deploy a similar strategy on the upstream end of the Lock if needed. Adjust for conditions.

Staging Area: Remote: Stage from upstream SA-SIH-9.9R/Ice harbor. Contact Ice Harbor Dam Control prior to deploying strategy 509-547-778

Site Safety: Water hazard, road hazard, vessel traffic, lock and dam, heavy equipment, slips, trips & falls.

Field Notes: Launch from upstream BL-SIH-9.9R/Ice harbor

Watercourse: Other - Ice Harbor Lock & Dam

Resources at Risk: Downstream Resources, Lock and Dam



Recommended Equipment

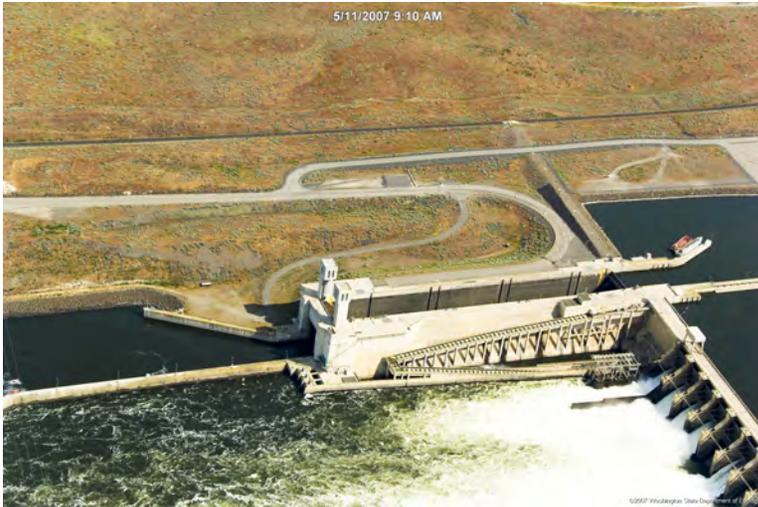
2	Each	Anchor - Danforth (or other appropriate type)
4	Each	Anchoring Post(s) - (shoreside)
200	Feet	Line - Small Stuff (< 3/8 inch)
1	Each	Line throwing gun(s) or device(s)
2	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

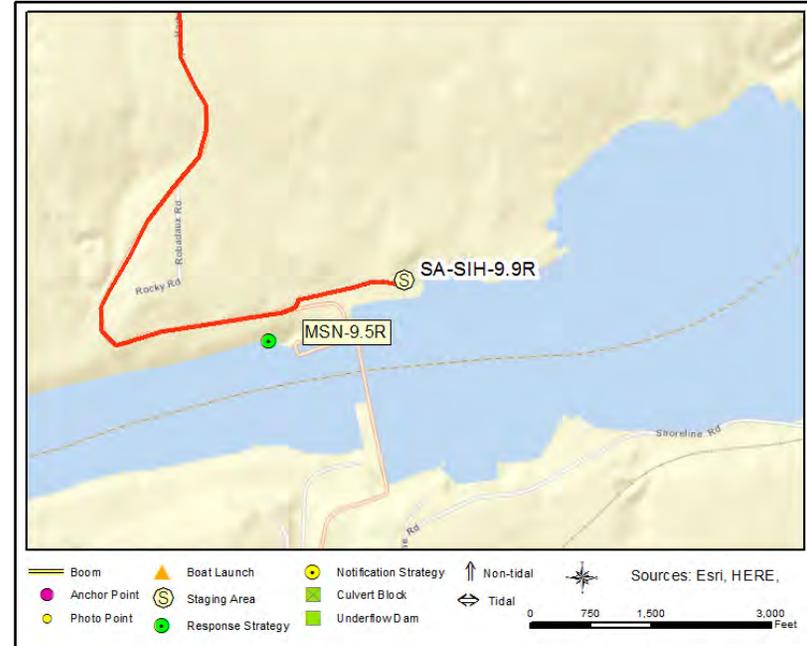
1	Boat Operator
3	Laborer
1	Supervisor

Ice Harbor Lock

MSN-9.5R



MSN-9.5R Photo: Aerial view of the Ice Harbor Lock



Site Contact

USACE Ice Harbor pool
 Emergency Contact : Natural Resources Manager
 509-547-2048

Nearest Address

1240 Ice Harbor Rd
 Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (1.7 mi)
3. Take the exit toward Kahlotus (0.4 mi)
4. Turn right onto E Lewis St (0.2 mi)
5. Continue onto Pasco Kahlotus Rd (8.9 mi)
6. Turn right onto Ice Harbor Rd, destination will be on the left (3.1 mi)

Madame Dorion Memorial Park (M-314.7L) WWR-4R

Position - Location: 46° 3.764', -118° 54.197' 46° 3' 45.8", -118° 54' 11.8" 46.06273, -118.90328 Touchet

Strategy Objective: Collection : Divert oil to shore for collection

Implementation: Anchor 300' of boom 50 yards upstream of the boat launch, tow boom across the river to the NE and anchor on shore. Use vac truck to collect. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Keep boat launch open.

Staging Area: Onsite: SA-WWR-4R/Madam Dorion

Site Safety: Water hazard, vehicle & boat traffic, slips, trips & falls

Field Notes: Launch on site at BL-WWR-4R/Madam Dorion

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Bald Eagle, Boat Launch/Ramp, Deer Habitat, Recreational Fishery, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

1	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
300	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
2	Laborer

Madame Dorion Memorial Park (M-314.7L)

WWR-4R



WWR-4R Photo: View of the water at the Madam Dorian boat launch



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges

Land/Property Contact : Property Contact

Burbank, WA 99323
509-546-8300

Nearest Address

324 Western Farmer Road
Touchet, WA 99360

Driving Directions

1. Directions to BL-WWR-4R/Madam Dorian Memorial Park, starting in Umatilla, OR head east on US-730 E/ 6th St toward Eisele Dr
Continue to follow US-730 (25.2 mi)
2. Slight left toward US-12 W (0.2 mi)
3. Turn left onto US-12 W (0.4 mi)
4. Turn right onto N Shore Rd (138 ft)
5. Take an immediate right on unnamed road for Madam Dorian boat launch on the right (0.3 mi)

Wye Park boat launch **YAK-0.5R**

Position - Location: 46° 14.331', -119° 13.721' 46° 14' 19.8", -119° 13' 43.3" 46.23885, -119.22869 Richland

Strategy Objective: Collection : Collect oil that is moving downstream while keeping Wye Park boat launch open

Implementation: Anchor on the left side of the boat launch and run 800' of boom out to the NW; keep the boat launch open. Adjust angle of boom, as well as quantity & placement of anchors based on conditions of the day.

Staging Area: Onsite: Paved parking on site at SA-YAK-0.5R/Wye Park

Site Safety: Water hazard, slips trips & falls, moving vehicles

Field Notes: Launch on site at BL-YAK-0.5R/Wye Park

Watercourse: River - Above a Dam - McNary Pool at the confluence with the Yakima River

Resources at Risk: Boat Launch/Ramp, City Park, Salmonid Concentrations and Habitat, Waterfowl and Shorebird Concentrations



Recommended Equipment

6	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

Wye Park boat launch

YAK-0.5R



YAK-0.5R Photo: View of the shoreside anchor point at the boat launch



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

1600 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/US-395 S toward Richland/Pendleton
Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/Richland (4.2 mi)
6. Take the Columbia Center Boulevard exit (0.2 mi)
7. Turn right onto N Columbia Center Blvd (0.3 mi)
8. Turn left onto Columbia Park Trail, destination will be on the right (0.2 mi)
9. Finish at 1600 Columbia Park Trail, 99352, on the right

Hwy 240 Bridge - George Washington Way YAK-2.1L

Position - Location: 46° 15.286', -119° 15.367' 46° 15' 17.2", -119° 15' 22.0" 46.25477, -119.25611 Richland

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Anchor 800' of boom on the E side of the clearing on the N shore. Deploy a small boat by hand and tow the boom SW to the S shore, anchoring it under the railroad bridge (above the creek). Adjust angle of boom, as well as quantity & placement of anchors based on conditions of the day.

Staging Area: Onsite: Stage on-site large gravel parking area

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

Field Notes: Hand launch a boat from the north shore

Watercourse: River - Above a Dam - Yakima River entering the McNary Pool

Resources at Risk: Critical Waterfowl, Shorebird Nesting, and Brooding Area, Downstream Resources, Public Recreation Site/Area, Salmonid



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) - (hand-launch)

Recommended Personnel

1	Boat Operator
3	Laborer

Hwy 240 Bridge - George Washington Way

YAK-2.1L



YAK-2.1L Photo: View of collection point facing bridges



Site Contact

City of Richland Parks and Recreation Department
Land/Property Contact : Manages this boat launch

Richland, WA 99352
509-942-7529

Nearest Address

91 George Washington Way
Richland, WA 99352

Driving Directions

- 1 From Washington 240 W take the I-182 E exit toward Pasco (0.1 mi)
 2. Turn off onto gravel frontage road, destination will be on the right (0.1 mi)
- (If coming from the opposite direction you must cross the 240 bridge, turn around and then follow the directions as there is only a pedestrian walkway to access the site from the eastbound lane which can not accommodate a small vehicle)

Chamna Natural Preserve, Tapteal Water Trail YAK-4.2L

Position - Location: 46° 15.402', -119° 17.251' 46° 15' 24.1", -119° 17' 15.1" 46.25670, -119.28752 Richland

Strategy Objective: Collection : Collect oil moving downstream

Implementation: Drive vac truck (or portable skimmer & storage) down to water, anchor 600' of boom to shore, hand launch a boat and take boom upstream to the opposite bank, anchor on shore. Adjust angle of boom, as well as quantity & placement of anchors based on conditions of the day.

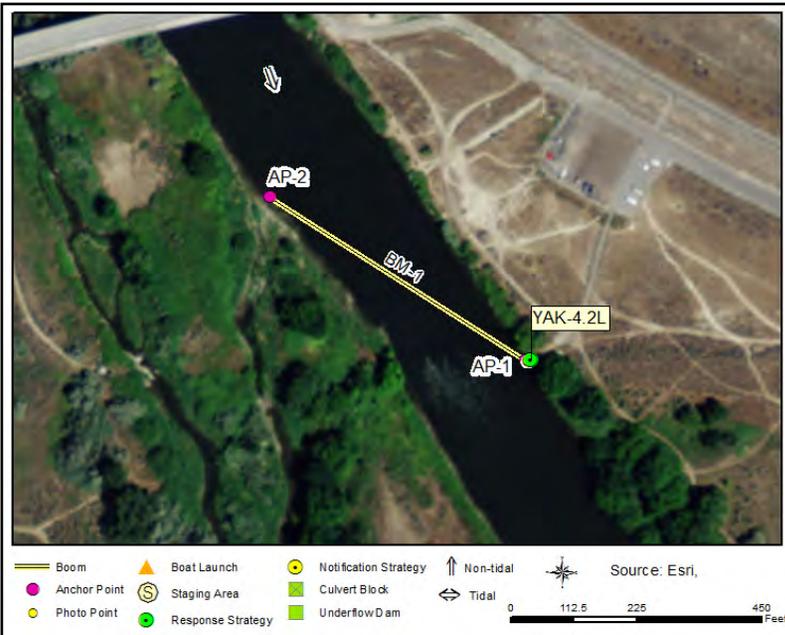
Staging Area: Onsite: Paved parking area with paved path to the water (may need to cut back vegetation by the water for vac truck)

Site Safety: Water hazard, slips, trips & falls

Field Notes: Bring bolt cutters to remove padlock from post in paved path, must hand launch boat

Watercourse: River - Side Channel - Yakima River upstream of the McNary Pool

Resources at Risk: City Park, Critical Waterfowl, Shorebird Nesting, and Brooding Area, Fish and Wildlife Resources, Public Recreation Site/Area, Salmon



Recommended Equipment

2	Each	Anchor - Danforth (or other appropriate type)
2	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - (hand-launch)

Recommended Personnel

1	Boat Operator
2	Laborer

Chamna Natural Preserve, Tapteal Water Trail

YAK-4.2L



YAK-4.2L Photo: View from downstream shoreside anchor point to upstream shoreside anchor point



Site Contact

City of Richland Parks and Recreation Department
 Land/Property Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

1000 Carrier Rd
 Richland, WA 99352

Driving Directions

1. Start at US 395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.52 miles)
3. Take ramp on the right and go on I-182 W/US-395 S toward Richland/Pendleton (9.25 miles)
4. At exit 5B take ramp on the right to Geo. Washington Way (0.61 miles)
5. Continue on WA-240-BR (George Washington Way) (0.2 miles)
6. Turn left on Adams St (0.03 miles)
7. Make sharp left on Aaron Dr (0.6 miles)
8. Turn left on Jadwin Ave (0.15 miles)
9. Turn right on Carrier Rd (0.5 miles)
10. Finish at parking lot for Tapteal Water Trail & Chamna Natural Preserve on the right

APPENDIX 4B
Notification Strategy 2-Pagers

NOTIFICATION STRATEGIES – LIST

M-292.6-N

M-293L-N

M-293.1L-N

M-309.4-N

M-316.5-N

M-328.4-N

M-336.1-N

M-340.2-N

M-343-N

MSN-2-N

MSN-2.8-N

MSN-9.6-N

McNary Lock & Dam Notification M-292.6-N

Position - Location: 45° 56.162', -119° 17.795' 45° 56' 9.7", -119° 17' 47.7" 45.93603, -119.29659 Umatilla

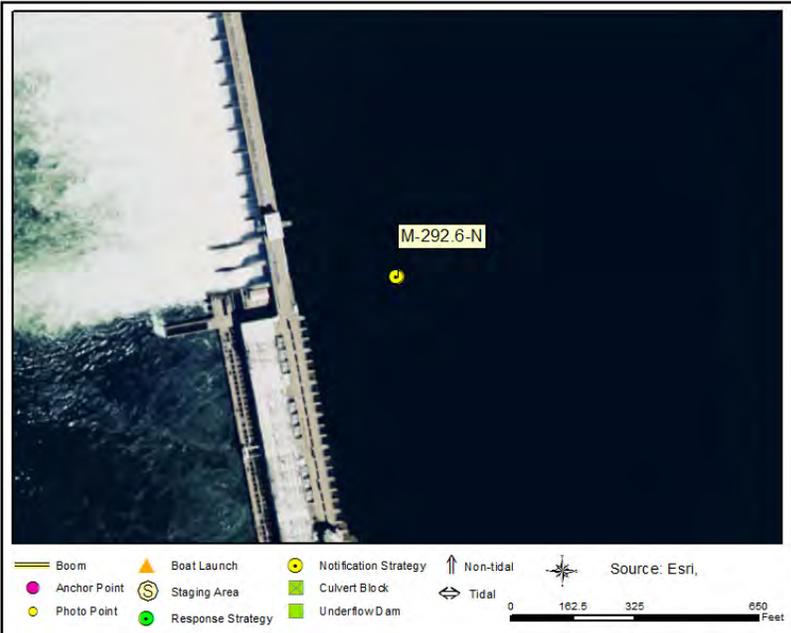
Strategy Objective: Notification : Protection of fish ladders, lock &/or spillway closure, deployment of GRP strategies

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 McNary pool include: M-292.7M and M-292.65R, exclusion strategies to protect the fish ladders on the upstream side of the dam, and M-292.6R, a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the John Day pool, include: J-292.5L and J-292.5R to protect the fish ladders.

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 - McNary Pool

Resources at Risk: Lock and Dam



Communication Process and Action:

Call McNary Lock & Dam Control Room Operator (24/7) 541-922-2231

McNary Lock & Dam Notification

M-292.6-N



M-292.6-N Photo: Aerial view of the McNary Lock & Dam



Site Contact

USACE McNary Control Room

Emergency Contact :

WA

541-922-2231

Nearest Address

100 Launch Lane
Umatilla, OR 97882

Driving Directions

Directions to McNary Lock & Dam on the OR side of the Columbia River

1. Starting at I-82 take Exit 1 toward 6th Street
2. Turn right onto 6th St (0.7 mi)
3. Turn left onto Devore Rd (0.7 mi)
4. Turn right toward Deschutes Ave (171 ft)
5. Continue onto Deschutes Ave (0.1 mi)
6. Stay to the left toward the USACE McNary Lock & Dam (0.3 mi)

City of Umatilla Public Works Department

M-293L-N

Position - Location: 45° 55.828', -119° 17.305' 45° 55' 49.7", -119° 17' 18.3" 45.93047, -119.28841 Umatilla

Strategy Objective: Notification : Alert to need to monitor and potentially shut off large municipal wells &/or surface water intake.

Implementation: Contact City of Umatilla Public Works Departement & notify to monitor situation and potentially shut off wells or water intakes.

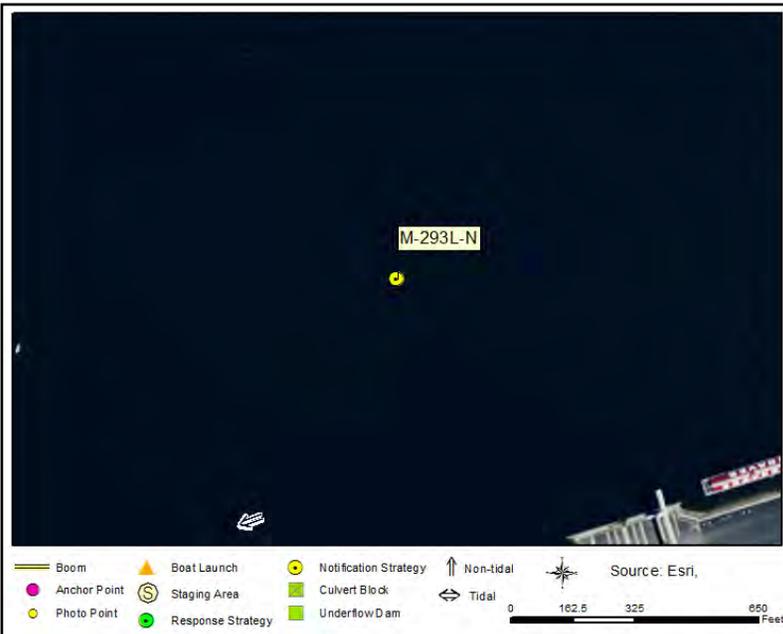
Field Notes: Large municipal well located less than 500 feet from river bank. The City is working on having surface water rights activated also and may need to shut down intakes if active.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Water Intakes

Communication Process and Action:

Call Director of Public Works, Russ Pelleberg, at 509-572-0323 (24 hrs)

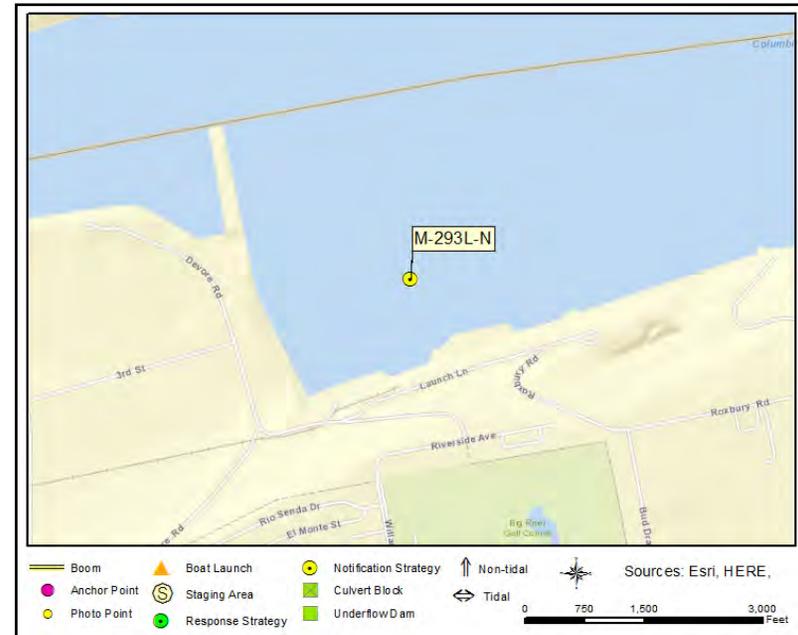


City of Umatilla Public Works Department

M-293L-N



M-293L-N Photo: City of Umatilla Public Works Department



Site Contact

City of Umatilla Public Works Department
 Primary Contact : Director of Public Works
 700 Sixth St
 Umatilla, OR 97882
 509-572-0323

Nearest Address

700 Sixth Street
 Umatilla, OR 97882

Driving Directions

1. Directions to the City of Umatilla Public Works Department offices, starting at Pasco, WA
2. Go south on N 8th Ave toward W Marie St (0.2 miles)
3. Turn right on W Margaret St (0.09 miles)
4. Turn left on N 10th Ave (0.06 miles)
5. Turn right on W Park St (0.11 miles)
6. Turn left on N 12th Ave (0.06 miles)
7. Turn right on W Nixon St (0.11 miles)
8. Turn left on N 14th Ave (0.06 miles)
9. Turn right on W Sylvester St (0.74 miles)
10. Turn left on N 24th Ave (N Road 24) (0.22 miles)
11. Turn right on W Lewis St (0.47 miles)
12. Take ramp and go on US-395 S (0.78 miles)
13. At fork keep left on US-395 (5.18 miles)
14. Take ramp on the left and go on I-82 E/US-395 S toward Pendleton/Umatilla (20.99 miles)
15. At exit 1 take ramp on the right to US-395/US-730 toward Umatilla/Hermiston (0.08 miles)
16. Take ramp to US-730 W toward Umatilla/Weigh Sta.-Odor (0.15 miles)
17. Continue on US-730 (6th St) (1.06 miles)
18. Finish at 700 Sixth Street, 97882, on the left

City of Hermiston Water Department

M-293.1L-N

Position - Location: 45° 55.838', -119° 17.200' 45° 55' 50.3", -119° 17' 12.0" 45.93064, -119.28667 Hermiston

Strategy Objective: Notification : Alert to need to monitor and potentially shut off large municipal well located less than 500 feet from river

Implementation: May shut down water intakes or wells

Field Notes: This well is shown as being both a surface water and groundwater withdrawal. Well serves multiple municipalities, including the cities of Umatilla and Hermiston.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Public Health and Safety, Water Intakes

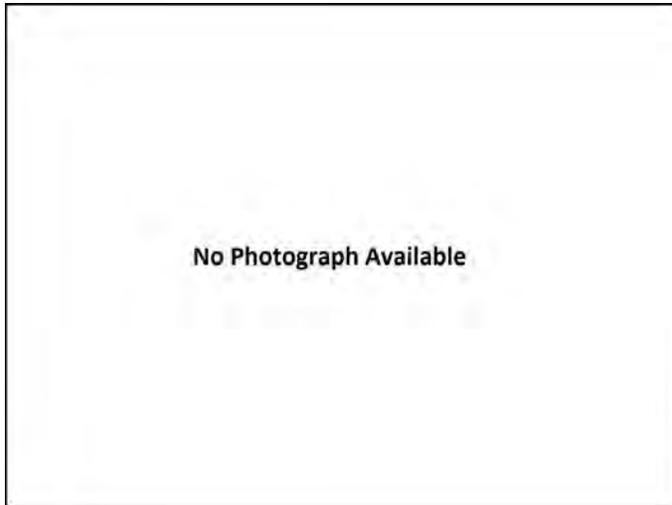
Communication Process and Action:

Call 541-561-7610, 24 hr emergency # for the Water Department

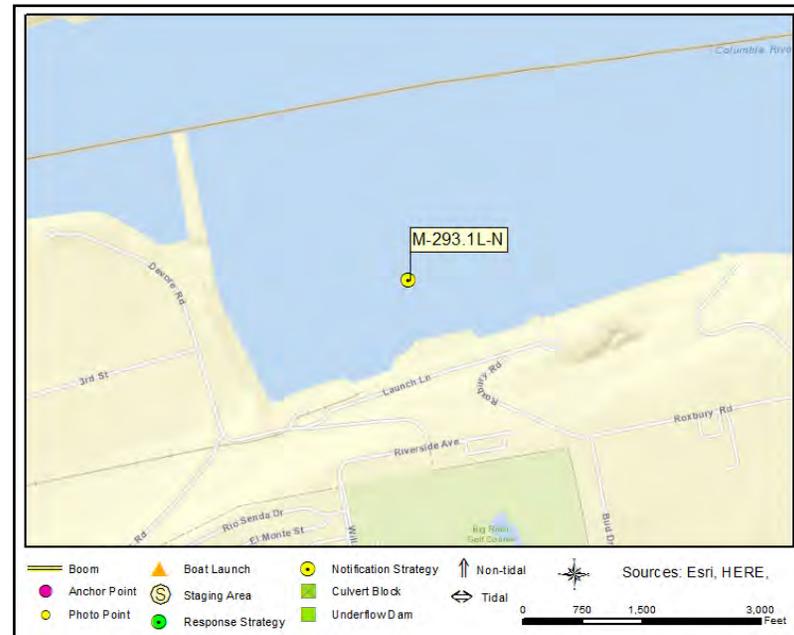


City of Hermiston Water Department

M-293.1L-N



M-293.1L-N Photo: No Photo Available



Site Contact

City of Hermiston Water Dept.
 Primary Contact : Water Department and Regional Water System Superin
 180 NE 2nd Street
 Hermiston, OR 97838
 541-561-7610

Nearest Address

180 NE 2nd street
 Hermiston, OR 97838

Driving Directions

1. Directions to the Hermiston City Hall, starting at McNary Highway, Umatilla, OR
2. Go northwest on I-82 (US-395 N) toward 131 (0.76 miles)
3. At exit 131 take ramp on the right to WA-14 W toward Plymouth/Vancouver (0.26 miles)
4. Turn left on WA-14 (0.11 miles)
5. Make sharp left onto ramp and go on I-82 E toward Umatilla/Pendleton (1.79 miles)
6. At exit 1 take ramp on the right to US-395/US-730 toward Umatilla/Hermiston (0.08 miles)
7. Take ramp to US-395 E/US-730 E toward McNary Dam/Hermiston (0.13 miles)
8. Turn left on US-395 (6th St) (0.7 miles)
9. Continue (0.15 miles)
10. Bear right on US-395 (Umatilla-Stanfield Hwy) (5.28 miles)
11. Turn left on E Gladys Ave (0.07 miles)
12. Turn right on NE 2nd St (0.02 miles)
13. Finish at 180 NE 2nd street, 97838, on the left

Oregon Water Resources Dept **M-309.4-N**

Position - Location: 45° 59.974', -118° 59.249' 45° 59' 58.5", -118° 59' 14.9" 45.99957, -118.98749 Pendleton

Strategy Objective: Notification : Notify Oregon Water Resources Department for the need for water intake closures

Implementation: The Oregon Water Resources Department will notify the following municipalities' who divert water directly or indirectly (Ranney wells, shallow gravel wells) from the Columbia River for Human Consumption: Port of Umatilla 541-922-3224, City of Hermiston 541-567-5521, City of Irrigon 541-922-2047, City of Boardman 541-481-9252

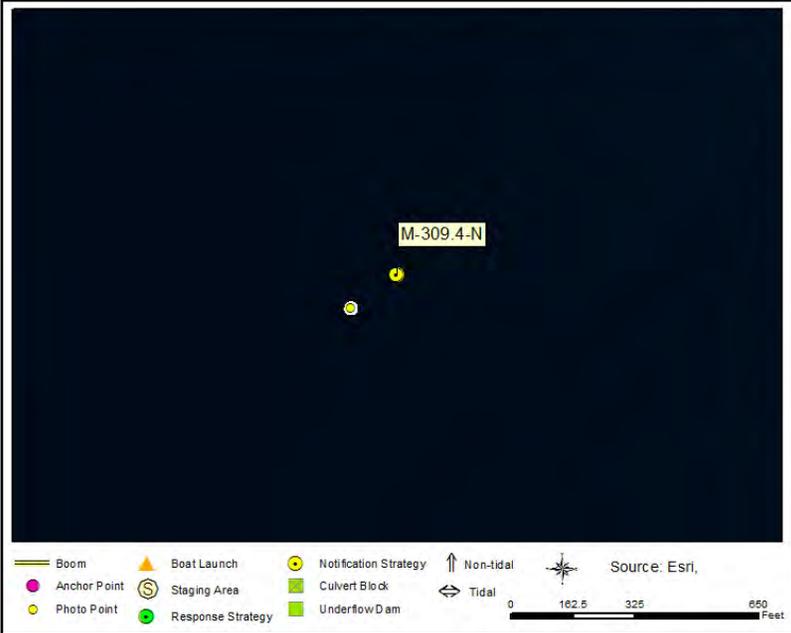
Field Notes: As of February 2015, the Oregon Water Resources Department does not know of any other municipalities in the area of the Middle Columbia River-GRP (between river mile 149-291)who have water rights and are diverting water directly or indirectly from the Columbia River for Human Consumption.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Water Intakes

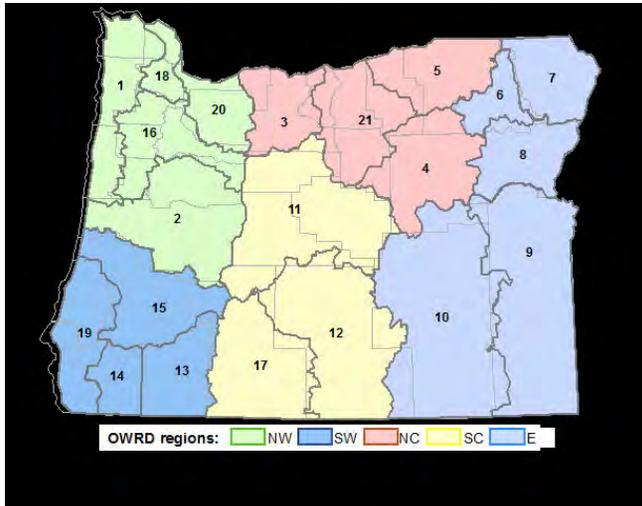
Communication Process and Action:

Call Michael Ladd, Oregon Water Resources Dept., 541-278-5456 wk., 541-310-0620 cell

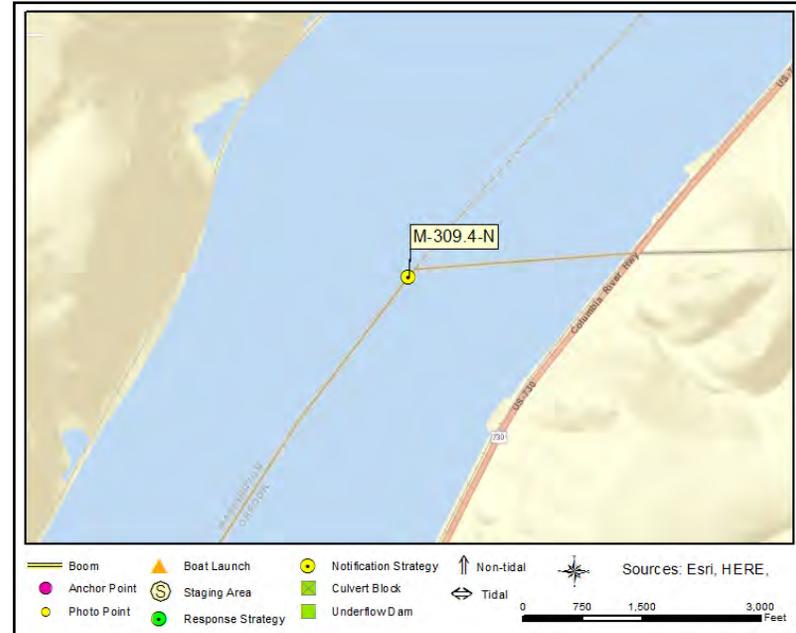


Oregon Water Resources Dept

M-309.4-N



M-309.4-N Photo: OWRD OR Water Regional Districts



Site Contact

Oregon Water Resources Department
 Primary Contact : OR Water Master Regions: 3, 21, & 5
 116 Southeast Dorion Avenue
 Pendleton, OR 97801
 541-310-0620

Nearest Address

116 Southeast Dorion Avenue
 Pendleton, OR 97801

Driving Directions

1. Directions to Oregon Water Resources Department/Umatilla County Watermaster's Office, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (0.21 miles)
3. Bear right onto ramp and go on I-82 E toward Pendleton/I-84/Portland (9.4 miles)
4. Take ramp on the left and go on I-84 E toward Pendleton (31.52 miles)
5. At exit 210 take ramp on the right to OR-11 toward Pendleton/Milton-Freewater (0.24 miles)
6. Turn left on OR-11 (Oregon-Washington Hwy) (0.36 miles)
7. Turn left on SE Isaac Ave (0.06 miles)
8. Turn right on SE 3rd St (0.31 miles)
9. Turn left on SE Emigrant Ave (0.1 miles)
10. Turn right on SE 1st St (0.08 miles)
11. Turn right on US-30 (SE Dorion Ave) (0.01 miles)
12. Finish at 116 Southeast Dorion Avenue, 97801, on the right

Boise Paper Inc.

M-316.5-N

Position - Location: 46° 6.063', -118° 55.293' 46° 6' 3.8", -118° 55' 17.6" 46.10106, -118.92155 Wallula

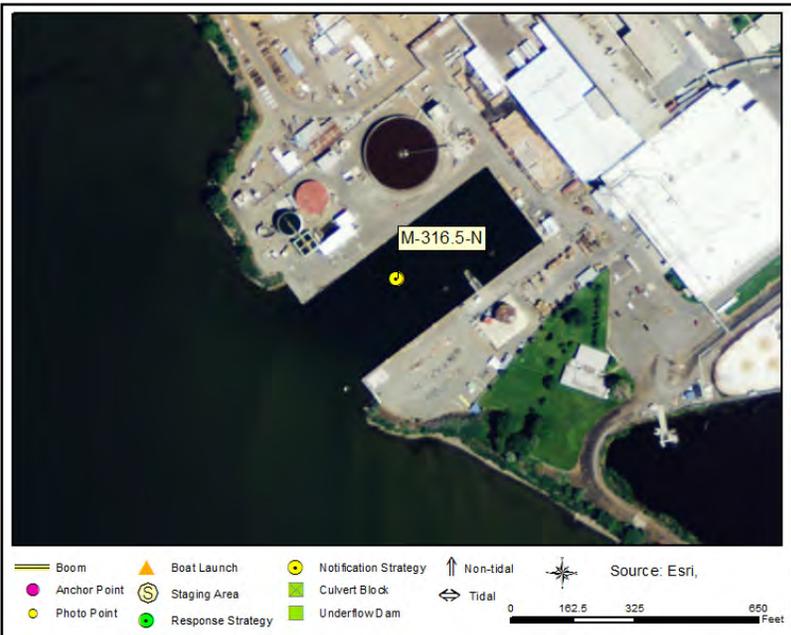
Strategy Objective: Notification : Notify Water Intake User

Implementation: Call the Boise Paper Environmental Safety Manager at 509-545-3241 who will then work with Incident Command to determine the need to shut off their water intake pipe.

Field Notes: Water intake pipe is 50' below the surface so concern is for sinking oil, air quality or fire/explosions near the Boise facility.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Economic Resource, Water Intakes



Communication Process and Action:

Call the Boise Paper Environmental Safety Manager at 509-545-3241

Boise Paper Inc.

M-316.5-N



M-316.5-N Photo: Boise Paper Inc. - water intake user



Site Contact

Boise Paper Inc
 Land/Property Contact : Water Intake User
 31831 W. US-12
 Wallula, WA 99363
 509-528-8095

Nearest Address

31831 W US-12
 Wallula, WA 99363

Driving Directions

1. Directions to Boise Paper in Wallula, WA starting from US-395 in Pasco, WA head south on US-395 (6.5 miles)
2. Take the exit onto US-12 E toward Walla Walla (13.9 miles)
3. Turn right onto Boise Cascade Rd, destination will be on the right (0.2 miles)
 31831 US-12 Wallula, WA 99363

Kennewick Water Treatment Plant M-328.4-N

Position - Location: 46° 12.887', -119° 6.282' 46° 12' 53.2", -119° 6' 16.9" 46.21478, -119.10471 Kennewick

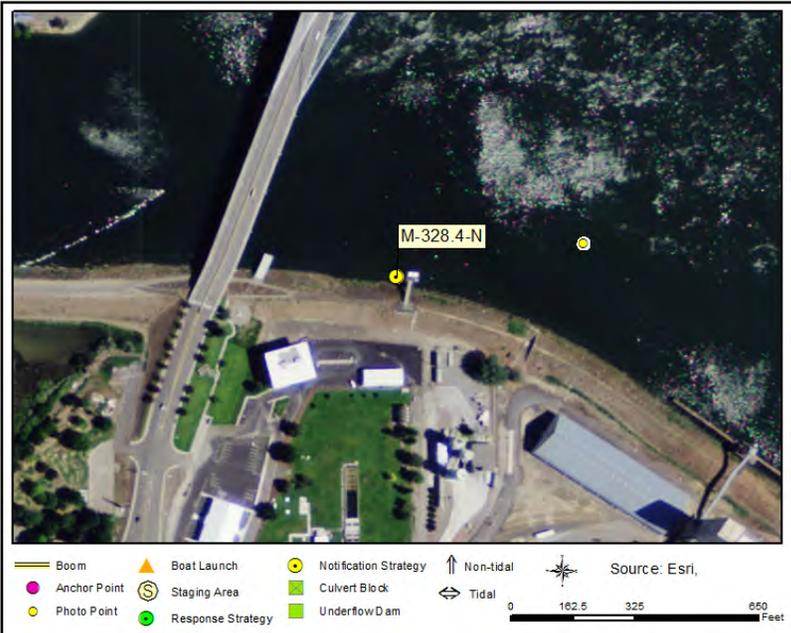
Strategy Objective: Notification : Shut off water intake

Implementation: Call 509-585-4247 (24 hours), to have them shut off water intake at water treatment facility

Field Notes: Water intake pipe is only 5 feet below the surface

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Economic Resource, Water Intakes



Communication Process and Action:

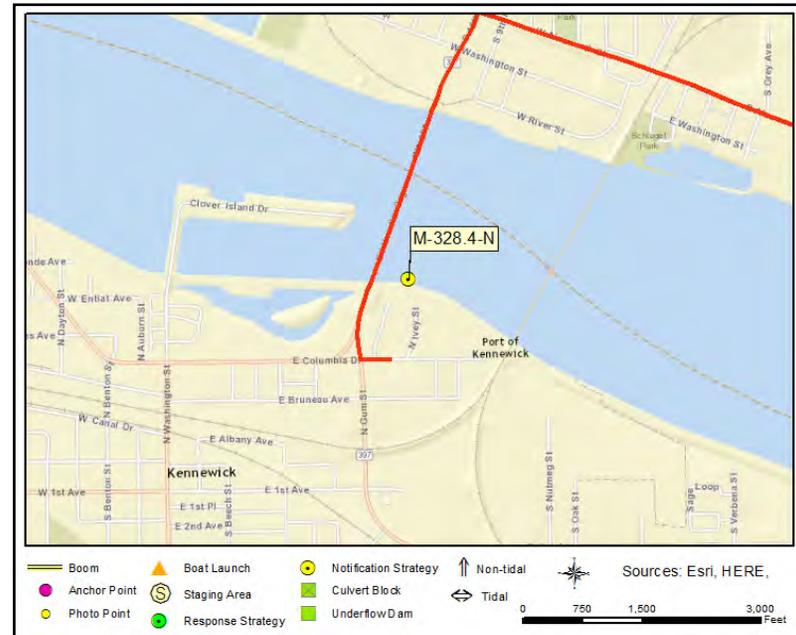
Call 509-585-4247 (24 hours)

Kennewick Water Treatment Plant

M-328.4-N



M-328.4-N Photo: Aerial view of the Kennewick Water Treatment Plant's water intake



Site Contact

Kennewick Water Treatment Plant
 Primary Contact : Water Intake User
 615 E. Columbia Street
 Kennewick, WA 99337
 509-585-4247

Nearest Address

615 E. Columbia Dr.
 Kennewick, WA 99337

Driving Directions

1. Directions to the Kennewick Water Treatment Facility, starting in Pasco, WA head south on US95 continue straight onto N Oregon Ave (1.3 miles)
2. Turn right onto E Lewis St (1.1 miles)
3. Turn left onto S 10th Ave (1.1 miles)
4. Continue onto N Gum St (197 ft)
5. Turn left onto E Columbia Dr, destination will be on the left (0.1 miles)
6. Finish at 615 E Columbia Dr Kennewick, WA 99336

Pasco Water Intake Pipes 1 & 2 M-336.1-N

Position - Location: 46° 15.951', -119° 14.469' 46° 15' 57.0", -119° 14' 28.1" 46.26584, -119.24115 Pasco

Strategy Objective: Notification : Shut off water intakes

Implementation: Call 509-531-9919 (24 hours), to have them shut off water intake at water treatment facility

Field Notes: Butterfield water intake pipe ~16 feet below the surface, the West Pasco water intake located at 11412 W Court St. is only ~7 ft below the surface.

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Water Intakes

Communication Process and Action:

Call 509-531-9919 (24 hours)

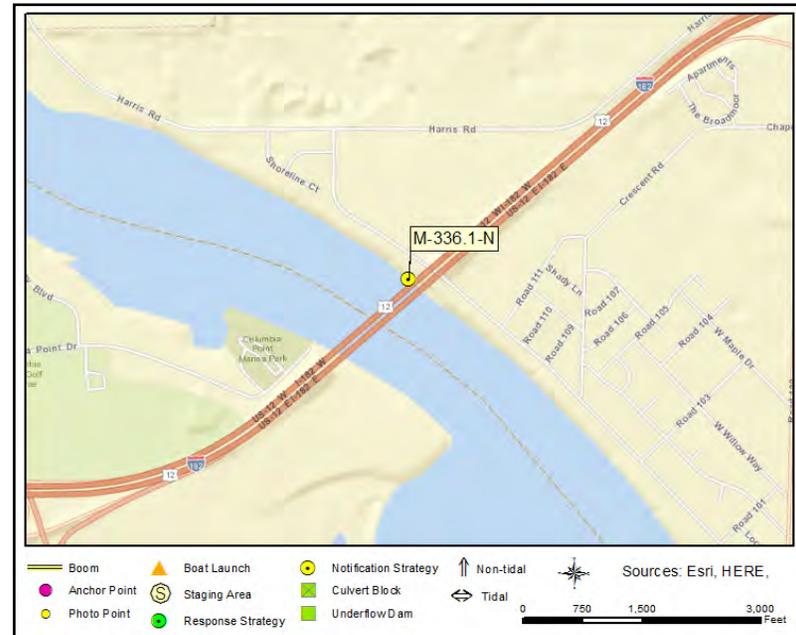


Pasco Water Intake Pipes 1 & 2

M-336.1-N



M-336.1-N Photo: Pasco Water Intake Facilities



Site Contact

Pasco's Butterfield Water Intake Facility
 Primary Contact : Water Intake 24 Hr Emergency Contact
 1304 S 12th Ave
 Pasco, WA 99301
 509-531-9919

Nearest Address

1304 S, 12th Ave
 Pasco, WA 99301

Driving Directions

1. Directions to Pasco's Butterfield Water Intake, starting at US395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (1.84 miles)
4. Make sharp right on E A St (1.29 miles)
5. Turn left on S 12th Ave (0.21 miles)
6. Continue to the end of the road, take a right, then left over the tracks to the water, turn right to finish at 1304 S, 12th Ave, 99301 on the right.

Richland Water Intake Facility M-340.2-N

Position - Location: 46° 18.887', -119° 15.570' 46° 18' 53.2", -119° 15' 34.2" 46.31478, -119.25951 Richland

Strategy Objective: Notification : Notification of a spill to allow the facility to close down water intake

Implementation: Call Richland Water Treatment Plant Operator's 24 hour emergency number 509-531-4480.

Field Notes: Water intake pipe is

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Water Intakes



Communication Process and Action:

Call Richland Water Treatment Plant Operator's 24 hour emergency number 509-531-4480.

Richland Water Intake Facility

M-340.2-N



M-340.2-N Photo: View of the Richland City water intake facility (agricultural) from the boat launch to the south



Site Contact

Richland Water Treatment Plant
 Primary Contact : Water Intake user
 1 Snyder Street
 Richland, WA 99354
 509-531-4480

Nearest Address

1 Snyder Street
 Richland, WA 99354

Driving Directions

1. Start at us-395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.52 miles)
3. Take ramp on the right and go on I-182 W/US-395 S toward Richland/Pendleton (9.25 miles)
4. At exit 5B take ramp on the right to Geo. Washington Way (0.61 miles)
5. Continue on WA-240-BR (George Washington Way) (2.75 miles)
6. Continue on George Washington Way (1.01 miles)
7. Turn right on Snyder St (0.59 miles)
8. Finish at 1 Snyder Street, 99354, on the right

North Richland Irrigation water intake M-343-N

Position - Location: 46° 21.072', -119° 15.957' 46° 21' 4.3", -119° 15' 57.4" 46.35120, -119.26595 Richland

Strategy Objective: Notification : Notify City of Richland to shut off water intake pipe.

Implementation: Call the Richland Water Treatment Plant– Water Operators 24 hour emergency number 509-531-4480 to have them shut down water intake pipe.

Field Notes: Water intake pipe is

Watercourse: River - Above a Dam - McNary Pool

Resources at Risk: Economic Resource, Water Intakes



Communication Process and Action:

Call Richland Water Treatment Plant Operator's 24 hour emergency number 509-531-4480.

North Richland Irrigation water intake

M-343-N



M-343-N Photo: The N. Richland irrigation water intake facility



Site Contact

Richland Water Treatment Plant
 Primary Contact : Water Intake user
 1 Snyder Street
 Richland, WA 99354
 509-531-4480

Nearest Address

700 Horn Rapids Road
 Richland, WA 99354

Driving Directions

1. Start at us-395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.52 miles)
3. Take ramp on the right and go on I-182 W/US-395 S toward Richland/Pendleton (10.42 miles)
4. At exit 4 take ramp on the right to WA-240 W toward Wellsian Way/Vantage (0.31 miles)
5. At fork keep left on WA-240 W toward Vantage (0.27 miles)
6. Continue on WA-240 (Bypass Hwy) (5.93 miles)
7. Turn right on Kingsgate Way (1.8 miles)
8. Turn right on Horn Rapids Road and finish at the water intake facility at the roads end.

Tesoro Pasco Facility **MSN-2-N**

Position - Location: 46° 12.901', -119° 1.874' 46° 12' 54.0", -119° 1' 52.4" 46.21501, -119.03123 Pasco

Strategy Objective: Notification : Deployment of MSN-2R a collection strategy

Implementation: Call Tesoro's Pasco facility manager at 509-543-6100 (M-F 8 to 5) or 509-543-6102 (After Hours). Upon notification Tesoro management will work with incident command to determine if and when to deploy MSN-2R. Once deployed, or if unable to deploy for some reason, a Tidewater representative will contact the WA ECY PREP Pager Duty Officer at 360-923-6020. Implementation of MSN-2R by contractors is an alternative option.

Field Notes: Tesoro has equipment & personnel to deploy strategy, however, any others responding should work with Tesoro personnel to gain access to facility property. Those deploying GRP strategies on Tesoro property will need to be escorted if traveling through the property

Watercourse: River - Below a Dam - McNary Pool of the Snake River below the Ice Harbor Dam

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



Communication Process and Action:

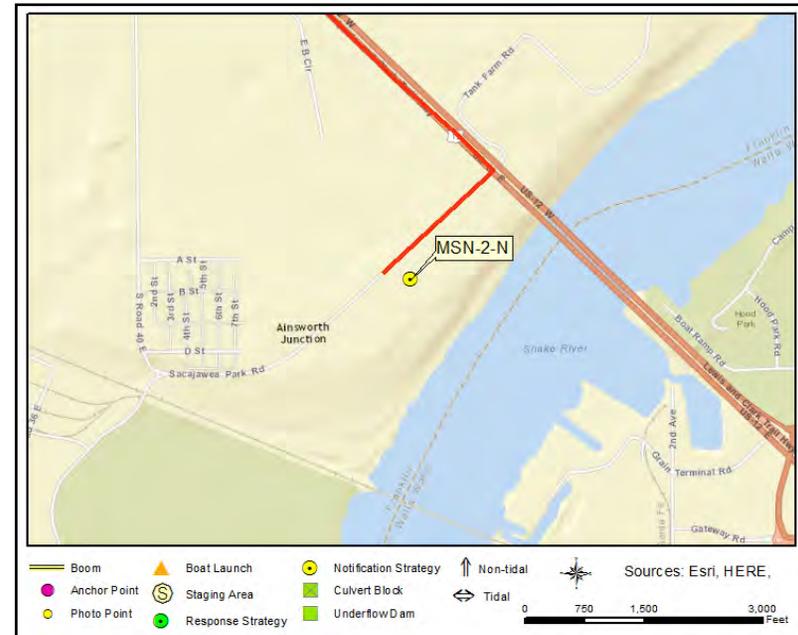
Call Tesoro's Pasco facility manager at 509-543-6100 (M-F 8 to 5) or 509-543-6102 (After Hours).

Tesoro Pasco Facility

MSN-2-N



MSN-2-N Photo: Tesoro's Pasco facility boathouse



Site Contact

Tesoro, Pasco Facility
 Pre-Notification Required : Contingency Plan Holder
 2900 Sacajawea Park Rd
 Pasco, WA 99301
 509-543-6100

Nearest Address

2900 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Directions to Tesoro's Pasco facility starting at US395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (4 miles)
7. Turn right on Sacajawea Park Rd (2 miles)
8. Finish at 2900 Sacajawea Park Rd, 99301, on the right

Tidewater, Pasco Facility **MSN-2.8-N**

Position - Location: 46° 13.289', -119° 1.236' 46° 13' 17.3", -119° 1' 14.2" 46.22148, -119.02060 Pasco

Strategy Objective: Notification : Deployment of GRP strategy MSN-2.9R a deflection strategy

Implementation: Call Tidewater's Pasco facility manager at 509-547-7701 (M-F 8 to 5) or 509-727-1585 (After Hours). Upon notification Tidewater management will work with incident command to determine if and when to deploy MSN-2.9R. Once deployed, or if unable to deploy for some reason, a Tidewater representative will contact the WA ECY PREP Pager Duty Officer at 360-923-6020. Implementation of MSN-2.9R by contractors is an alternative option.

Field Notes: Tidewater has equipment & personnel to deploy strategy, however, any others responding should work with Tidewater personnel to gain access to facility property. Those deploying GRP strategies on Tidewater property will need to be escorted if traveling through the

Watercourse: River - Below a Dam - McNary Pool of the Snake River below the Ice Harbor Dam

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



Communication Process and Action:

Call Tidewater's Pasco facility manager at 509-547-7701 (M-F 8 to 5) or 509-727-1585 (After Hours)

Tidewater, Pasco Facility

MSN-2.8-N



MSN-2.8-N Photo: Tidewater Pasco Facility Boom Storage Locker



Site Contact

Tidewater, Pasco Facility
 Pre-Notification Required : Contingency Plan Holder
 509-547-7701

Nearest Address

671 Tank Farm Road
 Pasco, WA 99301

Driving Directions

1. Directions to Tidewater's Pasco facility starting at US-395, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (2.87 miles)
7. Turn left on Sacajawea Park Rd (0.02 miles)
8. Continue on Tank Farm Rd (1.22 miles)
9. Finish at 671 Tank Farm Road, 99301, on the right. Call through intercome box at 2nd gate for access.

Ice Harbor Lock & Dam Notification MSN-9.6-N

Position - Location: 46° 14.927', -118° 52.804' 46° 14' 55.6", -118° 52' 48.2" 46.24878, -118.88006 Burbank

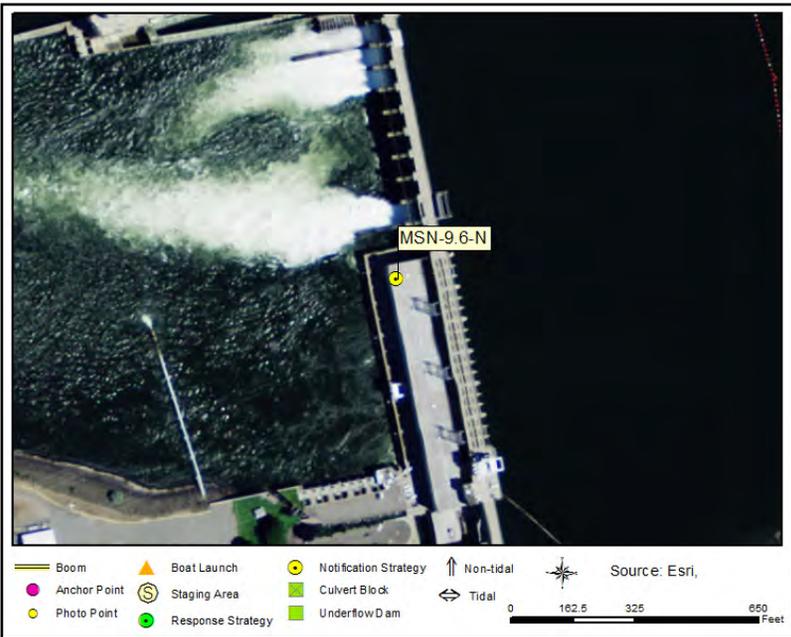
Strategy Objective: Notification : Protection of fish ladders, closure of lock/spillway, deployment of GRP strategies

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 McNary pool include MSN-9.5R a collection strategy for the downstream end of the lock. There are additional strategies in the Snake River Ice Harbor Pool GRP for the upstream side of the dam to protect the fish ladders and 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 - McNary Pool (on the Snake River)

Resources at Risk: Lock and Dam



Communication Process and Action:

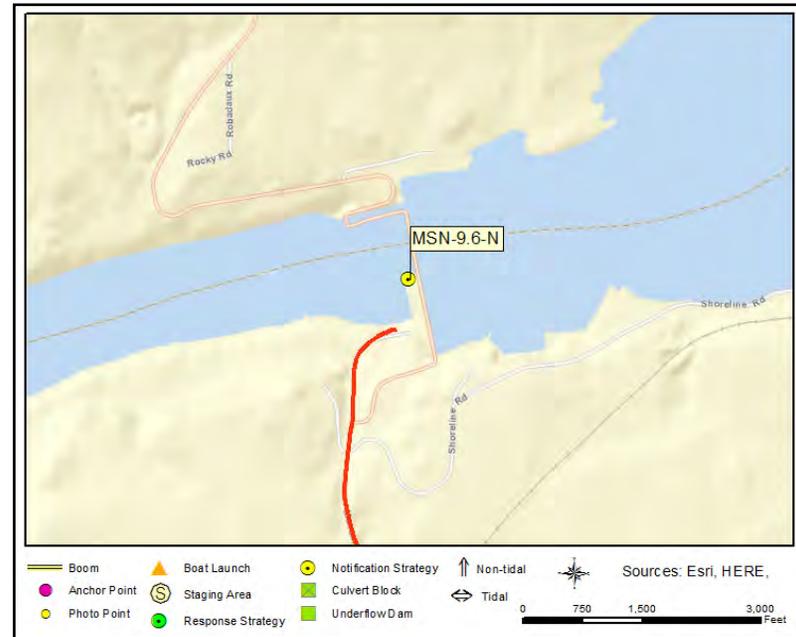
Call Ice Harbor Lock & Dam Control Room Operator (24/7) 509-543-3231

Ice Harbor Lock & Dam Notification

MSN-9.6-N



MSN-9.6-N Photo: View of the Ice Harbor Lock & Dam from the cliff on the south shore



Site Contact

USACE Ice Harbor Dam Control Room
 Emergency Contact : 24 Hour Emergency Contact
 WA
 509-547-7783

Nearest Address

2763 Monument Dr
 Burbank, WA 99323

Driving Directions

1. Start at US-395 Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr (4.89 miles)
3. Continue on WA-397 (0.19 miles)
4. Make sharp left onto ramp to I-182 (0.46 miles)
5. Continue on I-182 (US-12 E) (0.3 miles)
6. Continue on US-12 (3.79 miles)
7. Turn left (0.02 miles)
8. Continue on WA-124 (Ice Harbor Dr) (5.22 miles)
9. Turn left on Monument Dr (Ice Harbor Rd) (2.7 miles)
10. Finish at 2763 Monument Dr, 99323, on the right

APPENDIX 4C
Staging Area 2-Pagers

STAGING AREAS - LIST

SA-M-292.6L	SA-M-292.6R	SA-M-298.7L	SA-M-299.1L	SA-M-300L
SA-M-301.2L	SA-M-312.3L	SA-M-320.7L	SA-M-324.3R	SA-M-328.1L
SA-M-328.9R	SA-M-330.2R	SA-M-331.4L	SA-M-332.8R	SA-M-333.9L
SA-M-334R	SA-M-336.4R	SA-M-337.8R	SA-M-340.3R	SA-M-340.7L
SA-MSN-1R	SA-MSN-2.2L	SA-MSN-2.3L	SA-SIH-9.9R	SA-WWR-4R
SA-YAK-0.5R				

McNary South Shore boat launch SA-M-292.6L

Staging Area

Position - Location: 45° 55.633', -119° 17.422' 45° 55' 38.0", -119° 17' 25.3" 45.92721, -119.29036 Umatilla

Comments: USACE paved lot and three boat ramps 7.5 degree avg grade



GRP Response Strategies Served:

M-292.7M, M-292.6L

Location Information

Asset	Type/Status	Amount/Number
		2 Gravel and paved
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	3 Concrete ramps 7-6.5 degree grade double
Cell Phone Coverage	Yes	
Estimated Lot Size		2 Lots, gravel 70,000' & 25000' paved
Parking - Car	Gravel	Room for 100 cars & 50 trailers
Parking - Trailer	Marked	Gravel lot 100 cars or 50 trailers
Power	No	
Restroom	Restroom - Vault	Two buildings w/ mens and womens stalls
User Fee	No	USACE with gates which are always open
Waste Disposal	Trash Receptacle	dumpsters
Water (potable)	No	
Water (potable)	No	

McNary South Shore boat launch

SA-M-292.6L



SA-M-292.6L Photo: South Shore McNary double boat ramp



Site Contact

USACE McNary pool

Primary Contact : Natural Resource Manager

McNary Dam, OR
541-922-2268

Nearest Address

100 Launch Lane
Umatilla, OR 97882

Driving Directions

1. Starting at I-82 take Exit 1 toward 6th Street
2. Turn right onto 6th St (0.7 mi)
3. Turn left onto Devore Rd (0.7 mi)
4. Turn right toward Deschutes Ave (171 ft)
5. Continue onto Deschutes Ave (0.1 mi)
6. Turn left (20 ft)
7. Turn right (312 ft), destination will be on the left

McNary Dam North Shore boat launch

SA-M-292.6R

Staging Area

Position - Location: 45° 56.627', -119° 17.936' 45° 56' 37.6", -119° 17' 56.2" 45.94378, -119.29894 Kennewick

Comments: Paved USACE staging area and concrete boat ramp



GRP Response Strategies Served:

M-293.7R, M-292.63R, M-292.6R, M-292.65R

Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Concrete, Solid	Single ramp 8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		77,000 sq ft
Parking - Car	Gravel	77,000' sq gravel lot, space for 50 cars
Parking - Trailer	Gravel	Large gravel lot, 77,000' sq
Power	No	
Restroom	Restroom - Vault	1
User Fee	No	
Waste Disposal	Trash Receptacle	Trash cans & dumpster
Water (potable)	No	

McNary Dam North Shore boat launch

SA-M-292.6R



SA-M-292.6R Photo: North Shore McNary Dam boat launch



Site Contact

USACE McNary pool

Primary Contact : Natural Resource Manager

McNary Dam, OR
541-922-2268

Nearest Address

81226 Mc Nary Rd
Kennewick, WA 99338

Driving Directions

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

Hat Rock State Park boat launch **SA-M-298.7L**

Staging Area

Position - Location: 45° 55.062', -119° 10.467' 45° 55' 3.7", -119° 10' 28.0" 45.91770, -119.17445 Hermiston

Comments: Paved staging area, 2 concrete boat ramps 7.4 degree grade



GRP Response Strategies Served:

M-305.9L, M-298.7L, M-299.9R

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Double ramp 7.4 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		87,000 sq ft of paved and lined parking
Parking - Car	Marked	100 paved and striped spaces for cars
Parking - Trailer	Marked	50 paved/striped trailer spaces, 2 lots
Power	Yes	In brick restroom in adjacent lot
Restroom	Restroom - Flush	One flush bathroom & one vault (by ramp)
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In brick restroom in adjacent lot

Hat Rock State Park boat launch

SA-M-298.7L



SA-M-298.7L Photo: Hat Rock State Park boat launch



Site Contact

Hat Rock State Park

Primary Contact : Hat Rock SP manger of boat launch

Hermiston, OR 97838
541-983-2277

Nearest Address

82200 Hat Rock Rd
Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Take the exit onto US-12 E toward Walla Walla (16.8 mi)
3. Slight right toward US-730 W (0.2 mi) watch for signs for US 730 W/ Pendleton
4. Slight right onto US-730 W Entering Oregon (17.1 mi)
5. Turn right onto Hat Rock Rd and continue to the end (1 mi)

McNary Yacht Club boat launch SA-M-299.1L

Staging Area

Position - Location: 45° 55.202', -119° 9.882' 45° 55' 12.1", -119° 9' 52.9" 45.92003, -119.16470 Hermiston

Comments: Marina staging area and launch with one concrete ramp



GRP Response Strategies Served:

M-299.2L, M-299.8L, M-299.5M, M-299.4L

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Marina is private - need permission
Boat Ramp(s)	Concrete, Solid	USACE public, single ramp 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		12,500 sq ft by launch and more roadside
Fuel	Yes	Marina is private - need permission
Power	Yes	Marina is private - need permission
Restroom	Restroom - Flush	Marina is private - need permission
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Marina is private - need permission

McNary Yacht Club boat launch

SA-M-299.1L



SA-M-299.1L Photo: McNary Yacht Club (USACE) public boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

McNary Dam, OR
 541-922-2268

Nearest Address

34099 Beach Shore Drive
 Hermiston, OR 97838

Driving Directions

1. Start at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at 34099 Beach Shore Drive, 97838

Warehouse Beach Rec Area boat launch SA-M-300L

Staging Area

Position - Location: 45° 55.175', -119° 8.594' 45° 55' 10.5", -119° 8' 35.7" 45.91958, -119.14324 Hermiston

Comments: Primitive launch with gravel ramp & staging area



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp(s)	Gravel	Primitive 7 degree gravel ramp
Estimated Lot Size		Three gravel lots, 25,000 sq ft
Parking - Car	Gravel	Two gravel lots 20 cars 10 trailers
Parking - Trailer	Gravel	Two gravel lots 20 cars 10 trailers
Power	No	
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

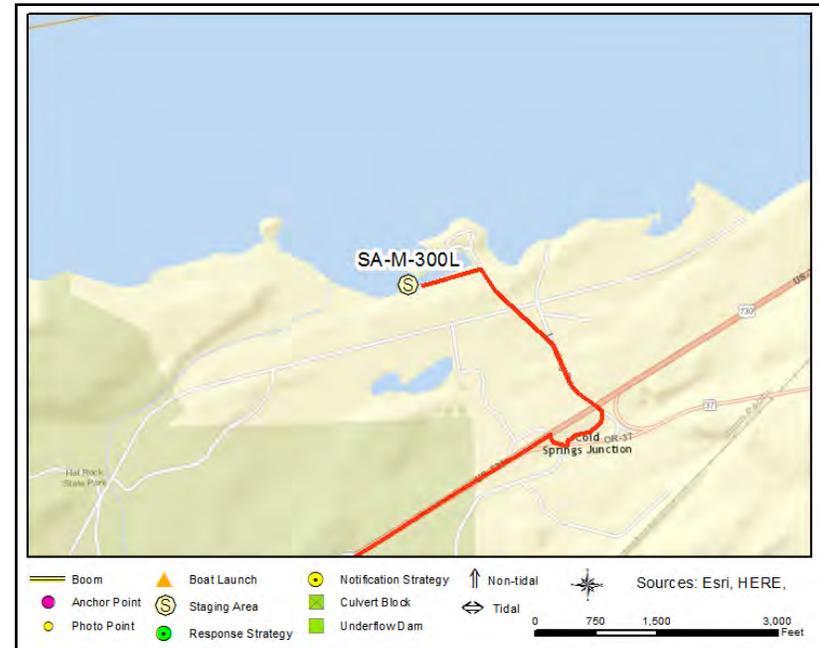
M-300.3L, M-300L, M-302.3R

Warehouse Beach Rec Area boat launch

SA-M-300L



SA-M-300L Photo: USACE Warehouse Beach Rec Area boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

100 Landing Rd
 Hermiston, OR 97838

Driving Directions

1. Starting at I-82 in Umatilla, OR
2. Turn left onto US-395 S/ US-730 E/6th St (signs for Mc Nary Dam/ Hermiston)
 Continue to follow US-730 E (9.2 mi)
3. Slight right onto OR-37 S (0.2 mi)
4. Turn left onto Landing Rd, Warehouse Beach Recreation Area will be on the right (0.6 mi)

Sand Station Recreation Area **SA-M-301.2L**

Staging Area

Position - Location: 45° 55.307', -119° 7.205' 45° 55' 18.4", -119° 7' 12.3" 45.92179, -119.12008 Hermiston

Comments: Restrooms, beaches, camping suitable for staging



Location Information

Asset	Type/Status	Amount/Number
Estimated Lot Size		200x300=60,000 sq ft of gravel parking
Parking - Car	Gravel	room for 30 cars
Parking - Trailer	Gravel	Room for 15 trailers
Power	Yes	Restroom has power
Restroom	Restroom - Flush	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Restroom has water

GRP Response Strategies Served:

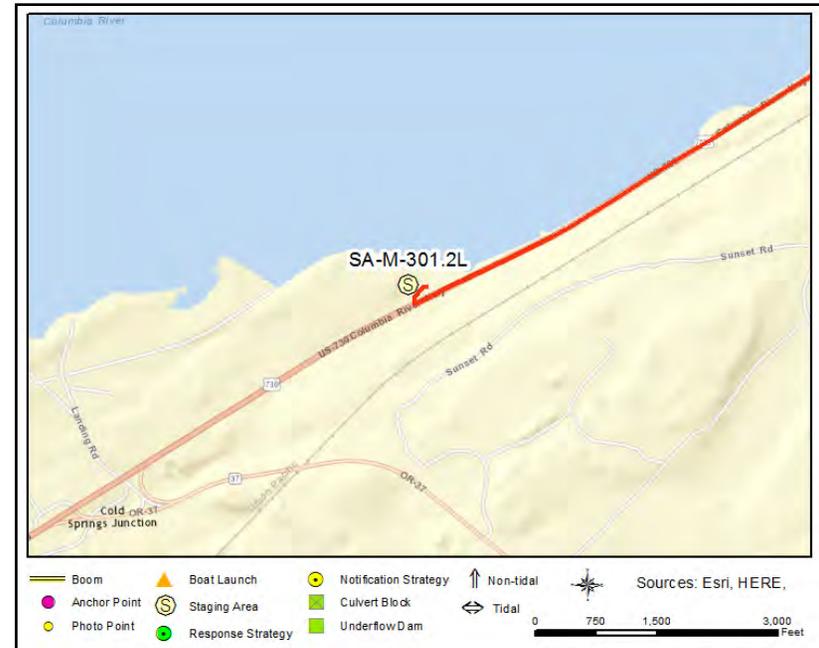
M-300.9L, M-301.1L

Sand Station Recreation Area

SA-M-301.2L



SA-M-301.2L Photo: Sand Station Recreation Area - Staging Area



Site Contact

USACE McNary Control Room

Primary Contact :

WA

541-922-2231

Nearest Address

Landing Road
Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
3. Continue onto US-12 E (17.0 mi)
4. Slight right toward US-730 W (0.2 mi)
5. Slight right onto US-730 W Entering Oregon, Sand Station Recreation Area will be on the right (14.8 mi)

Walla Walla Yacht Club **SA-M-312.3L**

Staging Area

Position - Location: 46° 1.585', -118° 56.196' 46° 1' 35.1", -118° 56' 11.7" 46.02641, -118.93659 Touchet

Comments: Paved staging area, private marina & USACE boat launch



GRP Response Strategies Served:

M-311.9R, M-309.8R, M-310.3R, M-308.8R, M-311.4R

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	2 floating docks (+additional marina)
Boat Ramp(s)	Concrete, Solid	USACE 1 public ramp 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		200,000 sq ftt gravel & grass lot
Fuel	Yes	
Parking - Car	Gravel	gravel & grass lot, space for 40 cars
Parking - Trailer	Gravel	gravel & grass lot, space for 20 trailer
Power	Yes	Private marina - need permission
Restroom	Restroom - Portable	1
User Fee	No	Ramp is public USACE (marina is private)
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Private marina, need permission

Walla Walla Yacht Club

SA-M-312.3L



SA-M-312.3L Photo: Walla Walla Yacht Club, USACE boat launch



Site Contact

Walla Walla Yacht Club
 Land/Property Contact : Manages Marina@ USACE's Walla Walla boat launch

 Kennewick, WA 99337
 509-547-4946

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Walla Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Casey Pond Boat Launch, McNary Wildlife Refuge **SA-M-320.7L**

Staging Area

Position - Location: 46° 9.680', -118° 57.297' 46° 9' 40.8", -118° 57' 17.8" 46.16133, -118.95495 Burbank

Comments: Staging area and concrete boat launch



GRP Response Strategies Served:

M-320.7L, M-317.8M, M-320.6L, M-319.2M

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	single concrete ramp 6.8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		150' x 150'=22500 sq ft gravel lot
Lot Cover (Primary)	Asphalt	gravel lot
Parking - Car	Gravel	30
Parking - Trailer	Gravel	30
Power	No	
Restroom	None	none
User Fee	No	gated open sunrise/sunset -bolt cutters
Waste Disposal	None	none
Water (potable)	No	

Casey Pond Boat Launch, McNary Wildlife Refuge

SA-M-320.7L



SA-M-320.7L Photo: Casey Pond Boat Ramp, McNary Wildlife Refuge



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges

Primary Contact : Property Contact

Burbank, WA 99323
509-546-8300

Nearest Address

2955 Hanson Loop Rd
Burbank, WA 99323

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp left onto ramp to I-182/US-12 E
5. Continue on I-182/US-12 E (1.4 mi)
6. Continue on US-12 (8.2 mi)
7. Make sharp right on Hanson Loop Rd (0.3 mi)
8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Two Rivers Park boat launch **SA-M-324.3R**

Staging Area

Position - Location: 46° 11.051', -119° 1.951' 46° 11' 3.1", -119° 1' 57.1" 46.18419, -119.03252 Kennewick

Comments: Lighted gravel lot (staging area) with 2 concrete boat ramps



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	3 floating docks
Boat Ramp(s)	Concrete, Solid	2 concrete ramps, 7.5 & 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		200' x 150'=30,000 sq ft of gravel lot
Parking - Car	Gravel	gravel lot 15 trailers, 20 cars
Parking - Trailer	Gravel	gravel lot 15 trailers, 20 cars
Power	No	
Restroom	Restroom - Portable	
User Fee	No	gated, may need bolt cutters
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

M-322.6M, M-323.1M, M-323.9M, M-323.5M, M-324.8R, M-323.2M, M-323.4M, M-324.1M

Two Rivers Park boat launch

SA-M-324.3R



SA-M-324.3R Photo: Two Rivers Park boat launch



Site Contact

Two Rivers Park
 Land/Property Contact : Manage Two Rivers Park boat launch

 Kennewick, WA 99337
 509-531-7106

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp right on E A St
5. Turn left on S 10th Ave
6. Continue on WA-397 (Ed Hendler Brg)
7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
8. Turn left on E Finley Rd (2.2 mi)
9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Pasco Boat Basin Boat Launch SA-M-328.1L

Staging Area

Position - Location: 46° 13.162', -119° 5.490' 46° 13' 9.7", -119° 5' 29.4" 46.21937, -119.09150 Pasco

Comments: Paved staging area & boat launch next to a marina



GRP Response Strategies Served:

M-328L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	floating dock (plus marina next door)
Boat Ramp(s)	Concrete, Solid	Usable 1/2 of double ramp 7.5 degree
Cell Phone Coverage	Yes	
Estimated Lot Size		Part paved, gravel & grass 200' x 200'
Parking - Car	Other	Paved, gravel & grass 20 trailer 20 cars
Parking - Trailer	Other	Paved, gravel & grass 20 trailer 20 cars
Power	No	But marina across the street has power
Restroom	Restroom - Vault	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	No	But Marina next door has water

Pasco Boat Basin Boat Launch

SA-M-328.1L



SA-M-328.1L Photo: Pasco Boat Basin launch



Site Contact

City of Pasco Recreation Service

Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

1315 South 4th Ave
Pasco, WA 99301

Driving Directions

1. Start at US-395, Pasco WA 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397 (2.4 mi)
4. Turn right on E. Ainsworth (0.4 mi)
5. Turn left on S 2nd Ave (482 ft)
6. Turn right on E Washington St (0.1 mi)
7. Turn left on S 4th Ave (46 ft)
8. Finish at 1315 South 4th Ave, 99301. Boat launch on the left across from Columbia Marine

Clover Island boat launch SA-M-328.9R

Staging Area

Position - Location: 46° 13.034', -119° 6.955' 46° 13' 2.0", -119° 6' 57.3" 46.21724, -119.11592 Kennewick

Comments: Lighted paved lots for staging, 3 boat ramps, Marina, & ECY spill trailer at the other end of the island by USCG station



GRP Response Strategies Served:

M-329M, M-328.9R

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	1 floating dock & Marina has bdock space
Boat Ramp(s)	Concrete, Solid	3 ramps, 8 & 5 degree grades
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		3 lots total over 50,000 sq ft paved
Fuel	Yes	Marina has fuel & boom (hard & sorbents)
Parking - Car	Marked	30 cars 2 paved 1 striped, 1 gravel lot
Power	Yes	Marina next door
Restroom	Restroom - Flush	2 restrooms, next door & across st
User Fee	No	
Waste Disposal	Trash Receptacle	

Clover Island boat launch

SA-M-328.9R



SA-M-328.9R Photo: Clover Island boat launch



Site Contact

Port of Kennewick 509-586-1186
 Land/Property Contact : Manages Clover Island boat launch (they have boom)
 Kennewick, WA 99336

Nearest Address

350 Clover Island Dr.
 Kennewick, WA 99336

Driving Directions

1. Head south on US-395 S (0.7 mi)
2. Continue straight onto N Oregon Ave (2.4 mi)
3. Turn right onto E Ainsworth St (1.1 mi)
4. Turn left onto WA-397/ S10th Ave
 Continue to follow WA-397 (0.8 mi)
5. Turn right onto E Columbia Dr (0.5 mi)
6. Turn right onto N Clover Island Dr
 Destination will be on the left (0.7 mi)

Columbia Park East boat launch (Kennewick) SA-M-330.2R

Staging Area

Position - Location: 46° 13.337', -119° 8.326' 46° 13' 20.2", -119° 8' 19.6" 46.22229, -119.13877 Richland

Comments: Large lighted/paved staging area & 4 boat ramps, with 7 degree avg grade



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	3 floating docks
Boat Ramp(s)	Concrete, Solid	1 double & 2 single ramps, avg 7* grade
Cell Phone Coverage	Yes	
Parking - Car	Marked	Lined spaces for 50 cars & 100 trailers
Parking - Trailer	Marked	Lined spaces for 50 cars & 100 trailers
Power	Yes	
Restroom	Restroom - Flush	One brick restroom at launch
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In restroom & other places in park

GRP Response Strategies Served:

M-330.3R

Columbia Park East boat launch (Kennewick)

SA-M-330.2R



SA-M-330.2R Photo: Columbia Park East boat launch (Kennewick)



Site Contact

City of Kennewick Parks, Rec & Tourism
 Land/Property Contact : Manages boat launches
 Kennewick, WA 99352

Nearest Address

1106 Columbia Park Trail
 Richland, WA 99336

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Continue straight to stay on US-395 S (signs for Kennewick Pendleton) (0.2 mi)
6. Take the exit toward W Columbia Dr (0.1 mi)
7. Continue onto Columbia Park Trail (453 ft)
8. At the traffic circle, take the 1st exit and stay on Columbia Park Trail (0.2 mi)
9. At the next traffic circle, take the 2nd exit and stay on Columbia Park Trail (0.5 mi)
10. Stay on Columbia Park Trail, your destination will be on your left (0.5 mi)

Wade Park Boat Launch SA-M-331.4L

Staging Area

Position - Location: 46° 13.958', -119° 9.720' 46° 13' 57.5", -119° 9' 43.2" 46.23264, -119.16200 Pasco

Comments: Large paved lot & two boat ramps



GRP Response Strategies Served:

M-331.4L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	One floating dock
Boat Ramp(s)	Concrete, Solid	Two concrete ramps, 6 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		three lots, 2 paved 1 gravel, 65000 sq f
Parking - Car	Marked	14 cars, 4 trailers @ ramp, 2 other lots
Parking - Trailer	Marked	16 lined spaces plus additional gravel
Power	No	
Restroom	Restroom - Portable	
User Fee	No	1 No user fee but sign says open 8am-10pm
Waste Disposal	Trash Receptacle	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Wade Park Boat Launch

SA-M-331.4L



SA-M-331.4L Photo: Wade Park Boat Launch



Site Contact

City of Pasco Recreation Service
Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

601 Road 54
Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the Court St exit (0.3 mi)
3. Turn right onto W Court St (0.2 mi)
4. Turn left onto N Rd 34 (0.5 mi)
5. Turn right onto W Sylvester St (1.3 mi)
6. Turn left onto Rd 54, destination will be on the left (341 ft)

Columbia Park West **SA-M-332.8R**

Staging Area

Position - Location: 46° 13.852', -119° 11.493' 46° 13' 51.1", -119° 11' 29.6" 46.23087, -119.19155 Kennewick

Comments: Paved lighted staging area with concrete boat ramp



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	Single concrete ramp 7.5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved/lined space 22,500 sq ft
Parking - Car	Marked	Spaces for 10 cars, 15 trailers
Parking - Trailer	Marked	Spaces for 10 cars, 15 trailers
Power	Unknown	Building may be available from Kennewick
Restroom	Restroom - Portable	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Unknown	Building may be available from Kennewick

GRP Response Strategies Served:

M-332.8R

Columbia Park West

SA-M-332.8R



SA-M-332.8R Photo: Columbia Park West boat launch



Site Contact

City of Kennewick Parks, Rec & Tourism
 Primary Contact : Manages boat launches

Kennewick, WA 99352

Nearest Address

1548 N Edison St.
 Kennewick, WA 99336

Driving Directions

1. Starting at US-395 S in Pasco
2. Turn right to merge onto I-182 W/ US-12 W toward Kennewick/ Richland/ Yakima (0.5 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington240 W/ Richland (2.6 mi)
6. Take the Edison St exit (0.3 mi)
7. Turn right onto N Edison St (0.1 mi)
8. Turn right onto Columbia Park Trail (79 ft)

Chiawana Park boat launch

SA-M-333.9L

Staging Area

Position - Location: 46° 14.631', -119° 12.378' 46° 14' 37.9", -119° 12' 22.7" 46.24385, -119.20630 Pasco

Comments: Boat launch with two ramps 7degree grade, plus a park with staging area



GRP Response Strategies Served:

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 floating dock
Boat Ramp(s)	Concrete, Solid	Two concrete ramps 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Two paved & lined lots = 34,000 sq ft
Parking - Car	Marked	Spaces for 60 cars and 15 trailers
Parking - Trailer	Marked	Spaces for 60 cars and 15 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	No fee but gated
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	

Chiawana Park boat launch

SA-M-333.9L



SA-M-333.9L Photo: Chiawana Park boat launches



Site Contact

City of Pasco Recreation Service

Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

100 Chiawana Park Rd
Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
Continue to follow I-182 W (4.9 mi)
3. Take exit 9 for Rd 68 (0.4 mi)
4. Turn left onto N Rd 68 (0.8 mi)
5. Turn right onto W Argent Rd (1.3 mi)
6. Turn left onto Rd 88 (0.6 mi)
7. Turn left onto Schuman Ln/Chiawana Park Rd (0.3 mi)

Columbia Park Marina

SA-M-334R

Staging Area

Position - Location: 46° 14.286', -119° 13.149' 46° 14' 17.2", -119° 13' 8.9" 46.23810, -119.21915 Richland

Comments: Large marina with 3 public boat ramps, 7-8 degree grade, and lots of lighted parking



Location Information

Asset	Type/Status	Amount/Number
		Marina has 4 boat houses
Boat Dock(s)	Yes	Room for ~40 boats at docks
Boat Ramp(s)	Concrete, Solid	Three concrete ramps 7-8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved and striped 70,000 sq ft
Fuel	Yes	
Parking - Car	Marked	Spaces for 55 cars, 40 trailers
Parking - Trailer	Marked	Spaces for 55 cars, 40 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	
Water (potable)	Yes	

GRP Response Strategies Served:

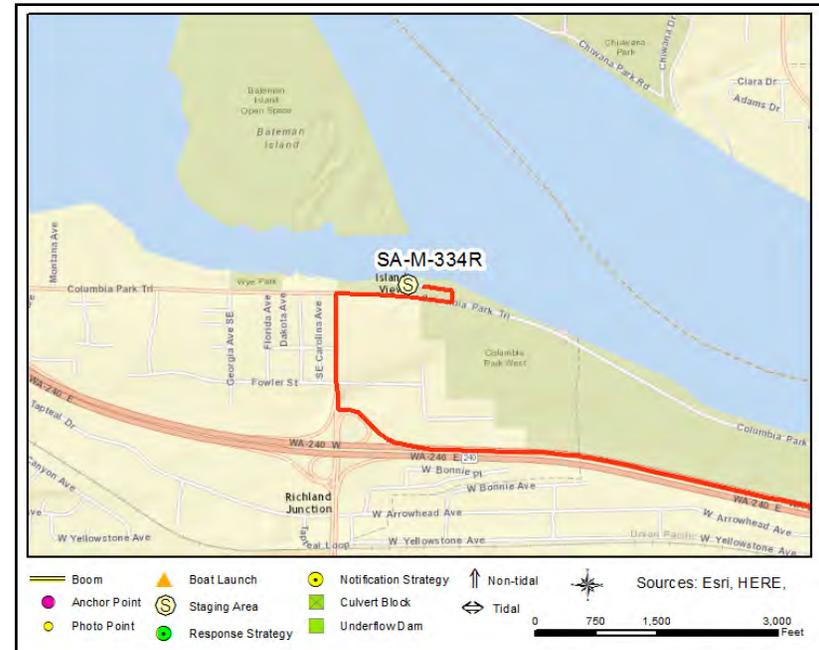
M-334.3M, M-334R

Columbia Park Marina

SA-M-334R



SA-M-334R Photo: Columbia Park Marina boat launches



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

1776 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington240 W/ Richland (4.2 mi)
6. Take the Columbia Center Blvd exit (0.2 mi)
7. Turn right on N Columbia Center Blvd (0.3 mi)
8. Turn right on Columbia Park Trail, destination will be on the left (0.3 mi)

Columbia Point Marine Park boat launch SA-M-336.4R

Staging Area

Position - Location: 46° 15.832', -119° 14.984' 46° 15' 49.9", -119° 14' 59.0" 46.26387, -119.24973 Richland

Comments: Marina & park lighted staging area with four boat ramps



GRP Response Strategies Served:

M-336.4R, M-335.8R

Location Information

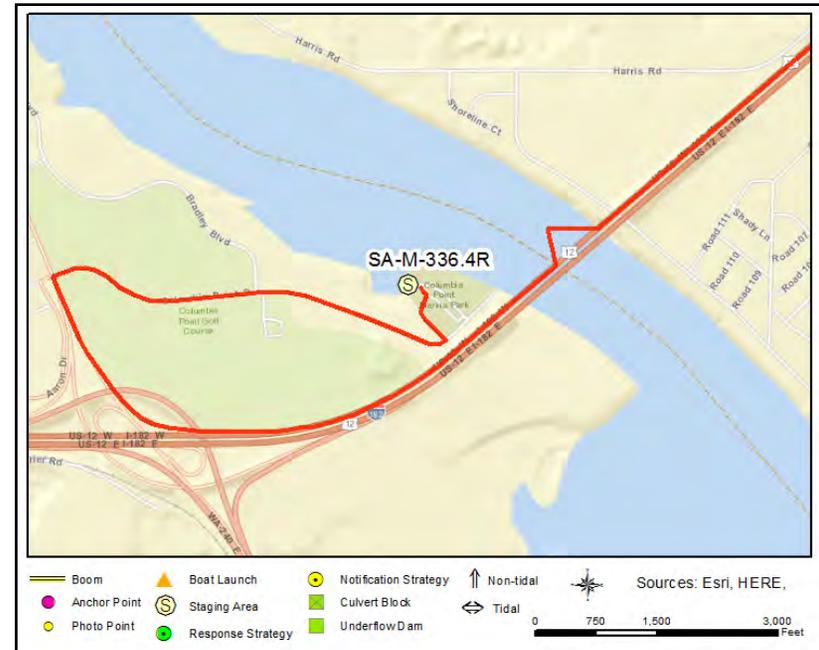
<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	dock space for ~35 boats w/o marina
Boat Ramp(s)	Concrete, Solid	Four concrete ramps 7-8 degrees
Cell Phone Coverage	Yes	4 G 4 bars
Estimated Lot Size		155,000 sq ft of paved lined parking
Fuel	Yes	Fuel dock
Parking - Car	Marked	Spaces for 65 cars and 125 trailers
Parking - Trailer	Marked	Spaces for 65 cars and 125 trailers
Power	Yes	20 amp
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	Trash receptacles and dump out station
Water (potable)	Yes	Restrooms and drinking fountains

Columbia Point Marine Park boat launch

SA-M-336.4R



SA-M-336.4R Photo: Columbia Point Marine Park boat ramps



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

660 Columbia Point Drive
 Richland, WA 99352

Driving Directions

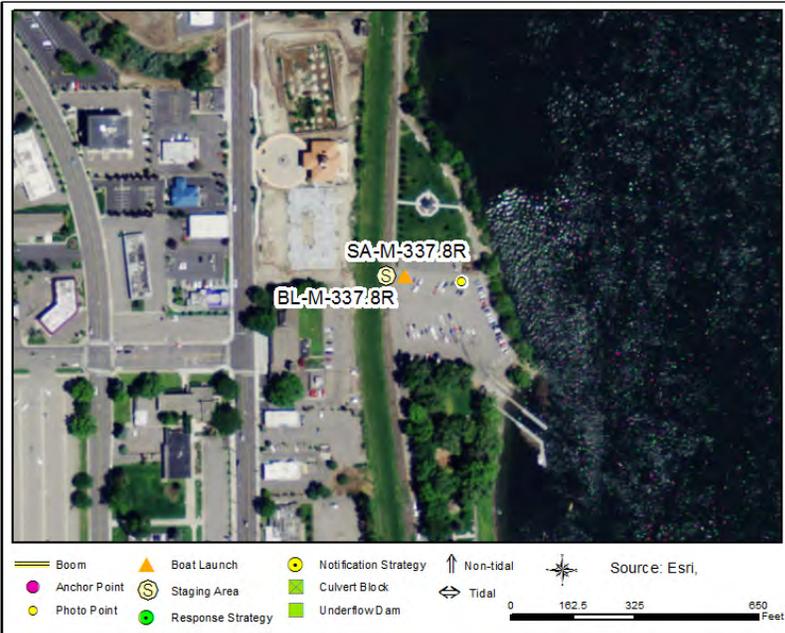
1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (0.8 mi)
4. Turn right onto Columbia Point Drive, destination will be on the left (0.8 mi)
5. Finish at 660 Columbia Point Drive, 99352

Howard Amon Park **SA-M-337.8R**

Staging Area

Position - Location: 46° 16.859', -119° 16.326' 46° 16' 51.5", -119° 16' 19.6" 46.28098, -119.27210 Richland

Comments: Paved lighted staging area and two ramps, each with a 7 degree grade



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Three floating docks
Boat Ramp(s)	Concrete, Solid	Two ramps with 7 degree grade each
Cell Phone Coverage	Yes	4 G 2 bars
Estimated Lot Size		63,000 sq ft of paved lined parking
Parking - Car	Marked	Spaces for 40 cars & 38 trailers
Parking - Trailer	Marked	Spaces for 40 cars & 38 trailers
Power	Yes	20 amp
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Water faucet located by ramps

GRP Response Strategies Served:

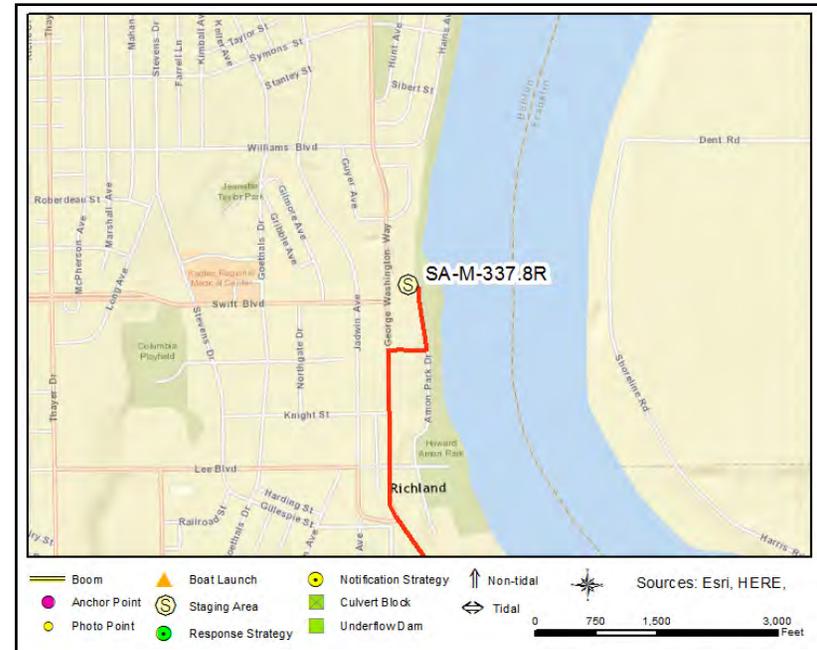
M-337.8R

Howard Amon Park

SA-M-337.8R



SA-M-337.8R Photo: Howard Amon Park boat ramps



Site Contact

City of Richland Parks and Recreation Department
 Land/Property Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

900 Amon Park Road North,
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (1.8 mi)
4. Turn right onto Newton St (486 ft)
5. Take the 1st left onto Amon Park Rd N, destination will be on the right (0.1 mi)
6. Finish at 900 Amon Park Road North,, 99352, on the right

Leslie Groves Park boat launch **SA-M-340.3R**

Staging Area

Position - Location: 46° 18.864', -119° 15.634' 46° 18' 51.8", -119° 15' 38.0" 46.31439, -119.26056 Richland

Comments: Lighted paved staging area with three concrete boat ramps



GRP Response Strategies Served:

M-340.3R

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Three concrete ramps 7-8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		63,000 sq ft of paved lined parking
Parking - Car	Marked	Paved spaces for 30 cars & 58 trailers
Parking - Trailer	Marked	Paved spaces for 30 cars & 58 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

Leslie Groves Park boat launch

SA-M-340.3R



SA-M-340.3R Photo: Leslie Groves Park boat launch



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

2 Snyder Street
 Richland, WA 99354

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (4.3 mi)
4. Turn right onto Snyder St (0.6 mi)
5. Turn right into the parking lot of the Leslie Groves Park boat launch

Selph Landing boat launch **SA-M-340.7L**

Staging Area

Position - Location: 46° 19.267', -119° 14.912' 46° 19' 16.0", -119° 14' 54.7" 46.32112, -119.24853 Pasco

Comments: Primitive launch with room for staging area



Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	Single gravel launch 8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		7,500 sq ft of gravel lot, more roadside
Parking - Car	Gravel	Space for 15 cars & 15 trailers
Parking - Trailer	Gravel	Space for 15 cars & 15 trailers
Power	No	
Restroom	Restroom - Portable	
User Fee	No	
Waste Disposal	None	None
Water (potable)	No	

GRP Response Strategies Served:

M-340.7L

Selph Landing boat launch

SA-M-340.7L



SA-M-340.7L Photo: Selph Landing primitive boat launch



Site Contact

USACE Ice Harbor pool

Primary Contact : Natural Resources Manager

Ice Harbor Dam, WA
509-547-2048

Nearest Address

10099 Selph Landing Rd
Pasco, WA 99301

Driving Directions

1. Start at US-395 S, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr
3. Turn right on W Vineyard Dr (1.2 mi)
4. Turn right on N Oregon St (0.1 mi)
5. Turn left on Selph Landing Rd (7 mi)
6. Finish at 10099 Selph Landing Rd, 99301, on the left

Sacajawea State Park boat launch **SA-MSN-1R**

Staging Area

Position - Location: 46° 12.100', -119° 2.301' 46° 12' 6.0", -119° 2' 18.1" 46.20166, -119.03835 Pasco

Comments: State park staging area and boat launch, gated & fee. Call Park Manager, Christian Ford at 509-366-5180



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Two concrete ramps, 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		40,000 sq ft of gravel parking + park
Parking - Car	Gravel	Gravel lot, room for 40 cars 20 trailers
Parking - Trailer	Gravel	Gravel lot, room for 20 trailers 40 cars
Power	Yes	
Restroom	Restroom - Flush	Mens and womens by launch, more in park
User Fee	Yes	5 \$5 launch fee
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

GRP Response Strategies Served:

M-324.6M, M-324.44M, MSN-1R, MSN-1.56R, MSN-0.8M, M-326.1M, M-324.37M

Sacajawea State Park boat launch

SA-MSN-1R



SA-MSN-1R Photo: Sacajawea State Park boat launch



Site Contact

Washington State Parks and Recreation Commission
 Primary Contact : Sacajawea State Park

Pasco, WA 99301
 509-545-2361

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Grain Terminal Rd USACE boat launch

SA-MSN-2.2L

Staging Area

Position - Location: 46° 12.642', -119° 1.070' 46° 12' 38.5", -119° 1' 4.2" 46.21070, -119.01784 Burbank

Comments: 11,00 sq ft Gravel lot by 1 concrete boat ramp, opposite side of the inlet is additional 12,325 sq ft gravel lot with bathroom



GRP Response Strategies Served:

MSN-2.1L, MSN-1.55L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Floating dock
Boat Ramp(s)	Concrete, Solid	Single concrete ramp 7 degree grade gate
Cell Phone Coverage	Yes	
Estimated Lot Size		Total of 23,500 sq ft in two lots
Parking - Car	Gravel	Room for 20 cars, 20 trailers - 2 lots
Parking - Trailer	Gravel	Room for 20 cars, 20 trailers - 2 lots
Power	No	
Restroom	Restroom - Portable	Portable by ramp, vault @other parking
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Grain Terminal Rd USACE boat launch

SA-MSN-2.2L



SA-MSN-2.2L Photo: Grain Terminal Rd USACE boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

577 S 2nd Street
 Burbank, WA 99323

Driving Directions

1. Start at 100 Hwy 12, Pasco, WA 99301
2. Go west on I-182 (US-12 W) toward 12a (1.58 miles)
3. Make U-turn and go back on I-182 (US-12 E) (4.44 miles)
4. Continue on US-12 (3.79 miles)
5. Turn right on Grain Terminal Rd (0.26 miles)
6. Turn left on 2nd Ave (0.2 miles)
7. Finish at 577 S 2nd Street, 99323, on the right

Hood Park USACE boat launch SA-MSN-2.3L

Staging Area

Position - Location: 46° 12.875', -119° 1.143' 46° 12' 52.5", -119° 1' 8.6" 46.21458, -119.01905 Burbank

Comments: Paved 41,600 sq ft lot, lighted, 3 ramps @ 6.5 degree grade with floating docks



GRP Response Strategies Served:

MSN-2.8L, MSN-8.4M, MSN-4M, MSN-4.6M

Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks & one perm dock
Boat Ramp(s)	Concrete, Solid	Three concrete ramps, 6.5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved and lined with 41,000 sq ft
Parking - Car	Marked	Paved spaces for 50 cars & 40 trailers
Parking - Trailer	Marked	Paved spaces for 50 cars & 40 trailers
Power	Yes	In campground or maint bldg
Restroom	Restroom - Portable	Additional flush toilets at campground
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In campground or maint bldg

Hood Park USACE boat launch

SA-MSN-2.3L



SA-MSN-2.3L Photo: Hood Park USACE boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

McNary Dam, OR
 541-922-2268

Nearest Address

100 Hood Park Road
 Burbank, WA 99323

Driving Directions

1. From Pasco take US-395 S
2. Turn right onto N 20th Ave (0.3 mi)
3. Turn right to merge onto I-182 E/ US12 E toward Walla Walla (1.4 mi)
4. Continue onto US-12 E (5.0 mi)
5. Take the Washington 124 exit toward Burbank/ Waitsburg (0.2 mi)
6. Keep right at the fork and merge onto Ice Harbor Dr (0.3 mi)
7. Slight right to stay on Ice Harbor Dr (0.1 mi)
8. Turn left onto Hood Park Rd- go straight to the launch at the end (0.5 mi)

Ice Harbor North Shore Recreation Area boat launch SA-SIH-9.9R

Staging Area

Position - Location: 46° 15.187', -118° 52.634' 46° 15' 11.2", -118° 52' 38.0" 46.25312, -118.87723 Pasco

Comments: Paved staging area with two 7 degree concrete boat ramps



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 One floating dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps, 7 degree grade
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		1 Paved 200 x 260 =52,000 sq ft of parking
Lot Cover (Primary)	Asphalt	Ashalt, lined
Parking - Car	Marked	12 Space for 26 trailers, 12 cars
Parking - Trailer	Marked	26 Space for 26 trailers, 12 cars
Power	No	
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

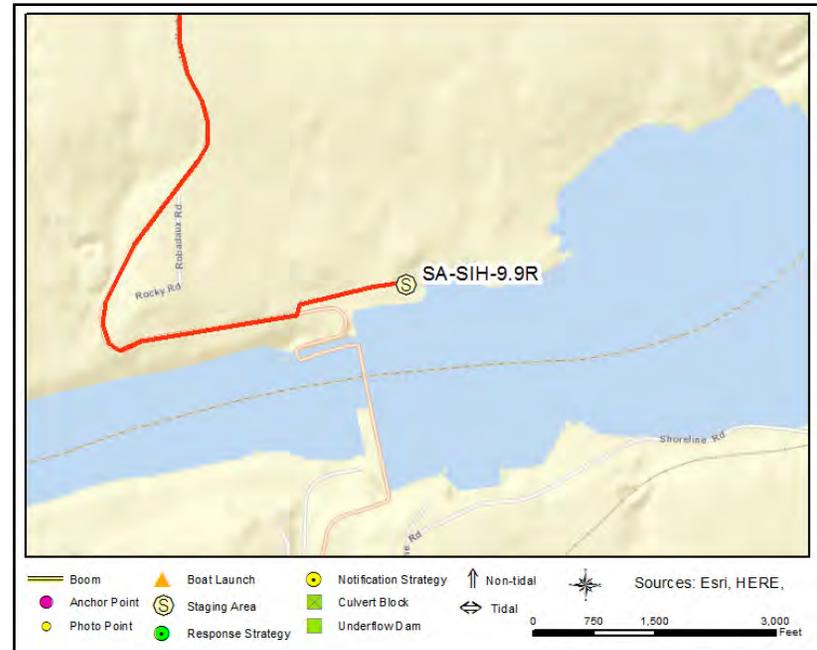
MSN-9.5R

Ice Harbor North Shore Recreation Area boat launch

SA-SIH-9.9R



SA-SIH-9.9R Photo: Ice Harbor North Shore Recreation Area and Boat Ramp



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

Ice Harbor Dam, WA
 509-547-2048

Nearest Address

1240 Ice Harbor Rd
 Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (1.7 mi)
3. Take the exit toward Kahlotus (0.4 mi)
4. Turn right onto E Lewis St (0.2 mi)
5. Continue onto Pasco Kahlotus Rd (8.9 mi)
6. Turn right onto Ice Harbor Rd, destination will be on the left (3.1 mi)

Madame Dorion Memorial Park USF&W boat launch SA-WWR-4R

Staging Area

Position - Location: 46° 3.738', -118° 54.209' 46° 3' 44.3", -118° 54' 12.5" 46.06231, -118.90348 Touchet

Comments: Gravel lot next to 1 concrete boat ramp



GRP Response Strategies Served:

WWR-4R, M-314.7L

Location Information

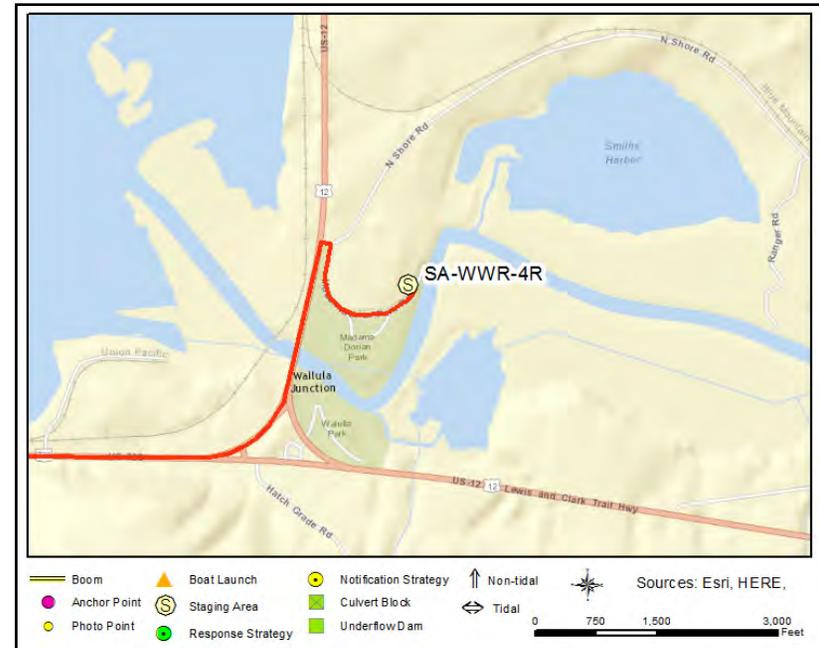
Asset	Type/Status	Amount/Number
		gravel
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	USF&W single boat ramp concrete 7 degree
Cell Phone Coverage	Yes	
Estimated Lot Size		350' x 40'=14,000 sq ft gravel lot
Parking - Car	Gravel	space for 20 cars
Parking - Trailer	Gravel	20
Power	No	
Restroom	Restroom - Portable	Portable + vault roadside
User Fee	No	ungated and no fee, open 24 hours
Waste Disposal	None	none
Water (potable)	No	

Madame Dorion Memorial Park USF&W boat launch

SA-WWR-4R



SA-WWR-4R Photo: Madam Dorion US Fish & Wildlife boat launch on the Walla Walla River (confluence at Columbia River mile 314.7)



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges
 Primary Contact : Property Contact

 Burbank, WA 99323
 509-546-8300

Nearest Address

324 Western Farmer Road
 Touchet, WA 99360

Driving Directions

1. Directions to BL-WWR-4R/Madam Dorian Memorial Park, starting in Umatilla, OR head east on US-730 E/6th St toward Eisele Dr
 Continue to follow US-730 (25.2 mi)
2. Slight left toward US-12 W (0.2 mi)
3. Turn left onto US-12 W (0.4 mi)
4. Turn right onto N Shore Rd (138 ft)
5. Take an immediate right on unnamed road for Madam Dorian boat launch on the right (0.3 mi)

Wye Park boat launch **SA-YAK-0.5R**

Staging Area

Position - Location: 46° 14.319', -119° 13.725' 46° 14' 19.1", -119° 13' 43.5" 46.23865, -119.22875 Richland

Comments: Wye Park has 1 gravel ramp 7 degree grade, & area for staging



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Small floating dock can handle 3 boats
Boat Ramp(s)	Gravel	Gravel ramp with 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		10,500 sq ft of paved parking
Parking - Car	Marked	Spaces for 10 cars
Parking - Trailer	Marked	Spaces for 4 trailers
Power	Yes	Power at restroom
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Water at restroom

GRP Response Strategies Served:

YAK-0.5R

Wye Park boat launch

SA-YAK-0.5R



SA-YAK-0.5R Photo: Wye Park boat launch



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

1600 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington240 W/ Richland (4.2 mi)
6. Take the Columbia Center Boulevard exit (0.2 mi)
7. Turn right onto N Columbia Center Blvd (0.3 mi)
8. Turn left onto Columbia Park Trail, destination will be on the right (0.2 mi)
9. Finish at 1600 Columbia Park Trail, 99352, on the right

APPENDIX 4D
Boat Launch 2-Pagers

BOAT LAUNCHES - LIST

BL-M-292.6L	BL-M-292.6R	BL-M-298.7L	BL-M-299.1L	BL-M-300L
BL-M-312.3L	BL-M-320.7L	BL-M-324.3R	BL-M-328.1L	BL-M-328.9R
BL-M-330.2R	BL-M-331.4L	BL-M-332.8R	BL-M-333.9L	BL-M-334R
BL-M-336.4R	BL-M-337.8R	BL-M-340.3R	BL-M-340.7L	BL-MSN-1R
BL-MSN-2.2L	BL-MSN-2.3L	BL-SIH-9.9R	BL-WWR-4R	BL-YAK-0.5R

McNary South Shore boat launch

BL-M-292.6L

Boat Launch Location

Position - Location: 45° 55.633', -119° 17.422' 45° 55' 38.0", -119° 17' 25.3" 45.92721, -119.29036 Umatilla

Comments: USACE paved, lighted lot & three boat ramps 7.5 degree avg grade



GRP Response Strategies Served:

M-292.7M, M-292.6L

Location Information

Asset	Type/Status	Amount/Number
		2 Gravel and paved
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	3 Concrete ramps 7-6.5 degree grade double
Cell Phone Coverage	Yes	
Estimated Lot Size		2 Lots, gravel 70,000' & 25000' paved
Parking - Car	Gravel	Room for 100 cars & 50 trailers
Parking - Trailer	Marked	Gravel lot 100 cars or 50 trailers
Power	No	
Restroom	Restroom - Vault	Two buildings w/ mens and womens stalls
User Fee	No	USACE with gates which are always open
Waste Disposal	Trash Receptacle	dumpsters
Water (potable)	No	
Water (potable)	No	

McNary South Shore boat launch

BL-M-292.6L



SA-M-292.6L Photo: South Shore McNary double boat ramp



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

McNary Dam, OR
 541-922-2268

Nearest Address

100 Launch Lane
 Umatilla, OR 97882

Driving Directions

1. Starting at I-82 take Exit 1 toward 6th Street
2. Turn right onto 6th St (0.7 mi)
3. Turn left onto Devore Rd (0.7 mi)
4. Turn right toward Deschutes Ave (171 ft)
5. Continue onto Deschutes Ave (0.1 mi)
6. Turn left (20 ft)
7. Turn right (312 ft), destination will be on the left

McNary Dam North Shore boat launch

BL-M-292.6R

Boat Launch Location

Position - Location: 45° 56.627', -119° 17.936' 45° 56' 37.6", -119° 17' 56.2" 45.94378, -119.29894 Kennewick

Comments: Paved USACE staging area and concrete boat ramp



Location Information

Asset	Type/Status	Amount/Number
Boat Ramp(s)	Concrete, Solid	Single ramp 8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		77,000 sq ft
Parking - Car	Gravel	77,000' sq gravel lot, space for 50 cars
Parking - Trailer	Gravel	Large gravel lot, 77,000' sq
Power	No	
Restroom	Restroom - Vault	1
User Fee	No	
Waste Disposal	Trash Receptacle	Trash cans & dumpster
Water (potable)	No	

GRP Response Strategies Served:

M-293.7R, M-292.63R, M-292.6R, M-292.65R

McNary Dam North Shore boat launch

BL-M-292.6R



SA-M-292.6R Photo: North Shore McNary Dam boat launch



Site Contact

USACE McNary pool

Primary Contact : Natural Resource Manager

McNary Dam, OR
541-922-2268

Nearest Address

81226 Mc Nary Rd
Kennewick, WA 99338

Driving Directions

1. Starting at I-82 take Exit 131
2. Head north on Exit 131 toward WA-14 W (0.2 mi)
3. Turn right on McNary Rd (1.0 mi)
4. Keep right on McNary Rd, your destination will be on the left (0.7 mi)
5. Finish at 81226 Mc Nary Rd, 99338, on the right

Hat Rock State Park boat launch BL-M-298.7L

Boat Launch Location

Position - Location: 45° 55.062', -119° 10.467' 45° 55' 3.7", -119° 10' 28.0" 45.91770, -119.17445 Hermiston

Comments: Paved staging area, 2 concrete boat ramps 7.4 degree grade



GRP Response Strategies Served:

M-305.9L, M-298.7L, M-299.9R

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Double ramp 7.4 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		87,000 sq ft of paved and lined parking
Parking - Car	Marked	100 paved and striped spaces for cars
Parking - Trailer	Marked	50 paved/striped trailer spaces, 2 lots
Power	Yes	In brick restroom in adjacent lot
Restroom	Restroom - Flush	One flush bathroom & one vault (by ramp)
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In brick restroom in adjacent lot

Hat Rock State Park boat launch

BL-M-298.7L



SA-M-298.7L Photo: Hat Rock State Park boat launch



Site Contact

Hat Rock State Park
 Primary Contact : Hat Rock SP manger of boat launch

 Hermiston, OR 97838
 541-983-2277

Nearest Address

82200 Hat Rock Rd
 Hermiston, OR 97838

Driving Directions

1. From Pasco take US-395 S
2. Take the exit onto US-12 E toward Walla Walla (16.8 mi)
3. Slight right toward US-730 W (0.2 mi) watch for signs for US 730 W/ Pendleton
4. Slight right onto US-730 W Entering Oregon (17.1 mi)
5. Turn right onto Hat Rock Rd and continue to the end (1 mi)

McNary Yacht Club boat launch

BL-M-299.1L

Boat Launch Location

Position - Location: 45° 55.202', -119° 9.882' 45° 55' 12.1", -119° 9' 52.9" 45.92003, -119.16470 Hermiston

Comments: Marina staging area and launch with one concrete ramp



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Marina is private - need permission
Boat Ramp(s)	Concrete, Solid	USACE public, single ramp 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		12,500 sq ft by launch and more roadside
Fuel	Yes	Marina is private - need permission
Power	Yes	Marina is private - need permission
Restroom	Restroom - Flush	Marina is private - need permission
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Marina is private - need permission

GRP Response Strategies Served:

M-299.2L, M-299.8L, M-299.5M, M-301.5L, M-301.6L, M-301.1L, M-299.4L

McNary Yacht Club boat launch

BL-M-299.1L



SA-M-299.1L Photo: McNary Yacht Club (USACE) public boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

34099 Beach Shore Drive
 Hermiston, OR 97838

Driving Directions

1. Start at I-82, Umatilla, OR 97882
2. Get off on Exit 1 going east on US-730/6th St (7.9 mi)
3. Make sharp left on Hat Rock State Park Rd (0.7 mi)
4. Bear right on Beach Shore Dr (0.2 mi)
5. Continue straight to finish at 34099 Beach Shore Drive, 97838

Warehouse Beach Rec Area boat launch BL-M-300L

Boat Launch Location

Position - Location: 45° 55.175', -119° 8.594' 45° 55' 10.5", -119° 8' 35.7" 45.91958, -119.14324 Hermiston

Comments: Primitive launch with gravel ramp & staging area



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp(s)	Gravel	Primitive 7 degree gravel ramp
Estimated Lot Size		Three gravel lots, 25,000 sq ft
Parking - Car	Gravel	Two gravel lots 20 cars 10 trailers
Parking - Trailer	Gravel	Two gravel lots 20 cars 10 trailers
Power	No	
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

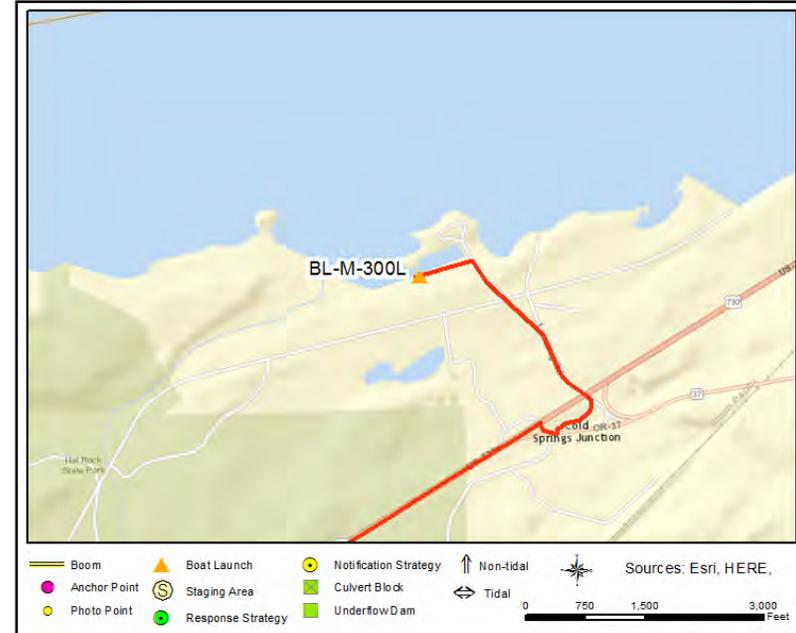
M-300.3L, M-300L, M-300.9L, M-302.3R

Warehouse Beach Rec Area boat launch

BL-M-300L



SA-M-300L Photo: USACE Warehouse Beach Rec Area boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

100 Landing Rd
 Hermiston, OR 97838

Driving Directions

1. Starting at I-82 in Umatilla, OR
2. Turn left onto US-395 S/ US-730 E/6th St (signs for Mc Nary Dam/ Hermiston)
 Continue to follow US-730 E (9.2 mi)
3. Slight right onto OR-37 S (0.2 mi)
4. Turn left onto Landing Rd, Warehouse Beach Recreation Area will be on the right (0.6 mi)

Walla Walla Yacht Club **BL-M-312.3L**

Boat Launch Location

Position - Location: 46° 1.585', -118° 56.196' 46° 1' 35.1", -118° 56' 11.7" 46.02641, -118.93659 Touchet

Comments: Paved staging area, private marina & USACE boat launch 9 degree grade



GRP Response Strategies Served:

M-311.9R, M-312L, M-309.8R, M-310.3R, M-308.8R, M-311.4R

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 floating docks (+additional marina)
Boat Ramp(s)	Concrete, Solid	USACE 1 public ramp 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		200,000 sq ftt gravel & grass lot
Fuel	Yes	
Parking - Car	Gravel	gravel & grass lot, space for 40 cars
Parking - Trailer	Gravel	gravel & grass lot, space for 20 trailer
Power	Yes	Private marina - need permission
Restroom	Restroom - Portable	1
User Fee	No	Ramp is public USACE (marina is private)
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Private marina, need permission

Walla Walla Yacht Club

BL-M-312.3L



SA-M-312.3L Photo: Walla Walla Yacht Club, USACE boat launch



Site Contact

Walla Walla Yacht Club
 Land/Property Contact : Manages Marina@ USACE's Walla Walla boat launch

 Kennewick, WA 99337
 509-547-4946

Nearest Address

299 Port Kelly Road
 Touchet, WA 99360

Driving Directions

1. Directions to SA-M-312.3L/Walla Walla Yacht Club, starting at 1800 6th St, Umatilla, OR 97882
2. Go east on US-730 (6th St) (21.65 miles)
3. Make sharp left on Port Kelly Rd (0.26 miles)
4. Turn right and pass the grainary, finish at the Walla Walla Yacht Club on the right

Casey Pond Boat Launch, McNary Wildlife Refuge **BL-M-320.7L**

Boat Launch Location

Position - Location: 46° 9.680', -118° 57.297' 46° 9' 40.8", -118° 57' 17.8" 46.16133, -118.95495 Burbank

Comments: Staging area and concrete boat launch



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	single concrete ramp 6.8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		150' x 150'=22500 sq ft gravel lot
Lot Cover (Primary)	Asphalt	gravel lot
Parking - Car	Gravel	30
Parking - Trailer	Gravel	30
Power	No	
Restroom	None	none
User Fee	No	gated open sunrise/sunset - bolt cutters
Waste Disposal	None	none
Water (potable)	No	

GRP Response Strategies Served:

M-318.3R, M-320.7L, M-317L, M-317.8M, M-317.5R, M-320.6L, M-319.2M

Casey Pond Boat Launch, McNary Wildlife Refuge

BL-M-320.7L



SA-M-320.7L Photo: Casey Pond Boat Ramp, McNary Wildlife Refuge



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges
 Primary Contact : Property Contact

 Burbank, WA 99323
 509-546-8300

Nearest Address

2955 Hanson Loop Rd
 Burbank, WA 99323

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp left onto ramp to I-182/US-12 E
5. Continue on I-182/US-12 E (1.4 mi)
6. Continue on US-12 (8.2 mi)
7. Make sharp right on Hanson Loop Rd (0.3 mi)
8. Take the second gravel drive on the left (just before the road curves and the blue line on the attached map ends), go through the gate to the end of the gravel road (0.9 mi).

Two Rivers Park boat launch **BL-M-324.3R**

Boat Launch Location

Position - Location: 46° 11.051', -119° 1.951' 46° 11' 3.1", -119° 1' 57.1" 46.18419, -119.03252 Kennewick

Comments: Lighted gravel lot (staging area) with 2 concrete boat ramps, 8 degree grade



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	3 floating docks
Boat Ramp(s)	Concrete, Solid	2 concrete ramps, 7.5 & 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		200' x 150'=30,000 sq ft of gravel lot
Parking - Car	Gravel	gravel lot 15 trailers, 20 cars
Parking - Trailer	Gravel	gravel lot 15 trailers, 20 cars
Power	No	
Restroom	Restroom - Portable	
User Fee	No	gated, may need bolt cutters
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

M-322.6M, M-323.9M, M-323.2R , M-323.5M, M-325.7R, M-324.8R, M-325.6R, M-323.2M, M-323.4M, M-325.5R, M-324.1M

Two Rivers Park boat launch

BL-M-324.3R



SA-M-324.3R Photo: Two Rivers Park boat launch



Site Contact

Two Rivers Park
 Land/Property Contact : Manage Two Rivers Park boat launch

 Kennewick, WA 99337
 509-531-7106

Nearest Address

220880 East Finley Road
 Kennewick, WA 99337

Driving Directions

1. Start at US-395, pasco, wa 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397
4. Make sharp right on E A St
5. Turn left on S 10th Ave
6. Continue on WA-397 (Ed Hendler Brg)
7. At fork keep left on WA-397 (N Gum St/turns into E Chemical Dr)
8. Turn left on E Finley Rd (2.2 mi)
9. Turn left onto gravel road at 220880 East Finley Road (just before S. Stevens Dr), follow gravel road to the end (0.2 mi)

Pasco Boat Basin Boat Launch

BL-M-328.1L

Boat Launch Location

Position - Location: 46° 13.162', -119° 5.490' 46° 13' 9.7", -119° 5' 29.4" 46.21937, -119.09150 Pasco

Comments: Paved staging area & boat launch next to a marina



GRP Response Strategies Served:

M-328.4L, M-327.1L, M-326.5L, M-328L, M-325.89L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	floating dock (plus marina next door)
Boat Ramp(s)	Concrete, Solid	Usable 1/2 of double ramp 7.5 degree
Cell Phone Coverage	Yes	
Estimated Lot Size		Part paved, gravel & grass 200' x 200'
Parking - Car	Other	Paved, gravel & grass 20 trailer 20 cars
Parking - Trailer	Other	Paved, gravel & grass 20 trailer 20 cars
Power	No	But marina across the street has power
Restroom	Restroom - Vault	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	No	But Marina next door has water

Pasco Boat Basin Boat Launch

BL-M-328.1L



SA-M-328.1L Photo: Pasco Boat Basin launch



Site Contact

City of Pasco Recreation Service

Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

1315 South 4th Ave
Pasco, WA 99301

Driving Directions

1. Start at US-395, Pasco WA 99301
2. Go south on US-395 toward W Vineyard Dr
3. Continue on WA-397 (2.4 mi)
4. Turn right on E. Ainsworth (0.4 mi)
5. Turn left on S 2nd Ave (482 ft)
6. Turn right on E Washington St (0.1 mi)
7. Turn left on S 4th Ave (46 ft)
8. Finish at 1315 South 4th Ave, 99301. Boat launch on the left across from Columbia Marine

Clover Island boat launch BL-M-328.9R

Boat Launch Location

Position - Location: 46° 13.034', -119° 6.955' 46° 13' 2.0", -119° 6' 57.3" 46.21724, -119.11592 Kennewick

Comments: Lighted paved lots for staging, 3 boat ramps, Marina, & ECY spill trailer at the other end of the island by USCG station



GRP Response Strategies Served:

M-329M, M-328.9R

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 floating dock & Marina has bdock space
Boat Ramp(s)	Concrete, Solid	3 ramps, 8 & 5 degree grades
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		3 lots total over 50,000 sq ft paved
Fuel	Yes	Marina has fuel & boom (hard & sorbents)
Parking - Car	Marked	30 cars 2 paved 1 striped, 1 gravel lot
Power	Yes	Marina next door
Restroom	Restroom - Flush	2 restrooms, next door & across st
User Fee	No	
Waste Disposal	Trash Receptacle	

Clover Island boat launch

BL-M-328.9R



SA-M-328.9R Photo: Clover Island boat launch



Site Contact

Port of Kennewick 509-586-1186
 Land/Property Contact : Manages Clover Island boat launch (they have boom)
 Kennewick, WA 99336

Nearest Address

350 Clover Island Dr.
 Kennewick, WA 99336

Driving Directions

1. Head south on US-395 S (0.7 mi)
2. Continue straight onto N Oregon Ave (2.4 mi)
3. Turn right onto E Ainsworth St (1.1 mi)
4. Turn left onto WA-397/ S10th Ave
Continue to follow WA-397 (0.8 mi)
5. Turn right onto E Columbia Dr (0.5 mi)
6. Turn right onto N Clover Island Dr
Destination will be on the left (0.7 mi)

Columbia Park East boat launch (Kennewick)

BL-M-330.2R

Boat Launch Location

Position - Location: 46° 13.337', -119° 8.326' 46° 13' 20.2", -119° 8' 19.6" 46.22229, -119.13877 Richland

Comments: Large lighted/paved staging area & 4 boat ramps, with 7 degree avg grade



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	3 floating docks
Boat Ramp(s)	Concrete, Solid	1 double & 2 single ramps, avg 7* grade
Cell Phone Coverage	Yes	
Parking - Car	Marked	Lined spaces for 50 cars & 100 trailers
Parking - Trailer	Marked	Lined spaces for 50 cars & 100 trailers
Power	Yes	
Restroom	Restroom - Flush	One brick restroom at launch
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In restroom & other places in park

GRP Response Strategies Served:

M-330.3R

Columbia Park East boat launch (Kennewick)

BL-M-330.2R



SA-M-330.2R Photo: Columbia Park East boat launch (Kennewick)



Site Contact

City of Kennewick Parks, Rec & Tourism
 Land/Property Contact : Manages boat launches
 Kennewick, WA 99352

Nearest Address

1106 Columbia Park Trail
 Richland, WA 99336

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Continue straight to stay on US-395 S (signs for Kennewick Pendleton) (0.2 mi)
6. Take the exit toward W Columbia Dr (0.1 mi)
7. Continue onto Columbia Park Trail (453 ft)
8. At the traffic circle, take the 1st exit and stay on Columbia Park Trail (0.2 mi)
9. At the next traffic circle, take the 2nd exit and stay on Columbia Park Trail (0.5 mi)
10. Stay on Columbia Park Trail, your destination will be on your left (0.5 mi)

Wade Park Boat Launch BL-M-331.4L

Boat Launch Location

Position - Location: 46° 13.958', -119° 9.720' 46° 13' 57.5", -119° 9' 43.2" 46.23264, -119.16200 Pasco

Comments: Large lighted paved lot & two boat ramps



GRP Response Strategies Served:

M-331.4L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	One floating dock
Boat Ramp(s)	Concrete, Solid	Two concrete ramps, 6 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		three lots, 2 paved 1 gravel, 65000 sq f
Parking - Car	Marked	14 cars, 4 trailers @ ramp, 2 other lots
Parking - Trailer	Marked	16 lined spaces plus additional gravel
Power	No	
Restroom	Restroom - Portable	
User Fee	No	1 No user fee but sign says open 8am-10pm
Waste Disposal	Trash Receptacle	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Wade Park Boat Launch

BL-M-331.4L



SA-M-331.4L Photo: Wade Park Boat Launch



Site Contact

City of Pasco Recreation Service

Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

601 Road 54
Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the Court St exit (0.3 mi)
3. Turn right onto W Court St (0.2 mi)
4. Turn left onto N Rd 34 (0.5 mi)
5. Turn right onto W Sylvester St (1.3 mi)
6. Turn left onto Rd 54, destination will be on the left (341 ft)

Columbia Park West

BL-M-332.8R

Boat Launch Location

Position - Location: 46° 13.852', -119° 11.493' 46° 13' 51.1", -119° 11' 29.6" 46.23087, -119.19155 Kennewick

Comments: Paved lighted staging area with concrete boat ramp, 7.5 degree grade and an anchor point



GRP Response Strategies Served:

M-332.8R

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	Single concrete ramp 7.5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved/lined space 22,500 sq ft
Parking - Car	Marked	Spaces for 10 cars, 15 trailers
Parking - Trailer	Marked	Spaces for 10 cars, 15 trailers
Power	Unknown	Building may be available from Kennewick
Restroom	Restroom - Portable	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Unknown	Building may be available from Kennewick

Columbia Park West

BL-M-332.8R



SA-M-332.8R Photo: Columbia Park West boat launch



Site Contact

City of Kennewick Parks, Rec & Tourism
 Primary Contact : Manages boat launches

 Kennewick, WA 99352

Nearest Address

1548 N Edison St.
 Kennewick, WA 99336

Driving Directions

1. Starting at US-395 S in Pasco
2. Turn right to merge onto I-182 W/ US12 W toward Kennewick/ Richland/ Yakima (0.5 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/ Richland (2.6 mi)
6. Take the Edison St exit (0.3 mi)
7. Turn right onto N Edison St (0.1 mi)
8. Turn right onto Columbia Park Trail (79 ft)

Chiawana Park boat launch

BL-M-333.9L

Boat Launch Location

Position - Location: 46° 14.631', -119° 12.378' 46° 14' 37.9", -119° 12' 22.7" 46.24385, -119.20630 Pasco

Comments: Boat launch with two ramps 7degree grade, plus a park with staging area



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 floating dock
Boat Ramp(s)	Concrete, Solid	Two concrete ramps 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Two paved & lined lots = 34,000 sq ft
Parking - Car	Marked	Spaces for 60 cars and 15 trailers
Parking - Trailer	Marked	Spaces for 60 cars and 15 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	No fee but gated
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	

GRP Response Strategies Served:

M-334.5L

Chiawana Park boat launch

BL-M-333.9L



SA-M-333.9L Photo: Chiawana Park boat launches



Site Contact

City of Pasco Recreation Service

Land/Property Contact :

Pasco, WA 99301
509-545-3456

Nearest Address

100 Chiawana Park Rd
Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
Continue to follow I-182 W (4.9 mi)
3. Take exit 9 for Rd 68 (0.4 mi)
4. Turn left onto N Rd 68 (0.8 mi)
5. Turn right onto W Argent Rd (1.3 mi)
6. Turn left onto Rd 88 (0.6 mi)
7. Turn left onto Schuman Ln/Chiawana Park Rd (0.3 mi)

Columbia Park Marina **BL-M-334R**

Boat Launch Location

Position - Location: 46° 14.286', -119° 13.149' 46° 14' 17.2", -119° 13' 8.9" 46.23810, -119.21915 Richland

Comments: Large marina with 3 public boat ramps, 7-8 degree grade, and lots of lighted parking



Location Information

Asset	Type/Status	Amount/Number
		Marina has 4 boat houses
Boat Dock(s)	Yes	Room for ~40 boats at docks
Boat Ramp(s)	Concrete, Solid	Three concrete ramps 7-8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved and striped 70,000 sq ft
Fuel	Yes	
Parking - Car	Marked	Spaces for 55 cars, 40 trailers
Parking - Trailer	Marked	Spaces for 55 cars, 40 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	
Water (potable)	Yes	

GRP Response Strategies Served:

M-334.3M, M-334R

Columbia Park Marina

BL-M-334R



SA-M-334R Photo: Columbia Park Marina boat launches



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

1776 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/ Richland (4.2 mi)
6. Take the Columbia Center Blvd exit (0.2 mi)
7. Turn right on N Columbia Center Blvd (0.3 mi)
8. Turn right on Columbia Park Trail, destination will be on the left (0.3 mi)

Columbia Point Marine Park boat launch

BL-M-336.4R

Boat Launch Location

Position - Location: 46° 15.832', -119° 14.984' 46° 15' 49.9", -119° 14' 59.0" 46.26387, -119.24973 Richland

Comments: Marina & park lighted staging area with four boat ramps, each has a 7 degree grade



GRP Response Strategies Served:

M-336.1R, M-336.4R, M-335.8R

Location Information

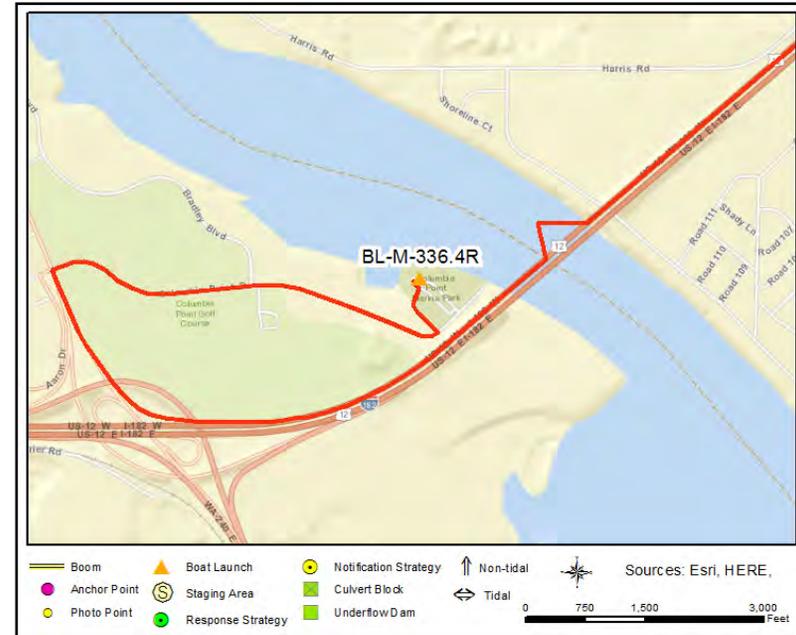
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	dock space for ~35 boats w/o marina
Boat Ramp(s)	Concrete, Solid	Four concrete ramps 7-8 degrees
Cell Phone Coverage	Yes	4 G 4 bars
Estimated Lot Size		155,000 sq ft of paved lined parking
Fuel	Yes	Fuel dock
Parking - Car	Marked	Spaces for 65 cars and 125 trailers
Parking - Trailer	Marked	Spaces for 65 cars and 125 trailers
Power	Yes	20 amp
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	Trash receptacles and dump out station
Water (potable)	Yes	Restrooms and drinking fountains

Columbia Point Marine Park boat launch

BL-M-336.4R



SA-M-336.4R Photo: Columbia Point Marine Park boat ramps



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

660 Columbia Point Drive
 Richland, WA 99352

Driving Directions

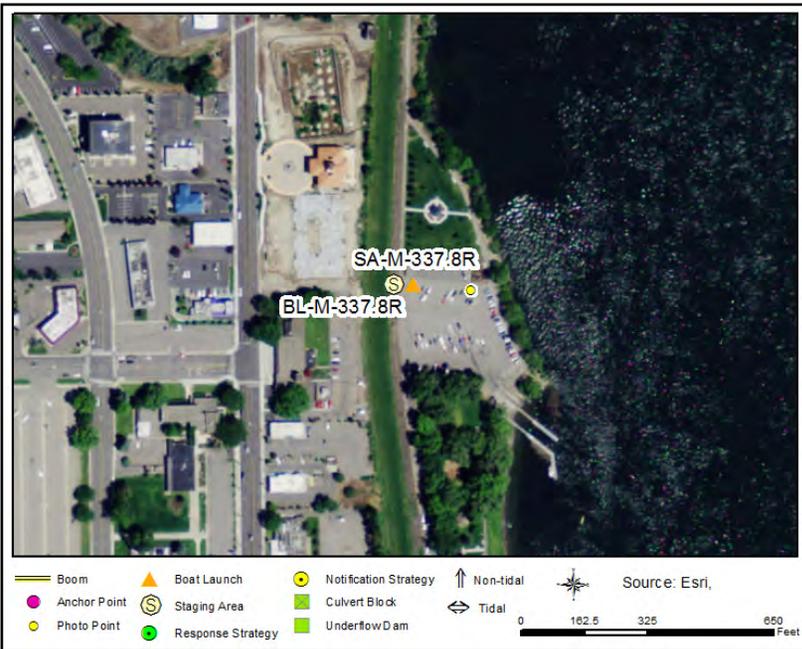
1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (0.8 mi)
4. Turn right onto Columbia Point Drive, destination will be on the left (0.8 mi)
5. Finish at 660 Columbia Point Drive, 99352

Howard Amon Park **BL-M-337.8R**

Boat Launch Location

Position - Location: 46° 16.859', -119° 16.326' 46° 16' 51.5", -119° 16' 19.6" 46.28098, -119.27210 Richland

Comments: Paved lighted staging area and two ramps, each with a 7 degree grade



GRP Response Strategies Served:

M-337.8R, M-337.3R

Location Information

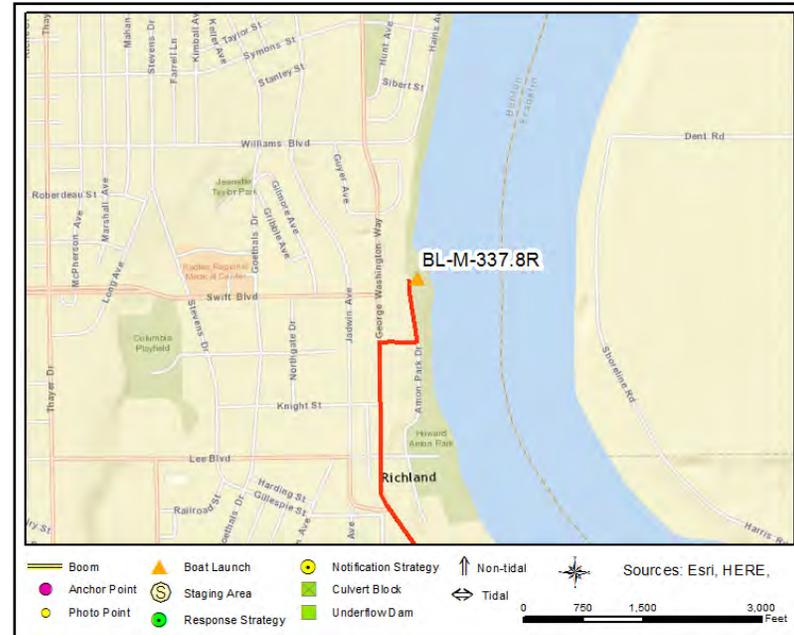
<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Three floating docks
Boat Ramp(s)	Concrete, Solid	Two ramps with 7 degree grade each
Cell Phone Coverage	Yes	4 G 2 bars
Estimated Lot Size		63,000 sq ft of paved lined parking
Parking - Car	Marked	Spaces for 40 cars & 38 trailers
Parking - Trailer	Marked	Spaces for 40 cars & 38 trailers
Power	Yes	20 amp
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Water faucet located by ramps

Howard Amon Park

BL-M-337.8R



SA-M-337.8R Photo: Howard Amon Park boat ramps



Site Contact

City of Richland Parks and Recreation Department
 Land/Property Contact : Manages this boat launch

 Richland, WA 99352
 509-942-7529

Nearest Address

900 Amon Park Road North,
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (1.8 mi)
4. Turn right onto Newton St (486 ft)
5. Take the 1st left onto Amon Park Rd N, destination will be on the right (0.1 mi)
6. Finish at 900 Amon Park Road North,, 99352, on the right

Leslie Groves Park boat launch **BL-M-340.3R**

Boat Launch Location

Position - Location: 46° 18.864', -119° 15.634' 46° 18' 51.8", -119° 15' 38.0" 46.31439, -119.26056 Richland

Comments: Lighted paved staging area with three concrete boat ramps



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Three concrete ramps 7-8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		63,000 sq ft of paved lined parking
Parking - Car	Marked	Paved spaces for 30 cars & 58 trailers
Parking - Trailer	Marked	Paved spaces for 30 cars & 58 trailers
Power	Yes	
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

GRP Response Strategies Served:

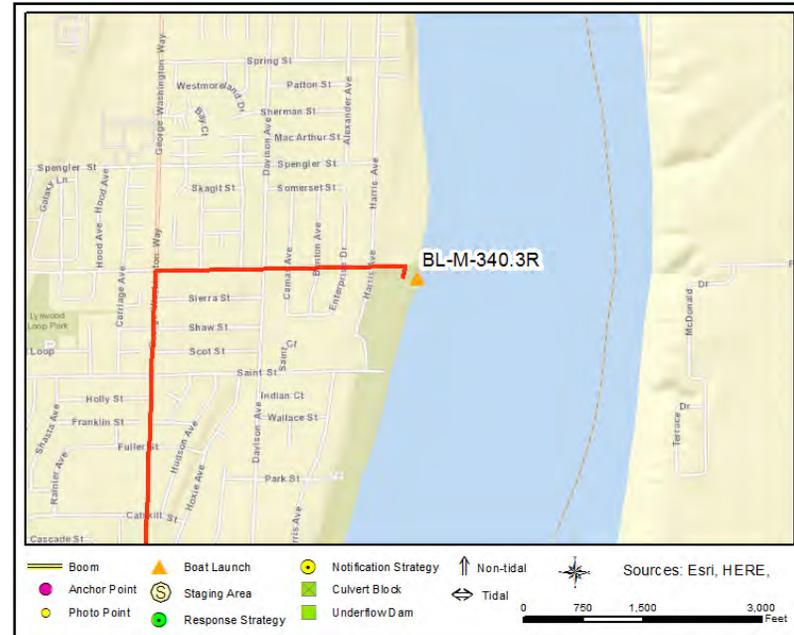
M-342.8R, M-340.3R

Leslie Groves Park boat launch

BL-M-340.3R



SA-M-340.3R Photo: Leslie Groves Park boat launch



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

2 Snyder Street
 Richland, WA 99354

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (9.2 mi)
3. Take exit 5B to merge onto George Washington Way (4.3 mi)
4. Turn right onto Snyder St (0.6 mi)
5. Turn right into the parking lot of the Leslie Groves Park boat launch

Selph Landing boat launch **BL-M-340.7L**

Boat Launch Location

Position - Location: 46° 19.267', -119° 14.912' 46° 19' 16.0", -119° 14' 54.7" 46.32112, -119.24853 Pasco

Comments: Primitive launch, gravel ramp 8 degree grade, with room for staging area



Location Information

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp(s)	Gravel	Single gravel launch 8 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		7,500 sq ft of gravel lot, more roadside
Parking - Car	Gravel	Space for 15 cars & 15 trailers
Parking - Trailer	Gravel	Space for 15 cars & 15 trailers
Power	No	
Restroom	Restroom - Portable	
User Fee	No	
Waste Disposal	None	None
Water (potable)	No	

GRP Response Strategies Served:

M-340.7L

Selph Landing boat launch

BL-M-340.7L



SA-M-340.7L Photo: Selph Landing primitive boat launch



Site Contact

USACE Ice Harbor pool

Primary Contact : Natural Resources Manager

Ice Harbor Dam, WA
509-547-2048

Nearest Address

10099 Selph Landing Rd
Pasco, WA 99301

Driving Directions

1. Start at US-395 S, Pasco, WA 99301
2. Go south on US-395 toward W Vineyard Dr
3. Turn right on W Vineyard Dr (1.2 mi)
4. Turn right on N Oregon St (0.1 mi)
5. Turn left on Selph Landing Rd (7 mi)
6. Finish at 10099 Selph Landing Rd, 99301, on the left

Sacajawea State Park boat launch **BL-MSN-1R**

Boat Launch Location

Position - Location: 46° 12.100', -119° 2.301' 46° 12' 6.0", -119° 2' 18.1" 46.20166, -119.03835 Pasco

Comments: State park staging area and boat launch, gated & fee. Call Park Manager, Christian Ford at 509-366-5180



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Two floating docks
Boat Ramp(s)	Concrete, Solid	Two concrete ramps, 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		40,000 sq ft of gravel parking + park
Parking - Car	Gravel	Gravel lot, room for 40 cars 20 trailers
Parking - Trailer	Gravel	Gravel lot, room for 20 trailers 40 cars
Power	Yes	
Restroom	Restroom - Flush	Mens and womens by launch, more in park
User Fee	Yes	5 \$5 launch fee
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	

GRP Response Strategies Served:

M-325.6L, M-324.6M, M-324.44M, MSN-1R, MSN-1.56R, MSN-0.8M, M-326.1M, M-324.37M

Sacajawea State Park boat launch

BL-MSN-1R



SA-MSN-1R Photo: Sacajawea State Park boat launch



Site Contact

Washington State Parks and Recreation Commission
 Primary Contact : Sacajawea State Park

 Pasco, WA 99301
 509-545-2361

Nearest Address

2503 Sacajawea Park Road
 Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (3.8 mi)
3. Turn right onto Sacajawea Park Rd. (1.9 mi watch for signs for the park)
4. Turn left into the park (0.1 mi) at 2503 Sacajawea Park Rd, Pasco, WA99301

Grain Terminal Rd USACE boat launch

BL-MSN-2.2L

Boat Launch Location

Position - Location: 46° 12.642', -119° 1.070' 46° 12' 38.5", -119° 1' 4.2" 46.21070, -119.01784 Burbank

Comments: 1 concrete boat ramp, gated, open 4am-10pm, daily between Sept 15 and May 15. Shallow water vessels only



GRP Response Strategies Served:

MSN-2.1L, MSN-1.55L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Floating dock
Boat Ramp(s)	Concrete, Solid	Single concrete ramp 7 degree grade gate
Cell Phone Coverage	Yes	
Estimated Lot Size		Total of 23,500 sq ft in two lots
Parking - Car	Gravel	Room for 20 cars, 20 trailers - 2 lots
Parking - Trailer	Gravel	Room for 20 cars, 20 trailers - 2 lots
Power	No	
Restroom	Restroom - Portable	Portable by ramp, vault @other parking
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Grain Terminal Rd USACE boat launch

BL-MSN-2.2L



SA-MSN-2.2L Photo: Grain Terminal Rd USACE boat launch



Site Contact

USACE McNary pool

Primary Contact : Natural Resource Manager

McNary Dam, OR
541-922-2268

Nearest Address

577 S 2nd Street
Burbank, WA 99323

Driving Directions

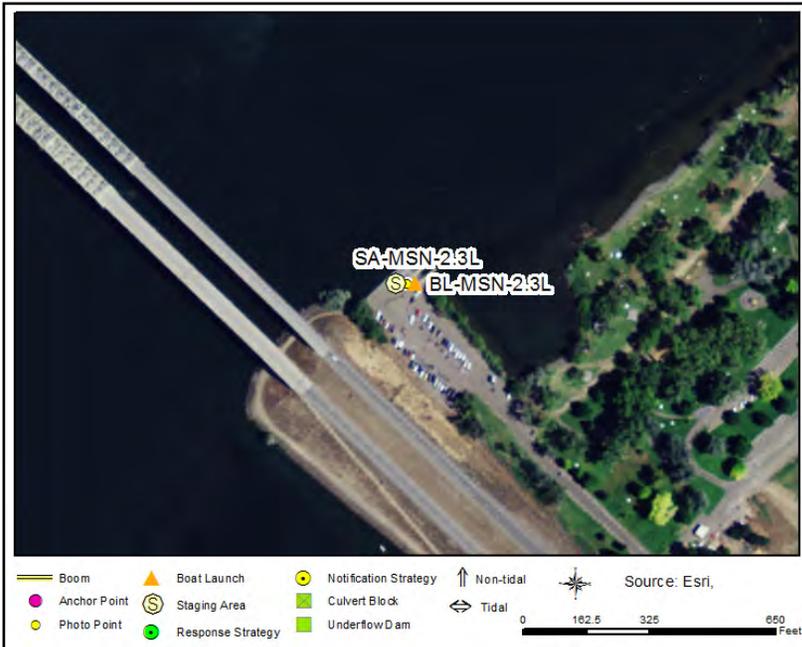
1. Start at 100 Hwy 12, Pasco, WA 99301
2. Go west on I-182 (US-12 W) toward 12a (1.58 miles)
3. Make U-turn and go back on I-182 (US-12 E) (4.44 miles)
4. Continue on US-12 (3.79 miles)
5. Turn right on Grain Terminal Rd (0.26 miles)
6. Turn left on 2nd Ave (0.2 miles)
7. Finish at 577 S 2nd Street, 99323, on the right

Hood Park USACE boat launch BL-MSN-2.3L

Boat Launch Location

Position - Location: 46° 12.875', -119° 1.143' 46° 12' 52.5", -119° 1' 8.6" 46.21458, -119.01905 Burbank

Comments: Paved 41,600 sq ft lot, lighted, 3 ramps @ 6.5 degree grade with floating docks



GRP Response Strategies Served:

MSN-2.8L, MSN-8.4M, MSN-4.5L, MSN-4M, MSN-4.6M

Location Information

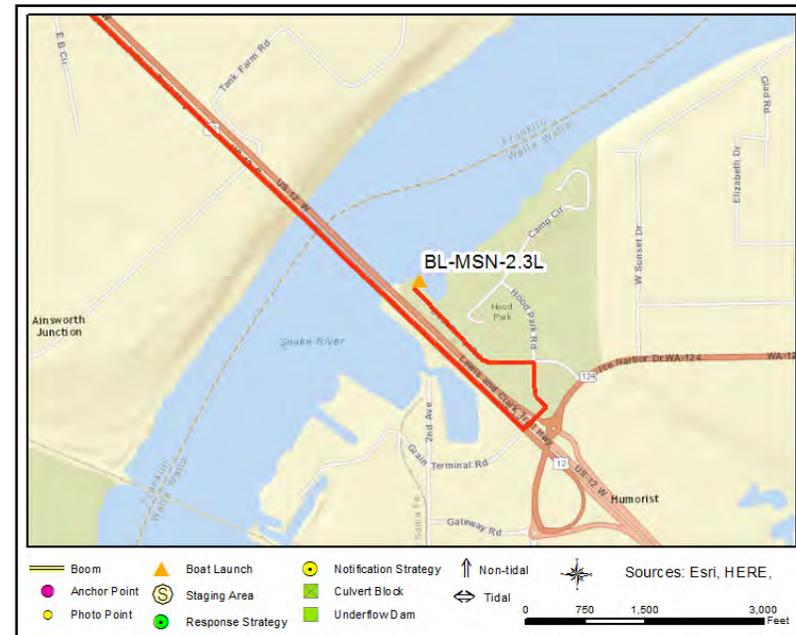
<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Dock(s)	Yes	Two floating docks & one perm dock
Boat Ramp(s)	Concrete, Solid	Three concrete ramps, 6.5 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		Paved and lined with 41,000 sq ft
Parking - Car	Marked	Paved spaces for 50 cars & 40 trailers
Parking - Trailer	Marked	Paved spaces for 50 cars & 40 trailers
Power	Yes	In campground or maint bldg
Restroom	Restroom - Portable	Additional flush toilets at campground
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	In campground or maint bldg

Hood Park USACE boat launch

BL-MSN-2.3L



SA-MSN-2.3L Photo: Hood Park USACE boat launch



Site Contact

USACE McNary pool
 Primary Contact : Natural Resource Manager

 McNary Dam, OR
 541-922-2268

Nearest Address

100 Hood Park Road
 Burbank, WA 99323

Driving Directions

1. From Pasco take US-395 S
2. Turn right onto N 20th Ave (0.3 mi)
3. Turn right to merge onto I-182 E/ US-12 E toward Walla Walla (1.4 mi)
4. Continue onto US-12 E (5.0 mi)
5. Take the Washington 124 exit toward Burbank/ Waitsburg (0.2 mi)
6. Keep right at the fork and merge onto Ice Harbor Dr (0.3 mi)
7. Slight right to stay on Ice Harbor Dr (0.1 mi)
8. Turn left onto Hood Park Rd- go straight to the launch at the end (0.5 mi)

Ice Harbor North Shore Recreation Area boat launch BL-SIH-9.9R

Boat Launch Location

Position - Location: 46° 15.187', -118° 52.634' 46° 15' 11.2", -118° 52' 38.0" 46.25312, -118.87723 Pasco

Comments: Paved staging area with two 7 degree concrete boat ramps



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 One floating dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps, 7 degree grade
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		1 Paved 200 x 260 =52,000 sq ft of parking
Lot Cover (Primary)	Asphalt	Ashalt, lined
Parking - Car	Marked	12 Space for 26 trailers, 12 cars
Parking - Trailer	Marked	26 Space for 26 trailers, 12 cars
Power	No	
Restroom	Restroom - Vault	
Waste Disposal	Trash Receptacle	
Water (potable)	No	

GRP Response Strategies Served:

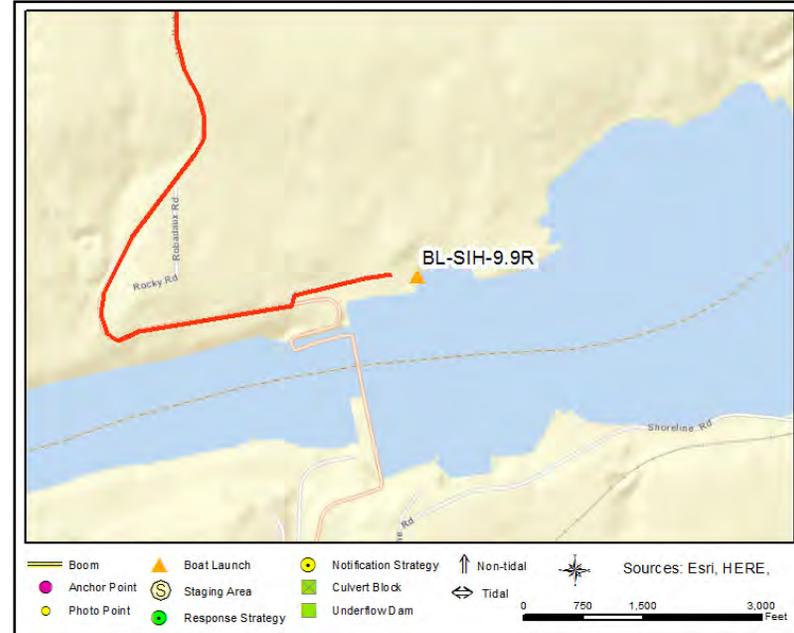
MSN-9.5R

Ice Harbor North Shore Recreation Area boat launch

BL-SIH-9.9R



SA-SIH-9.9R Photo: Ice Harbor North Shore Recreation Area and Boat Ramp



Site Contact

USACE Ice Harbor pool
 Primary Contact : Natural Resources Manager

 Ice Harbor Dam, WA
 509-547-2048

Nearest Address

1240 Ice Harbor Rd
 Pasco, WA 99301

Driving Directions

1. Head south on US-395 S
2. Take the exit onto US-12 E toward Walla Walla (1.7 mi)
3. Take the exit toward Kahlotus (0.4 mi)
4. Turn right onto E Lewis St (0.2 mi)
5. Continue onto Pasco Kahlotus Rd (8.9 mi)
6. Turn right onto Ice Harbor Rd, destination will be on the left (3.1 mi)

Madame Dorion Memorial Park USF&W boat launch **BL-WWR-4R**

Boat Launch Location

Position - Location: 46° 3.738', -118° 54.209' 46° 3' 44.3", -118° 54' 12.5" 46.06231, -118.90348 Touchet

Comments: 1 concrete boat ramp with gravel lot



GRP Response Strategies Served:

WWR-4R, M-314.7L, M-314.5L

Location Information

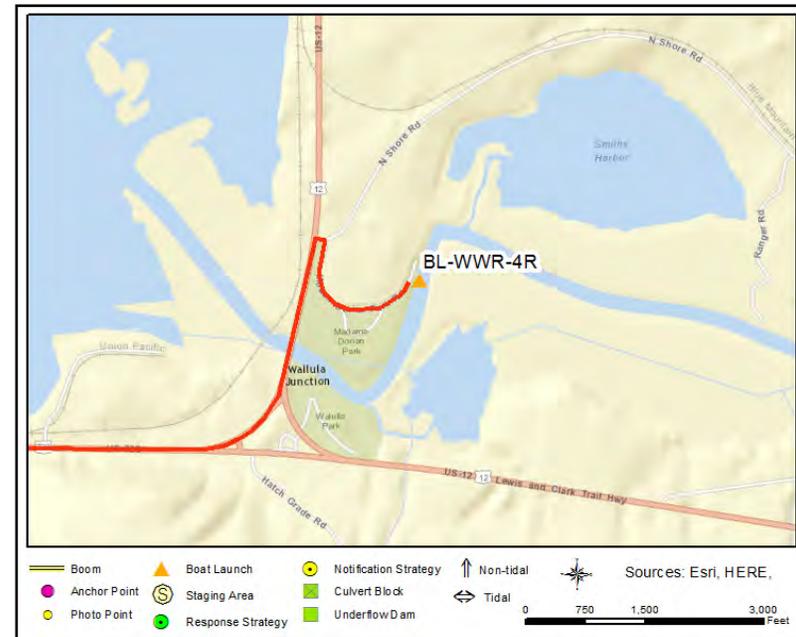
Asset	Type/Status	Amount/Number
		gravel
Boat Dock(s)	No	
Boat Ramp(s)	Concrete, Solid	USF&W single boat ramp concrete 7 degree
Cell Phone Coverage	Yes	
Estimated Lot Size		350' x 40'=14,000 sq ft gravel lot
Parking - Car	Gravel	space for 20 cars
Parking - Trailer	Gravel	20
Power	No	
Restroom	Restroom - Portable	Portable + vault roadside
User Fee	No	ungated and no fee, open 24 hours
Waste Disposal	None	none
Water (potable)	No	

Madame Dorion Memorial Park USF&W boat launch

BL-WWR-4R



SA-WWR-4R Photo: Madam Dorion US Fish & Wildlife boat launch on the Walla Walla River (confluence at Columbia River mile 314.7)



Site Contact

US Fish & Wildlife Service, McNary and Umatilla National Wildlife Refuges
 Primary Contact : Property Contact

 Burbank, WA 99323
 509-546-8300

Nearest Address

324 Western Farmer Road
 Touchet, WA 99360

Driving Directions

1. Directions to BL-WWR-4R/Madam Dorian Memorial Park, starting in Umatilla, OR head east on US-730 E/ 6th St toward Eisele Dr
 Continue to follow US-730 (25.2 mi)
2. Slight left toward US-12 W (0.2 mi)
3. Turn left onto US-12 W (0.4 mi)
4. Turn right onto N Shore Rd (138 ft)
5. Take an immediate right on unnamed road for Madam Dorian boat launch on the right (0.3 mi)

Wye Park boat launch

BL-YAK-0.5R

Boat Launch Location

Position - Location: 46° 14.319', -119° 13.725' 46° 14' 19.1", -119° 13' 43.5" 46.23865, -119.22875 Richland

Comments: Wye Park has 1 gravel ramp 7 degree grade, & area for staging



Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	Small floating dock can handle 3 boats
Boat Ramp(s)	Gravel	Gravel ramp with 7 degree grade
Cell Phone Coverage	Yes	
Estimated Lot Size		10,500 sq ft of paved parking
Parking - Car	Marked	Spaces for 10 cars
Parking - Trailer	Marked	Spaces for 4 trailers
Power	Yes	Power at restroom
Restroom	Restroom - Flush	
User Fee	No	
Waste Disposal	Trash Receptacle	
Water (potable)	Yes	Water at restroom

GRP Response Strategies Served:

YAK-0.5R, M-335M

Wye Park boat launch

BL-YAK-0.5R



SA-YAK-0.5R Photo: Wye Park boat launch



Site Contact

City of Richland Parks and Recreation Department
 Primary Contact : Manages this boat launch

Richland, WA 99352
 509-942-7529

Nearest Address

1600 Columbia Park Trail
 Richland, WA 99352

Driving Directions

1. Head south on US-395 S
2. Take the exit onto I-182 W/ US395 S toward Richland/ Pendleton
 Continue to follow I-182 W (2.4 mi)
3. Take exit 12A for US-395 S toward Kennewick Pendleton (0.7 mi)
4. Continue onto US-395 S (1.8 mi)
5. Keep right to continue on WA-240 W, follow signs for Washington 240 W/ Richland (4.2 mi)
6. Take the Columbia Center Boulevard exit (0.2 mi)
7. Turn right onto N Columbia Center Blvd (0.3 mi)
8. Turn left onto Columbia Park Trail, destination will be on the right (0.2 mi)
9. Finish at 1600 Columbia Park Trail, 99352, on the right

CHAPTER 5
(Reserved)

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CHAPTER 6

Resources at Risk

6.1 CHAPTER INTRODUCTION

This chapter provides a summary of natural, cultural, and economic resources at risk in the McNary Pool of the Middle Columbia River area. It provides general information on habitat, fish, and wildlife resources, and locations in the area where sensitive natural resource concerns exist. It offers a summary of cultural resources that include fundamental procedures for the discovery of cultural artifacts and human skeletal remains. General information about flight restrictions, hazing, and oiled wildlife can be found near the end of this chapter. A list of economic resources in the area is provided in the chapter's appendix.

This chapter is purposely broad in scope and should not be considered comprehensive. Some of the sensitive resources provided in this chapter are listed because they could not be addressed in Chapter 4 (Response Strategies and Priorities). Additional information from private organizations or federal, state, tribal, and local government agencies should also be sought during spills and considered.

The information provided in this chapter can be used in:

- Assisting the Environmental Unit (EU) and Operations in developing additional response strategies beyond those found in Chapter 4.
- Providing resource-at-risk "context" to responders, clean-up workers, and others during the initial phase of a spill response in the GRP area.
- Briefing responders and incident command staff that may be unfamiliar with sensitive resource concerns in the GRP area.
- Providing background information for personnel involved in media presentations and public outreach during a spill incident.

6.2 NATURAL RESOURCES AT RISK - SUMMARY

Most biological communities are susceptible to the effects of oil spills. Plant communities on land, eelgrass and marsh grasses in estuaries, and kelp beds in the ocean; microscopic plants and animals; and larger animals, such as fish, amphibians and reptiles, birds, mammals, and a wide variety of invertebrates, are all at potentially at risk from smothering, acute toxicity, and/or the chronic long-term effects that may result from being exposed to spilled oil.

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 a variety of birds, including waterfowl and herons.
- **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 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, McNary Pool, Lake Wallula (~RM 292-317). See Figure 6.4

1. **McNary Pool above dam (~RM 292-296):** Large waterfowl concentration area. Osprey and Prairie falcon present.
2. **Hat Rock and vicinity (~RM 298-301):** Shallow water habitat, waterfowl, shorebird nesting and wintering areas. Public recreation area (Hat Rock State Park).
3. **Survivor Island (~RM 302-305):** Waterfowl concentration area.
4. **McNary Wildlife Refuge/State Wildlife Recreation Area (~RM 314-325):** Numerous islands, sloughs and wetlands between the mouths of the Snake and Walla Walla Rivers provide rearing habitat for juvenile salmonids. Steelhead trout [FT/SC (WA)] and resident fish present. This important wildlife area supports very large numbers of waterfowl, seabirds, herons, and sensitive species (including American white pelican [SE]) and raptors (including Bald eagle [SS (WA)] and osprey). In addition, riparian area supports varied wildlife including song and game birds, mule and white-tailed deer, foraging mammals. Public recreation area.

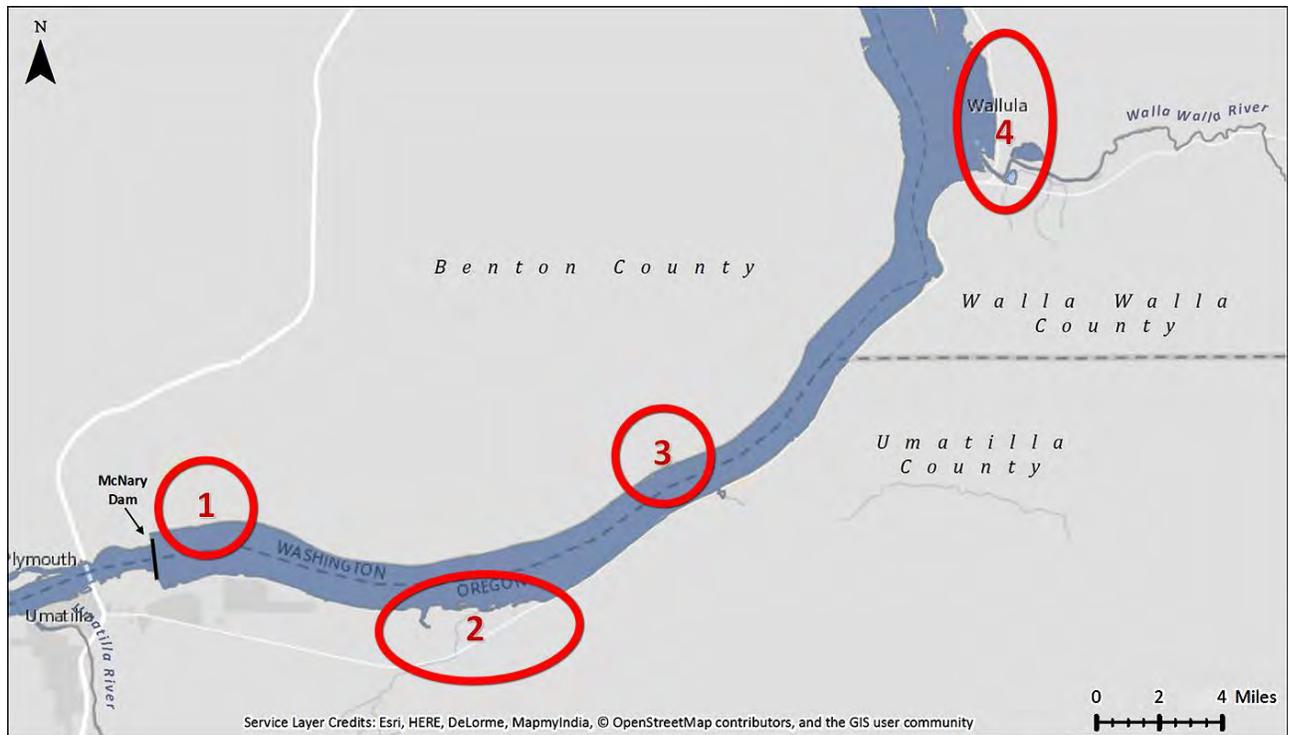
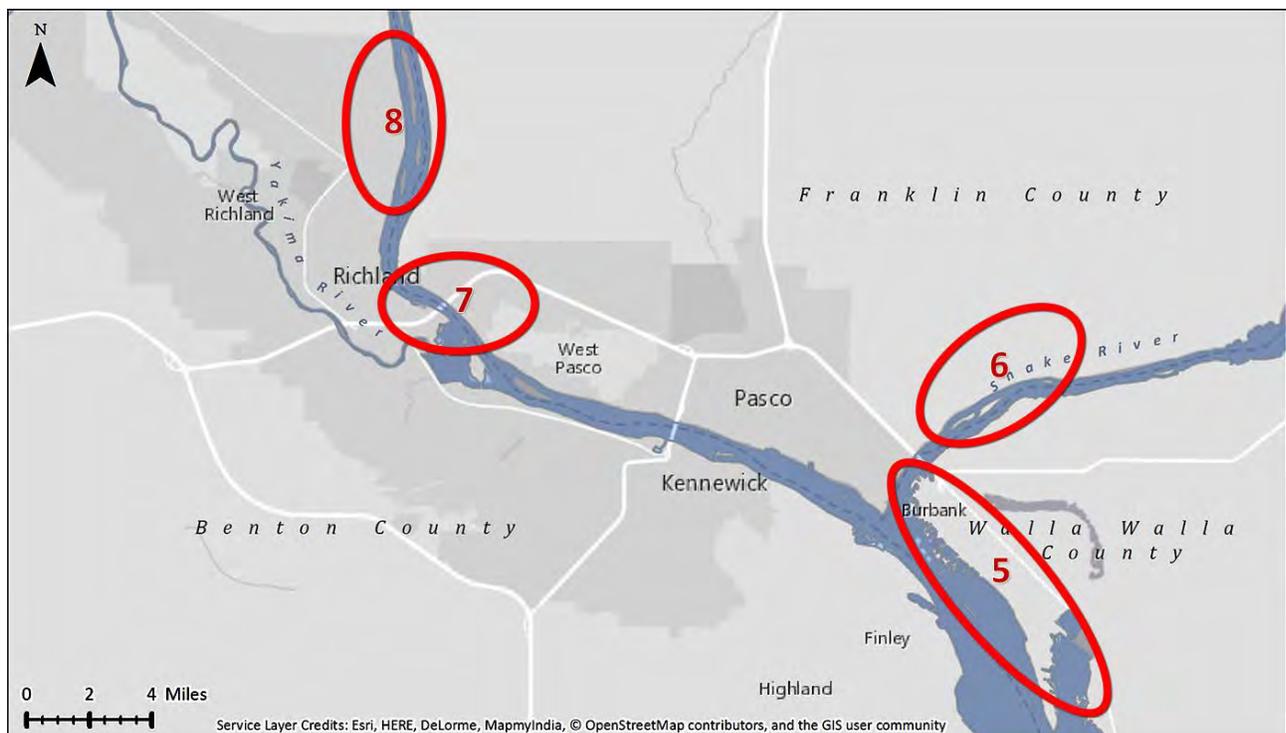


Figure 6-1: Middle Columbia River, McNary Pool, Lake Wallula (~RM 292-317).

Middle Columbia River, McNary Pool, Lake Wallula (~RM 317-343). See Figure 6-5

5. **McNary Wildlife Refuge/ State Wildlife Recreation Area (~RM 314-325):** Numerous islands, sloughs and wetlands between the mouths of the Snake and Walla Walla Rivers provide rearing habitat for juvenile salmonids. Steelhead trout [FT/SC (WA)] and resident fish present. This important wildlife area supports very large numbers of waterfowl, seabirds, herons, and sensitive species (including American white pelican [SE]) and raptors (including Bald eagle [SS (WA)] and osprey). In addition, riparian area supports varied wildlife including song and game birds, mule and white-tailed deer, foraging mammals. Public recreation area.
6. **Strawberry Island and vicinity, Snake River (~RM 3):** Part of McNary SWRA. Associated riparian and wetland habitats. Salmonid habitat (including Steelhead trout [FT/SC (WA)], and Bull trout [FT/SC (WA)]). Migratory waterfowl concentration and nesting areas (including American white pelican [SE]). Great blue heron foraging area.
7. **Bateman Island and vicinity (~RM 333-337) and lower Yakima River:** Waterfowl and shorebird migration and wintering concentration area. Concentration and breeding areas for Western grebes [SC], and Common loons [SS] on main stem. Yakima River delta serves as a biodiversity corridor, consisting of mixed riparian, wetland, and shrub-steppe used by a variety of species. Salmonid habitat (including Bull trout [FT/SC (WA)]).
8. **Hanford Reach Islands (~RM 339-343).** Waterfowl and shorebird migration, wintering, and nesting concentration area. Concentration area for American white pelican [SE]. Breeding area for Long-billed curlew. Great blue heron and Forster's tern nesting colonies.

**Figure 6-2: Middle Columbia River, McNary Pool, Lake Wallula (~RM 317-343).**

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

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. Implementation of Flight Restriction Zones will take place within the Air Operations Branch (Operations Section) after a Unified Command is formed. The Planning Section's Environmental Unit will work with the Air Ops Branch Director to resolve any potential conflicts with flight activities that are essential to the spill response effort. Typically, the area within a 1,500 ft radius and below 1,000 ft in altitude is restricted to flying in areas that have been identified as sensitive; however, some areas have more restrictive zones. In addition to restrictions associated with wildlife, Tribal authorities may also request notification when overflights are likely to affect culturally sensitive areas within reservations. See [Section 9301.3.2](#) and [Section 9301.3.3 of the Northwest Area Contingency Plan](#) for more information on the use of aircraft and helicopters in open water and shoreline responses.

6.5.2 Hazing

After a Unified Command is formed, the Wildlife Branch (Operations Section) in consultation with the appropriate trustee agencies and the Environmental Unit will evaluate hazing options for the purpose of keeping un-oiled birds and marine mammals away from oil during a spill. Hazing options might include the use of acoustic or visual deterrent devices, boats, aircraft or other situation-appropriate tools. For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#) and [Northwest Area Wildlife Deterrence Resources \(NWACP Section 9311\)](#).

6.5.3 Oiled Wildlife

Attempting to capture oiled wildlife can be hazardous to both the animal and the person attempting the capture it. Response personnel should not approach or attempt to recover oiled wildlife. Responders should report their observations of oiled wildlife to the Wildlife Branch so appropriate action can be taken. Information provided should include the location, date, and time of the sighting, and the estimated number and kind of animals observed. Early on in the response, before a Unified Command is established, oiled wildlife sightings should be reported to Washington Emergency Management Division. For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#).

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APPENDIX 6A

The McNary Pool of the Middle Columbia River

List of Economic Resources

Category	Name	Location/Address	Lat/Long	Contact	Phone	Email
A - 1 Drinking Water Intakes	City of Umatilla Public Works Department	700 Sixth Street Umatilla, OR 97882	45.93125/-119.28691	Director of Public Works	509-572-0323	
A - 1 Drinking Water Intakes	City of Hermiston Water Department	180 NE 2nd Street Hermiston, OR 97838	45.93064/-119.28667	Water Department Emergency #	541-561-7610	
A - 1 Drinking Water Intakes	Kennewick Water Treatment Plant	615 E. Columbia Dr. Kennewick, WA 99337	46.21478/-119.10471	24 hr. Emergency #	509-585-4247	
A - 1 Drinking Water Intakes	Pasco Butterfield Water Intake Pipe	1304 S 12th Ave Pasco, WA 99301	46.26584/-119.24115	24 hr. Emergency #	509-531-9919	
A - 1 Drinking Water Intakes	West Pasco Water Intake Pipe	11412 W. Court St. Pasco, WA 99301	46.265937/-119.241059	24 hr. Emergency #	509-531-9919	
A - 1 Drinking Water Intakes	Richland Water Intake Facility	1 Snyder Street Richland, WA 99354	46.31478/-119.25950	Plant Operator's 24 hr. Emergency #	509-531-4480	
A - 1 Drinking Water Intakes	North Richland Irrigation Water Intake	700 Horn Rapids Road Richland, WA 99354	46.35120/-119.26595	Plant Operator's 24 hr. Emergency #	509-531-4480	
A2 - Energy/Power Generation Water Intakes	Ice Harbor Lock & Dam	2763 Monument Dr. Burbank, WA 99323	46.249463/-118.87981	Emergency Control Room	509-543-3231	
A2 - Energy/Power Generation Water Intakes	McNary Lock & Dam	100 Launch Lane Umatilla, OR 97882	45.935895/-119.29777	Emergency Control Room	541-922-2231	
B1 - Industrial Intakes	Boise Paper Inc.	31831 W US-12, Wallula, WA 99363	46.10106/-118.92155	Environmental Safety Manager	509-545-3241	
B2 - Agricultural Irrigation Intakes	N. Richland irrigation water intake facility	3420 George Washington Way, Richland, WA 99354	46.351445/-119.266001	Water Operators 24 hour emergency number	509-531-4480	
B4 - Marinas	Columbia Park Marina	1776 Columbia Park Trail, Richland, WA 99352	46.238318/-119.219065	City of Richland Parks and Rec Dept.	509-942-7529	
B4 - Marinas	Walla Walla Yacht Club	539 Port Kelly Road, Touchet, WA 99360	46.026502/-118.936486	Walla Walla Yacht Club	509-547-4946	
B4 - Marinas	McNary Yacht Club	34099 Beach Shore Drive, Hermiston, Oregon 97838,	45.920093/-119.164625	McNary Yacht Club	541-567-5603	

Category	Name	Location/Address	Lat/Long	Contact	Phone	Email
B4 - Marinas	Clover Island Marina, Kennewick, WA	350 Clover Island Dr. Kennewick, WA 99336	46.21706/- 119.11555	Port of Kennewick	509-586-1186	
B4 - Marinas	Pasco Boat Basin	1315 South 4th Ave, Pasco, WA 99301	46.21937/- 119.09150	City of Pasco Recreation Services	509-544-3080	
B4 - Marinas	Columbia Point Marine Park	660 Columbia Point Drive, Richland, WA 99352	46.26387/- 119.24973	City of Richland Parks and Rec Dept.	509-942-7529	
C2 - Public Recreation Areas	Warehouse Beach Recreation Area	Landing Rd, Hermiston, OR 97838	45.91958, - 119.14324	US Army Corp of Engineers	541-922-2268	
C2 - Public Recreation Areas	Sand Station Recreation Area	US-730, Hermiston, OR 97838	45.92179, - 119.12008	US Army Corp of Engineers	541-922-2268	
C2 - Public Recreation Areas	McNary Wildlife Refuge	64 Maple St, Burbank, WA 99323	46.16133, - 118.95495	US Fish and Wildlife Service	509-546-8300	
C2 - Public Recreation Areas	Ice Harbor North Shore Recreation Area	Columbia Plateau Trail, Pasco, WA 99301	46.25312, - 118.87723	US Army Corp of Engineers	509-547-2048	
C4 - Parks & Beaches	Hat Rock State Park	82375 C St, Hermiston, OR 97838	45.91771, - 119.17423	Oregon Parks and Recreation	541-983-2277	
C4 - Parks & Beaches	Two Rivers Park,	220880 East Finley Road, Kennewick, WA 99337	46.184 19, - 119.03252	Benton County Parks and Recreation	509-531-7106	
C4 - Parks & Beaches	Columbia Park West	1106 Columbia Park Trail, Richland, WA 99336	46.22234, - 119.13867	Richland Parks and Recreation	509-942-7526	
C4 - Parks & Beaches	Wade Park	601 Rd 54, Pasco, WA 99301	46.23263, - 119.16201	City of Pasco Recreation Services	509-545-3456	
C4 - Parks & Beaches	Columbia Park	5111 Columbia Park Trail, Kennewick, WA 99336	46.23087, - 119.19155	Kennewick City Park and Recreation	509-585-4293	
C4 - Parks & Beaches	Chiawana Park	100 Chiawana Park Rd, Pasco, WA 99301	46.24385, - 119.20630	City of Pasco Recreation Services	509-545-3456	
C4 - Parks & Beaches	Howard Amon Park	900 Amon Park Road North, Richland, WA 99352	46.28097, - 119.27210	Richland Parks and Recreation	509-942-7526	
C4 - Parks & Beaches	Leslie Groves Park	2 Snyder Street, Richland, WA 99354	46.31439, - 119.26056	Richland Parks and Recreation	509-942-7526	

Category	Name	Location/Address	Lat/Long	Contact	Phone	Email
C4 - Parks & Beaches	Sacajawea State Park	2503 Sacajawea Park Road, Pasco, WA 99301	46.20166, - 119.03835	Washington State Parks and Recreation Commission	509-545-2361	
C4 - Parks & Beaches	Hood Park	100 Hood Park Rd, Burbank, WA 99323	46.21458, - 119.01905	US Army Corp of Engineers	509-547-2048	
C4 - Parks & Beaches	Madame Dorion Memorial Park	Madame Dorion Memorial Park Rd (N Shore Rd.), Burbank, WA 99323	46.06231, - 118.90347	US Fish and Wildlife Service	509-546-8300	
C4 - Parks & Beaches	Wye Park	1600 Columbia Park Trail, Richland, WA 99352	46.23871, - 119.22861	Richland Parks and Recreation	509-942-7526	