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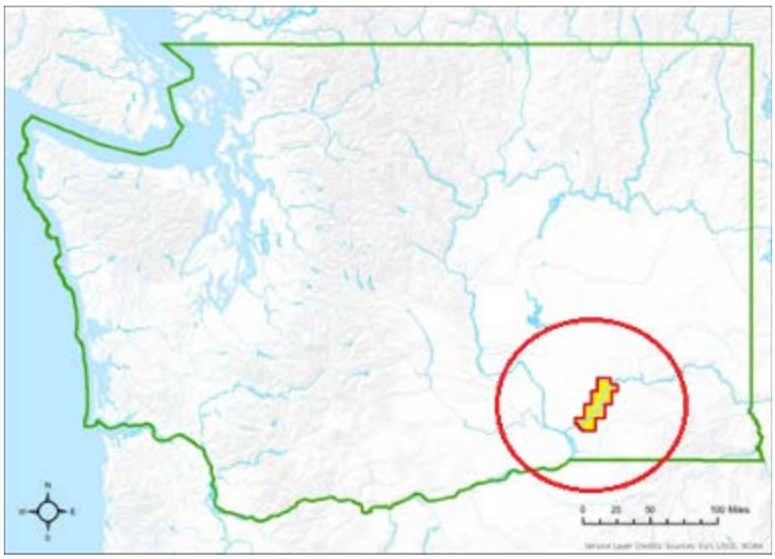
SNAKE RIVER
ICE HARBOR POOL
Geographic Response Plan
(SIH-GRP)



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SNAKE RIVER

ICE HARBOR POOL

Geographic Response Plan

(SIH-GRP)

May 2016

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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 - Washington Emergency Management Division	(800) 258-5990*
USACE Dam Operators - Emergency Contact - Dam Control Room	
Ice Harbor Lock and Dam - Snake River Mile: 9.7	(541) 547-7783*
Lower Monumental Lock and Dam – Snake River Mile: 41.5	(509) 282-3218 Ext. 231

U.S. Environmental Protection Agency	
Region 10 - Spill Response	(206) 553-1263*
- Washington Ops Office	(360) 753-9437
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 Walla Walla District Office	(541) 922-2231*
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
Railroads	
Union Pacific Railroad	(888) 877-7267*
Local Government - Ice Harbor 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
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

Washington State Agencies	
Archaeology and Historic Preservation	(360) 586-3065
ECY -Headquarters - Spills	(360) 407-7455
DOE - Central Region Spill Response Team	(509) 575-2490*
WDFW - Region 5	(360) 696-6211
WDFW - Oil Spill Team	(360) 534-8233*
WDFW - Emergency HPA	(360) 534-8233*
DOH- Drinking H2O Program	(887) 481-4901
DOH - Drinking H2O Program (Afterhours)	(800) 521-0323
DNR - Aquatic Lands (M-Th daytime)	(360) 902-1064
DNR - Aquatic Lands (Nights/Weekends)	(360) 556-3921
WSDOT	(360) 705-7000
State Patrol - District #3	(509) 575-2320
Response Contractors	
NRC Environmental Services	(800) 337-7455*
Able Clean-Up	(866) 466-5255*
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

* Contact Numbers staffed 24-hour/day

Before you print this document

Chapter 4 with appendices (29 - 224) and Appendix 6A (239 - 242) of this document are provided in "landscape" page orientation; all other chapters and appendices are oriented in "portrait." The appendices in Chapter 4 (79 - 224) 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 of this plan 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
01/1997	Original Release		N/A
Pending	Update	Comprehensive review and update of all chapters. Detailed 2-page response strategy information sheets added to appendices of Chapter 4 and economic resource information added to Appendix 6A.	Susan Vezeau, PhD

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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 Snake River Ice Harbor Pool. 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 Ice Harbor Pool of the Snake River (SIH-GRP). The SIH-GRP encompasses the 31.8 mile reach of the Ice Harbor Pool (a.k.a. Lake Sacajawea), from the upstream side of the Ice Harbor Lock and Dam (located at river mile 9.7) to the downstream side of the Lower Monumental Dam (located at river mile 41.5). Below the Ice Harbor Lock and Dam, the Snake River flows for 9.7 miles before joining with the Columbia River. This lower section of the Snake River is included in the Middle Columbia River GRP (MCRM-GRP). The area around Lake Sacajawea is rural with no large towns present. Pasco and Kennewick are the largest cities nearby, both located downstream of the Ice Harbor Dam near the confluence of the Snake and Columbia Rivers. 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 (Response Strategies and Priorities). 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 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. 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 planning area were taken into consideration in the development of this document but such information cannot be provided because of the confidential nature of the information.

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	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, just developed and revised 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, pilots, and the public. Participants identify resources that may

be at risk of injury from spills and work 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 and development 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

Mail Completed Form to:

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

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

Today's Date: _____

Your Name: _____

Title: _____

Company/Agency: _____

Address: _____

City: _____

State/Province: _____ Zip: _____

Email: _____ Ph: _____

GRP Page Number: _____ Section or Paragraph: _____

Comment(s): _____

CHAPTER 2

Site Description

2.1 CHAPTER INTRODUCTION

This chapter provides a description of the physical features, hydrology, climate, and winds found within the Snake River Ice Harbor Pool (SIH) and includes an overview of oil spill risks in, or near, the planning area. The Snake River originates in Yellowstone National Park and travels 1,040 miles (1,670 km) west through Wyoming, Idaho, and Washington before finally emptying into the Columbia River at Pasco, in southeastern Washington.[1] The plan area is located within Washington's Water Resources Inventory Area (WRIA) 33.

The Snake River is the largest tributary to the Columbia River and is itself one of the major rivers in the United States. Although the Columbia River originates in Canada, the NOAA river mile system used in this plan begins at the confluence of the Columbia River with Pacific Ocean. The same river mile numbering system is used for the Snake River beginning at its confluence with the Columbia River at river mile 324.

The Ice Harbor Lock and Dam, located on the Snake River 9.7 miles upstream of its confluence with the Columbia, was built between 1955 and 1962, creating the Ice Harbor Pool otherwise known as Lake Sacajawea . The Ice Harbor Pool extends upstream 31.8 miles to the base of the Lower Monumental Dam located at river mile 41.5. The **SIH-GRP** encompasses this reach of the Snake River.

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.[2] Basalt flows then covered the area, known as the Columbia River Basalt Group, in layers, forming a strong foundation of basaltic rock at least one mile thick.[3] Subsequent lava and ash eruptions raised the Cascade Mountains during the Miocene Epoch, and the mountains began to lift when hundreds of volcanoes erupted during the Pleistocene Epoch (2.6 million – 11,700 years ago). As the mountains rose, the Snake and Columbia Rivers carved out deep gorges. Towards the end of the Pleistocene (~16,000-14,000 years ago) the Missoula floods battered these gorges over 100 times when the glacial dam forming Glacial Lake Missoula 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

1 http://www.britannica.com/place/Snake-River
2 http://www.ucmp.berkeley.edu/cenozoic/cenozoic.php
3 http://hugefloods.com/Basalt.html

feet per second[4]. This series of events has been described as one of the greatest flood occurrences in the history of the earth.[5] Basalt bluffs and cliffs prevail throughout the most of the length of the Ice Harbor Pool, but gradually flattens toward the end of the gorge craved by the Snake River until it reaches its mouth at the Columbia.[6] Shoreline habitats along this section of the Snake River 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.[7]

Human activity has also had a major impact on the Snake River. The U.S. Army Corps of Engineers (USACE) has shape the Snake River into its current form through the construction of 15 dams; structures designed to provide irrigation water, hydroelectricity, and improve navigation. The four dams in the Lower Snake River Project were built primarily to create a navigable channel from the mouth of the Snake River to the beginning of Hells Canyon, located downstream of Lewiston, Idaho near the borders of eastern Washington, eastern Oregon, and western Idaho. The Lower Snake River dams, in downstream order, include: Lower Granite Lock and Dam, Little Goose Lock and Dam, Lower Monumental Lock and Dam, and Ice Harbor Lock and Dam.

The dams on both the Snake and Columbia allow the rivers to function as an industrial transportation corridor, with ships running import containers and autos east from Portland, OR and Vancouver, WA through a series of locks up to the Tri-Cities area (Kennewick, Pasco, and Richland, WA), before continuing east on the Snake River to Lewiston, Idaho.[8] As of 2014, more than four million tons of petroleum products were received at terminals in Portland each year, with approximately half of that volume barged upriver to inland ports.[9] The Columbia and Snake River corridor provides a route for the transport of grain from farms in the interior of the country to the river's gateway at the Pacific Ocean. This corridor 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.[10] Dams within the corridor provide irrigation, flood control, and hydroelectric power to Washington, Oregon and Idaho.

The Lower Snake River is rich in archaeological resources. Evidence shows that the Columbia Plateau was inhabited as early as 11,500 years ago,[11] and that settlements were established as early as 11,230 years ago.[12] Three Archaeological Districts in the region are listed on the National Register of Historic Places and numerous other sites are known, including: villages, fishing sites, temporary camps, storage pits, burials, and rock art such as pictographs and petroglyphs. Well before the establishment of white settlements, Native Americans had developed the largest trading center in the Northwest at the Long Narrows of The Dalles/Celilo Falls area on the Columbia River.

[4] Lee, 2009 http://inside.mines.edu/UserFiles/File/Geology/Missoula.pdf
[5] http://mil.wa.gov/uploads/pdf/HAZ%20MIT%20PLAN/Landslide_Hazard_Profile.pdf
[6] USACE 1977.
[7] http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_tropical.pdf
[8] PNWA http://www.pnwa.net/new/Articles/Lower_Columbia_River_Ports.pdf
[9] PNWA http://graphics.thomsonreuters.com/F/12/US_CSFACT1210.pdf
[10] PNWA http://www.portoflongview.com/Portals/0/Documents/Columbia_River_Channel_Deepening.pdf
[11] Ames et al, 1988
[12] Bureau of Indian Affairs, 2013.

Celilo is believed to be the oldest continuously inhabited community on the North American continent.[13] The center linked a trade network that extended along the entire Pacific Coast and inland to the Great Plains.

Europeans and Americans began exploring and trading in the Pacific Northwest in the 18th century with trade items being transported into the Snake River Basin during that period. First contact occurred in the region in 1805 when the Lewis and Clark Expedition traveled down the Snake and into the Columbia River. Upon arriving at The Dalles/Celilo Falls area, Clark noted the settlement as being a "great mart of trade".[14] Other expeditions of exploration soon followed, and trading operations were established. The Northwest Company built Fort Nez Perce in 1818 near the mouth of the Walla Walla River on the Columbia.[15] The fort was taken over as a trade station by the Hudson Bay Company in 1821, further impacting the regional economy and influencing relations by Euro-Americans and Native American.[16] Missionaries arrived in the 1830s and were followed by settlers in the 1840s.

From the mid to late 1800's, numerous white settlements were established along both the Columbia and Snake Rivers. People migrated into the area by following the Oregon Trail or arriving by ship via the Pacific Ocean. Gold was discovered near Fort Colville in 1855 prompting an influx of miners at the same time treaty negotiations were underway with Native American Tribes. The earliest treaties were signed in 1855; however, increasing conflicts led to several years of war between Native Americans and the United States government.[17] Oregon became a state in 1859, followed by Washington and Idaho in 1889 and 1890, respectively.

With traders, farmers, ranchers, and miners arriving in the area, steamboats began navigating the Snake River in the 1860s. Steamboats traversed over 60 sets of rapids in the free flowing river when traveling between Pasco, Washington and Lewiston, Idaho. The USACE started modifying the Columbia River to aid vessel navigation as early as 1873 by removing obstructions; from 1876 to 1915 canals were built.[18] The first dam was constructed on the Snake River in 1901. Between the 1950's-1980's, the USACE started the Lower Snake River Project with the construction of four dams in eastern Washington, bringing the total number of dams on the Snake River to 15.

2.3 HYDROLOGY

The Snake River is the 13th longest river in the United States[19]. The Ice Harbor Pool is approximately 32 miles in length and has a drainage area encompassing 103,200 square miles. The Ice Harbor Dam, which creates Lake Sacajawea, is 2,822 feet long and about 100 feet high. The elevation of Lake Sacajawea during normal dam operations at full pool is 440 feet. The minimum

[13] Dietrich, W. (1995). *Northwest Passage: The Great Columbia River*. Seattle, Washington: University of Washington Press. p. 52. ISBN 0-295-97546-6.
[14] Lewis and Clarks Journals http://frontiers.loc.gov/cgi-bin/query (2:527).
[15] Garth, 1952
[16] Garth, 1952.
[17] Beckham, 1998
[18] Bureau of Indian Affairs, 2013.
[19] Krammerer, 1990 http://pubs.usgs.gov/of/1987/ofr87-242/

pool elevation is 437 feet, and the maximum capacity of the pool is 446 feet. Prior to the construction of the dams the maximum unregulated historical peak discharge was 409,000 cubic feet per second (cfs) (1894). Currently, the average monthly outflow of both the Ice Harbor and Lower Monumental Dams is approximately 34,000 cfs.[20]

2.4 CLIMATE AND WINDS

The climate in this area of the Snake River is arid, with an annual precipitation of 10.4 inches with over 50% occurring between the months of November and March. Annual snowfall is 5.8 inches, with more than 75% occurring in December and January. Much of the precipitation occurs as drizzle or intermittent rains from winter through spring with extended periods of cloudiness.[21] A few regional storms with showers occur in winter but heavy rain is rare. While the climate is barely adequate for wheat production, much of the area within a few miles of the riverbanks is farmed through irrigation using water pulled from the Snake River. The average annual temperature is 53.9°F, ranging from a mean low of 34.2°F in January, to a mean high of 74.2°F in July and August. Recorded temperature extremes are -22°F and 111°F.

The climate of the lower Snake River is greatly influenced by prevailing southwesterly winds in both summer and winter, with the Cascade Mountain Range shielding the area from winds flowing east from the Pacific Ocean.[22] Average wind speeds usually range from 7-8 mph.[23] Winter storms often include strong winds, and thunderstorms in July and August generally produce little rain but can create strong gusts of wind. Wind erosion is the primary cause of dust emissions in the semi-arid climate found in this part of Eastern Washington. Wind erosion is especially common in spring and fall when high winds and dry soil conditions result in dust storms.[24] Winds are often channeled parallel to shore in the river valley aiding in erosion. There is a large sand deposit near the Ice Harbor Dam which is primarily wind-derived.[25]

2.5 TIDES AND CURRENTS

There are no tidally influenced areas within the planning area. The river's flow is governed strictly by dams on the Snake River, with USACE determining exactly when and how much water is allowed to pass through the spillways. Nearly all flow into the Ice Harbor Pool comes from the Snake River after having passed through the Lower Granite, Little Goose and Lower Monumental Dams in Washington State. The Ice Harbor Pool is very lake-like, with dam controlled outflow rates. The lowest flow rates typically occur during the late summer, autumn, and winter months. Higher flows occur during the spring snow melt. The upper reach of the reservoir below the Lower Monumental Dam may attain higher flows than the lower reach, especially during spring runoff. Nearer to the

[20] USACE 2016 http://www.nwd-wc.usace.army.mil/dd/common/projects/www/ihr.html
[21] USACE 2002 http://www.nww.usace.army.mil/portals/28/docs/environmental/lsrstudy/Section04.pdf
[22] USACE 2002http://www.nww.usace.army.mil/portals/28/docs/environmental/lsrstudy/Section04.pdf
[23] Jackson & Kimmerling, 1993
[24] USACE 2002 http://www.nww.usace.army.mil/portals/28/docs/environmental/lsrstudy/Section04.pdf
[25] Miklancic, 1989

Ice Harbor Dam, the current is practically nonexistent, except for the area in front of the spillway and powerhouse, which may have very dangerous strong currents and undertows.

2.6 RISK ASSESSMENT

The Snake 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 sensitive resources in the planning area include commercial vessels, roadways, railways, and other factors. Industrial development along this reach of the river consists of storage facilities for grain and irrigation pumping stations.

Large Commercial Vessel Traffic

The Columbia/Snake corridor offers many port facilities, stretching from Astoria, Oregon to Lewiston, Idaho. The Dalles Lock reports that an average of eight million tons of cargo, mostly grain and petroleum products, pass through each year.[26] Future oil movement along the Columbia River Vessel Route is estimated to reach 566 million gallons/year (based on annual estimates and 2013 data).[27] The potential for vessel collisions, allisions, or groundings presents a significant spill risk in the planning area. Large commercial vessels, including tug and barge combinations, carry substantial amounts of heavy and blended fuel oils and other petroleum products. Increased volumes of vessel traffic in the area increase the risk of injury to sensitive resources from oil spills involving commercial vessels.

Road Systems

Vehicle traffic on roadways pose an oil spill risk in areas where they run adjacent to the shorelines, or cross over lakes, rivers, creeks, and ditches, that drain into the Snake River. Several smaller roads run parallel to the river, including Washington Highway 263. There are no highway bridges that cross the Snake River in the planning area. However, there are several smaller bridges or causeways where vehicles cross tributaries or small lakes along shore. A vehicle spill onto one of these bridges or roadways can cause fuel or oil to flow from hardened surfaces into the Snake River or its tributaries. Commercial trucks can contain hundreds to thousands of gallons of fuel and oil, especially fully loaded tank trunks, and may carry almost any kind of cargo, including hazardous waste or other materials that might injure sensitive resources if spilled. Smaller vehicle accidents pose a risk as well, a risk commensurate to the volume of fuel and oil they carry.

Rail Transportation and Facilities

Union Pacific's (UPs) Portland Subdivision runs parallel to the river on the south bank (river left) throughout the Snake River Ice Harbor Pool. UPs trains generally contain mixed cargo loads, and may include the transport of hazardous materials and Bakken crude oil. Once the trains reach Pasco, they then continue westward along the Columbia River through the Columbia River Gorge to

[26] USACE 2015 http://cdm16021.contentdm.oclc.org/cdm/ref/collection/p16021coll11/id/426 (3)
[27] WA Dept. of ECY 2015 https://fortress.wa.gov/ecy/publications/publications/1508010.pdf

Portland, OR before heading south or crossing the river at Vancouver, WA to head north along the I-5 corridor on track managed by BNSF Railways. Oil unit trains typically head north through Tacoma and Seattle, WA towards refineries in Anacortes and Ferndale, WA.[28] 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.[29] 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 million gallons of oil in a unit train of 100 tank cars. In 2013, approximately 700 million gallons were shipped through Washington, increasing to an estimated 2,300 million gallons in 2014.[30] These numbers have been predicted to rise as facilities are improved or increased.[31]

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.[32] Vancouver Energy is a facility proposed for the Port of Vancouver. If approved, it would initially handle one to two crude-by-rail trains per day, and would be capable of receiving up to four unit trains per day. Unit trains carrying crude oil are now commonly found travelling along the Snake and Columbia Rivers. As of June 2014, 19 loaded unit trains with Bakken oil were passing through the Middle Columbia River weekly on BNSF and UP tracks combined.

Aircraft

The Lower Monumental State Airport is the only airport within the SIH-GRP planning area. Managed by Washington State Department of Transportation (WSDOT), it is primarily used for recreational and transit purposes. Since this airport is close to the river, the potential exists for aircraft failures during inbound or outbound flights that could result in a spill by releasing jet fuel to the Snake River or its tributaries.

Recreational Boating

Accidents involving recreational water craft on the Snake River have the potential to result in spills of a few gallons of gasoline up to hundreds of gallons of diesel fuel. Examples of such accidents might include vessel collisions, allisions, groundings, fires, sinking, or explosions. Bilge discharges

[28] WA Dept. of ECY 2015 https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (320
[29] 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.
[30] http://www.cnsnews.com/news/article/sharp-rise-west-coast-oil-trains-fears-abound
[31] WA Dept. of ECY 2015 https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (460)
[32] WA Dept. of ECY 2015 https://fortress.wa.gov/ecy/publications/publications/1508010.pdf (317)

and mishaps during boat refueling operations are generally the most typical types of oil spills to occur.

Other Spill Risks

Other potential oil spill risks in the area include, dam turbine mechanical failures, fuel storage areas (including waste oil storage), road run-off during rain events, on-shore or near shore activities where heavy equipment is being operated or stored, and the migration of spilled oil through soil on lands adjacent to the river or its tributary streams.

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CHAPTER 3

Spill Response Options and Considerations

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

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

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

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

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

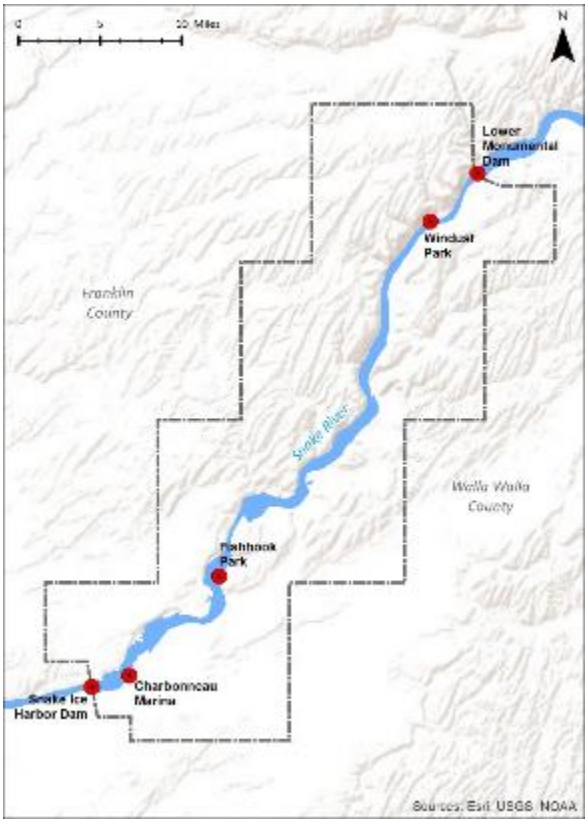
Note 5: Shoreside Cleanup options depend on safe and efficient access to locations and the type of river, creek, or stream bank present. Potential activities could include flooding, flushing, manual removal, vacuum, mechanical removal, sorbents, vegetation cutting, mechanical tilling/aeration, and/or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

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

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

Note 8: These areas are not pre-approved for the use of in-situ burning. Refer to the Northwest Area Contingency Plan for the dispersant Policy.

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



SNAKE RIVER

ICE HARBOR POOL

Geographic Response Plan

(SIH-GRP)

CHAPTER 4

Response Strategies and Priorities

MAY 2016

Before you print this document

This chapter and its appendices, as well as the appendix at the end of Chapter 6, are provided in "landscape" page orientation. The detailed 2-page information sheets for each pool's response strategies, notification strategies, staging areas, and boat launch locations in appendices 4A though 4D (79 - 224) 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 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, or local, county, municipality, or tribal police for assistance. At minimum, Washington Department of Transportation (WSDOT) 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

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 Flow Ranges

Table 4.1.2 provides historical river outflow data which was obtained for both the Lower Monumental Dam and the Ice Harbor Dam using the University of Washington's Columbia Basin Research, Columbia River DART (Data Access in Real Time) database, (2016). Information on outflow, and other performance measures, can be found online at http://www.cbr.washington.edu/status. Outflow is recorded in cubic feet per second (cfs). 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.

Table 4-2: Historical River Streamflow Ranges

2015 Monthly Average Outflow in Cubic Feet per Second (cfs)		
	Lower Monumental Dam	Ice Harbor Dam
Jan	34,520	34,660
Feb	54,120	54,580
Mar	43,310	43,490
Apr	49,820	51,460
May	60,320	60,890
Jun	40,600	41,120
Jul	27,080	27,530
Aug	20,790	20,860
Sep	18,140	17,620
Oct	16,000	15,520
Nov	18,650	18,400
Dec	22,940	22,380
Annual Averages (Ten Year Averages)	**33,858 (45,832)**	**34,043 (46,513)**

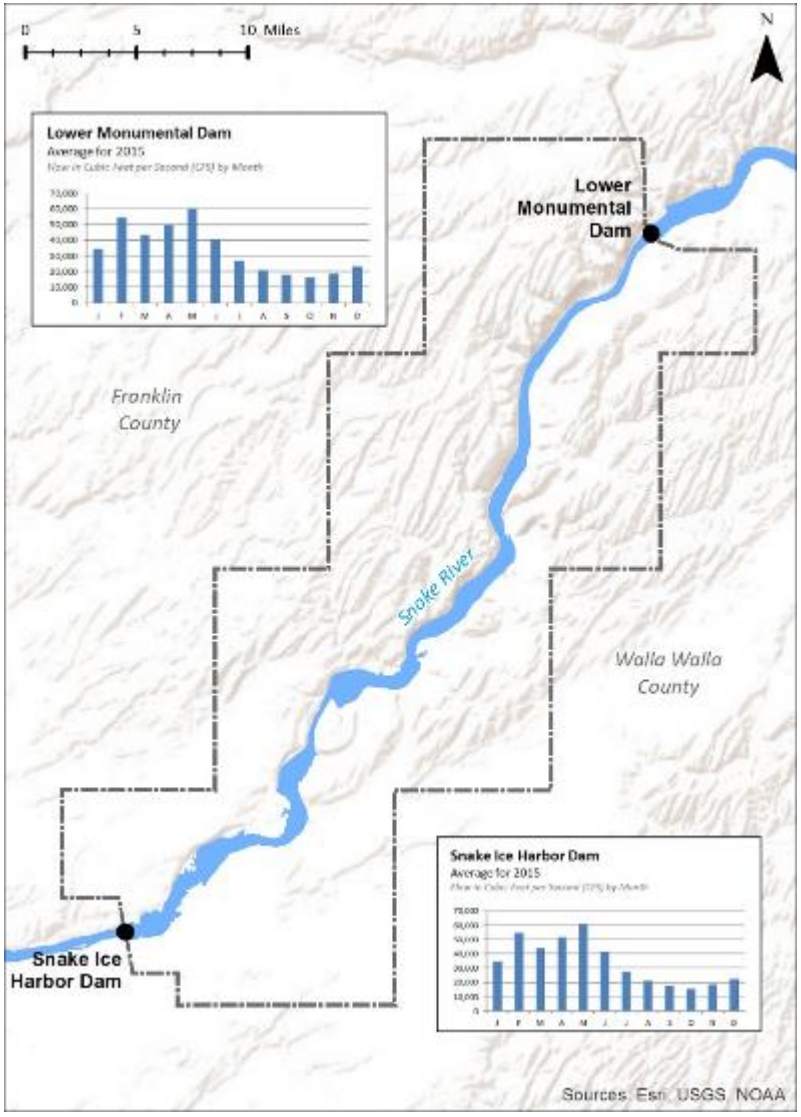


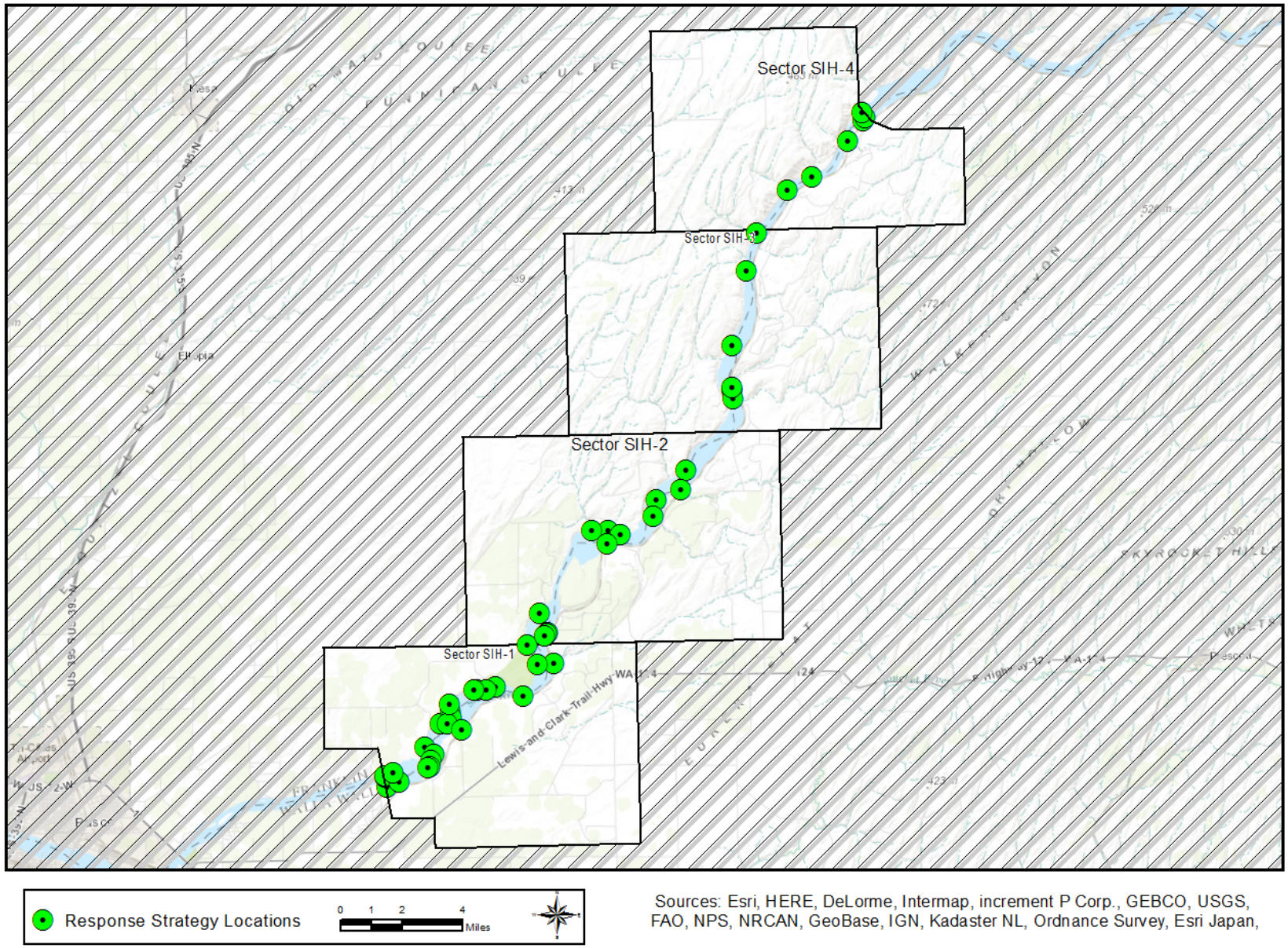
Figure 4-1: Mean Monthly Outflow for the Ice Harbor and Lower Monumental Dams

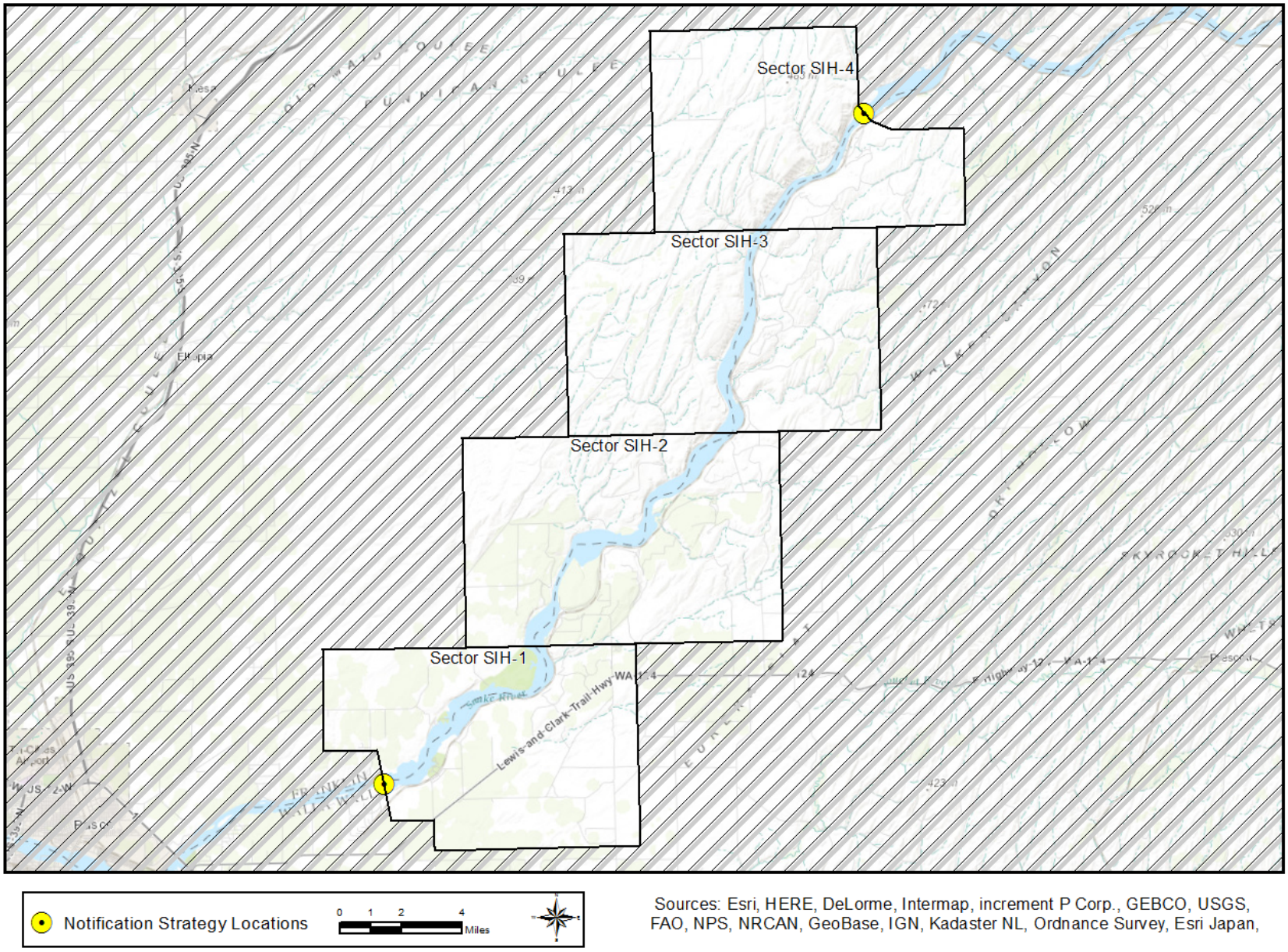
4.2 AREA OVERVIEW MAPS

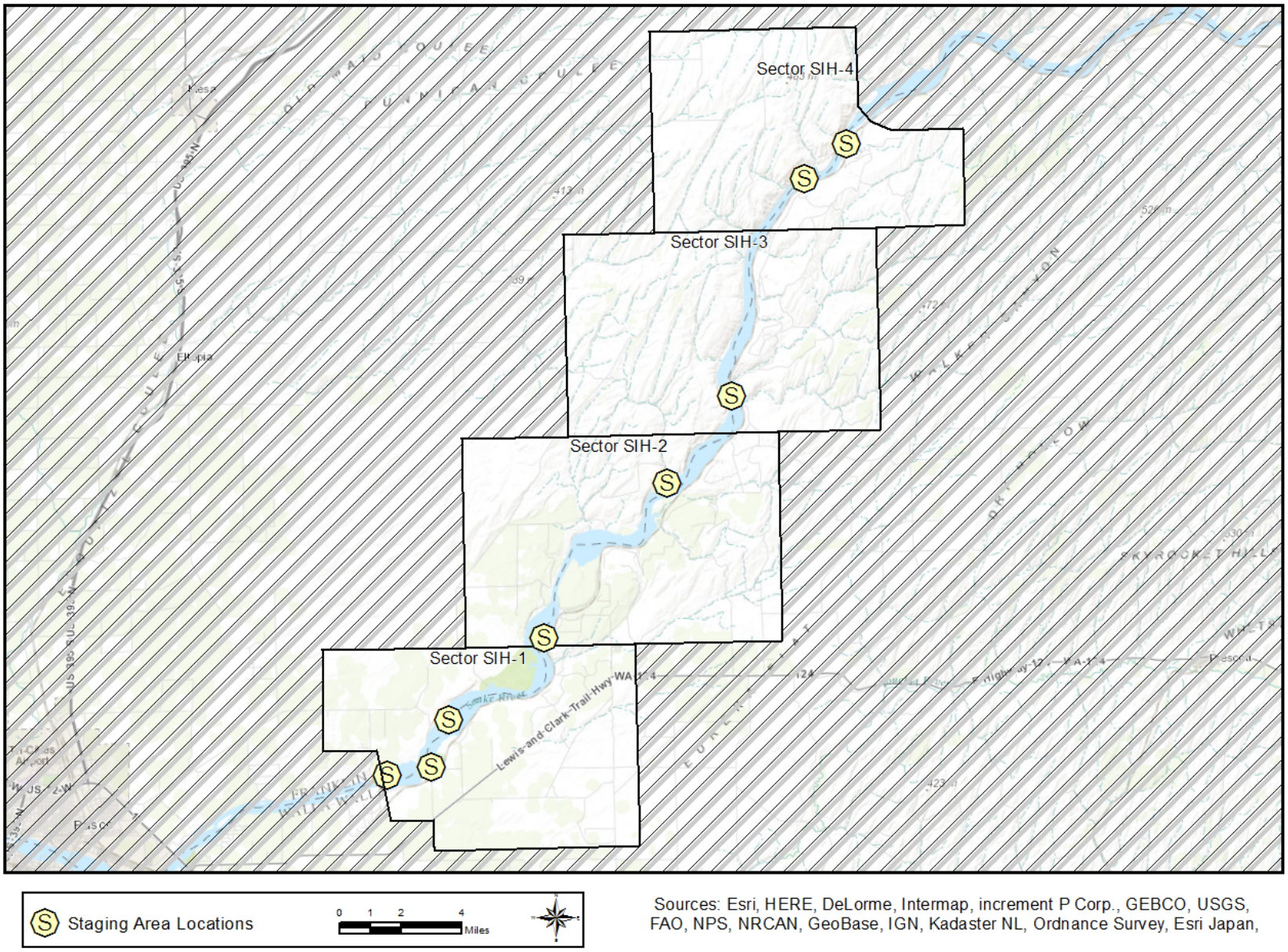
The following maps provide a geographic overview of the Snake River Ice Harbor Pool. Sector maps in Section 4.4 of this chapter provide more detail on the location of response strategies, notification strategies, staging areas, boat launch locations, and Potential Oil Spill Origin Points (POSOPs). Detailed 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.

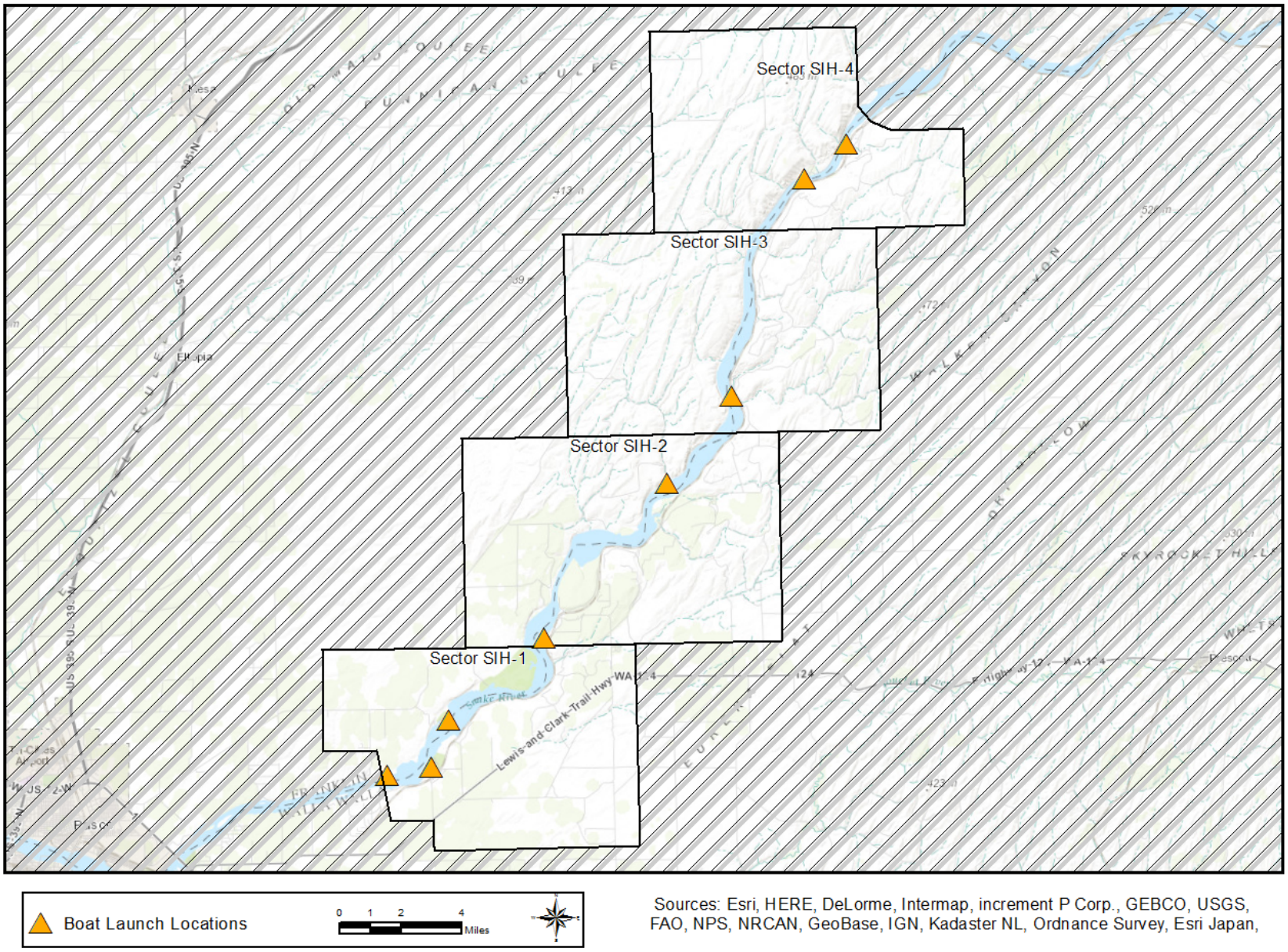
The following area maps are provided, by pool, for reference:

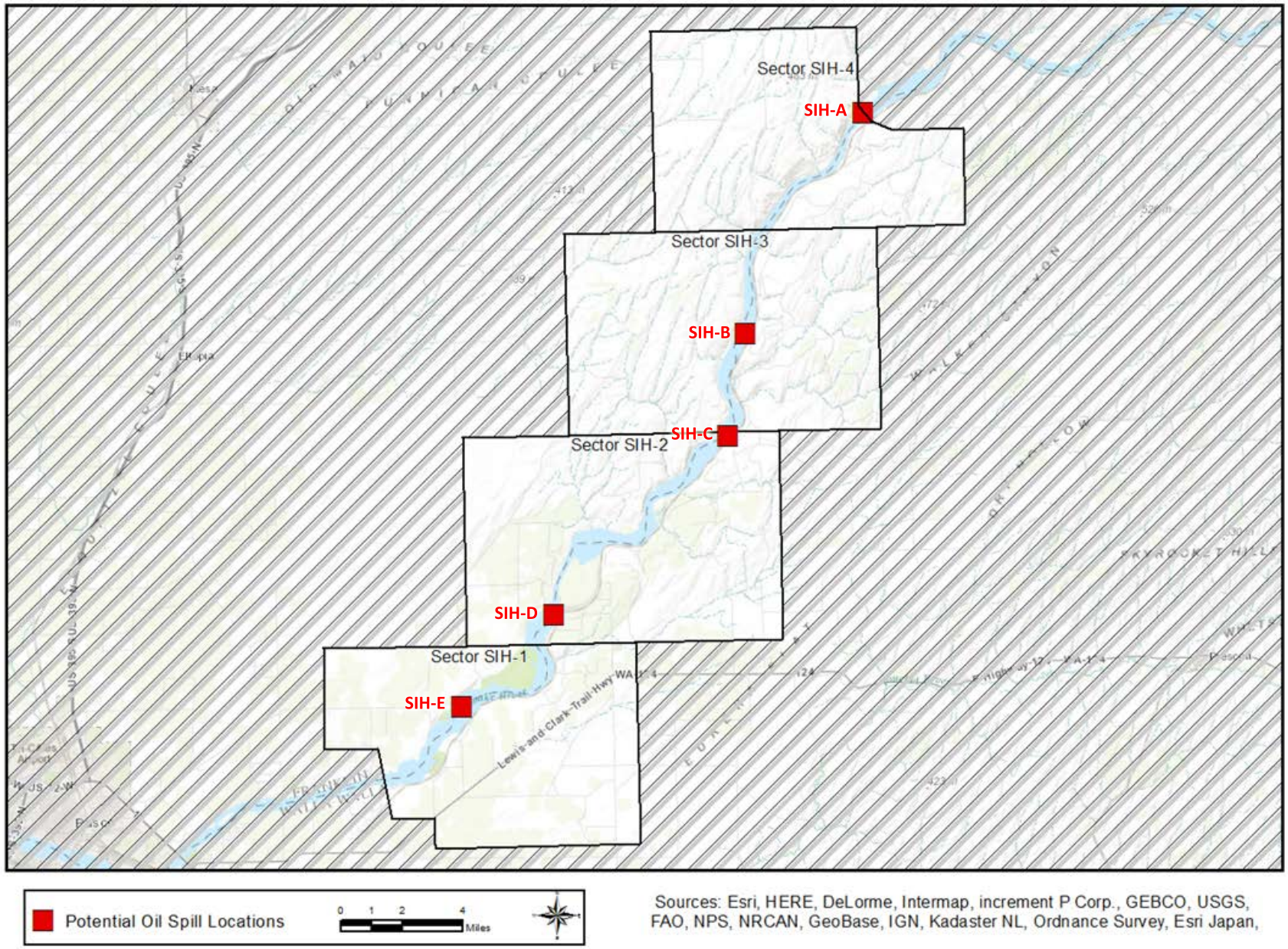
- Response Strategy Locations
- Notification Strategy Locations
- Staging Areas
- Boat Launch Locations
- Potential Oil Spill Origin Points


Sector SIH-4
Sector SIH-3
Sector SIH-2
Sector SIH-1
Lewis-and-Clark-Trail-Hwy-WA-14
Response Strategy Locations
0 1 2 4
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector SIH-4
Sector SIH-3
Sector SIH-2
Sector SIH-1
Lewis-and Clark-Trail Hwy-WA
Notification Strategy Locations
0 1 2 4
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector SIH-4
Sector SIH-3
Sector SIH-2
Sector SIH-1
Lewis-and-Clark-Trail-Hwy-WA
Staging Area Locations
0 1 2 4
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector SIH-4
Sector SIH-3
Sector SIH-2
Sector SIH-1
Lewis-and-Clark-Trail-Hwy-WA-14
Boat Launch Locations
0 1 2 4
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,


Sector SIH-4
SIH-A
Sector SIH-3
SIH-B
SIH-C
Sector SIH-2
SIH-D
Sector SIH-1
SIH-E
Lewis and Clark Trail Hwy WA
Potential Oil Spill Locations
0 1 2 4
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,

4.3 STRATEGY AND RESPONSE PRIORITIES

4.3.1 General Response Priorities

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

- 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

Potential Oil Spill Origin Points (POSOPs) are geographic locations that have a defined list of response strategy implementation priorities 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 Ice Harbor Pool-GRP; example include, points SIH-A, SIH-B, SIH-C and SIH-D. The priority tables provided in this section were developed 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, trustee input, and other considerations.

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

Table 4-3: SIH-A (Lower Monumental Dam ~SIH-41.55)

SIH-A (Lower Monumental Dam SIH-41.55)				
Implementation Priority	**Strategy Number**	**Sector Map**	**Strategy Matrix**	**Strategy Details**
1	SIH-37.77R	52	67	167
2	SIH-38.6R	52	68	169
3	SIH-34.75R	51	67	163
4	SIH-36.0R	51	67	165
5	SIH-40.45L	52	68	171
6	SIH-41.4L	52	68	173
7	SIH-41.5L	52	69	175
8	SIH-41.5R	52	69	177
9	SIH-32.15R	51	66	161
10	SIH-30.6L	51	66	157

Table 4-4: SIH-B (Union Pacific RR Switch ~SIH-33.0)

SIH-B (Union Pacific RR Switch SIH-33.0)				
Implementation Priority	**Strategy Number**	**Sector Map**	**Strategy Matrix**	**Strategy Details**
1	SIH-30.6L	51	66	157
2	SIH-30.7L	51	66	159
3	SIH-30.5L	51	67	155
4	SIH-30.25L	51	65	153
5	SIH-32.15R	51	66	161
6	SIH-27.1R	50	65	151
7	SIH-26.5L	50	65	149
8	SIH-25.5L	50	64	147
9	SIH-24.75L	50	64	145
10	SIH-23.1R	50	64	143

Table 4-5: SIH-C (Northwest Granary ~SIH-29.0)

SIH-C (Northwest Granary SIH-29.0)				
Implementation Priority	**Strategy Number**	**Sector Map**	**Strategy Matrix**	**Strategy Details**
1	SIH-26.5L	50	65	149
2	SIH-27.1R	50	65	151
3	SIH-24.75L	50	64	145
4	SIH-25.5L	50	64	147
5	SIH-23.1R	50	64	143
6	SIH-22.7R	50	63	141
7	SIH-22.65L	50	63	139
8	SIH-22.1R	50	63	137

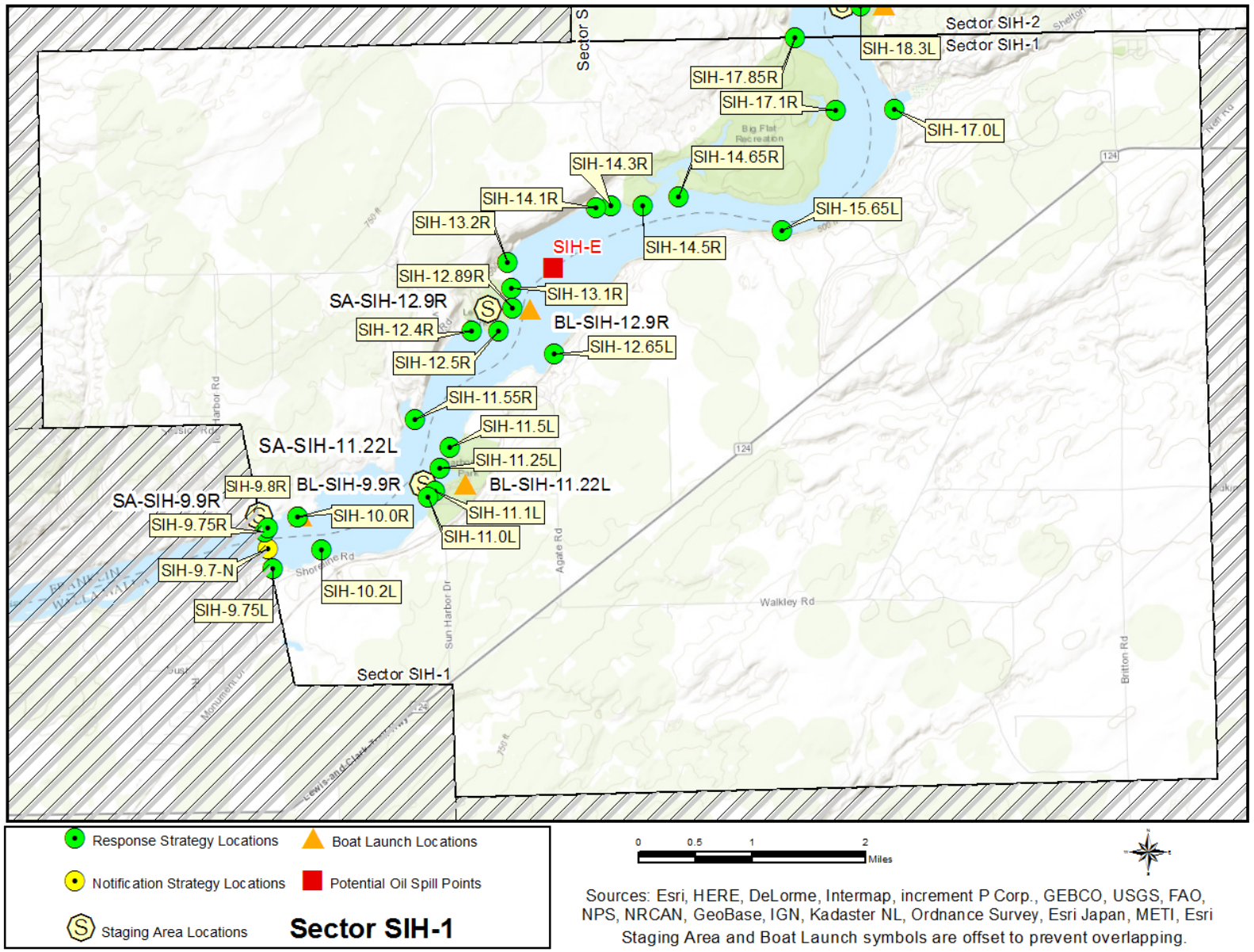
Table 4-6: SIH-D (Emma Lake ~SIH-19.0)

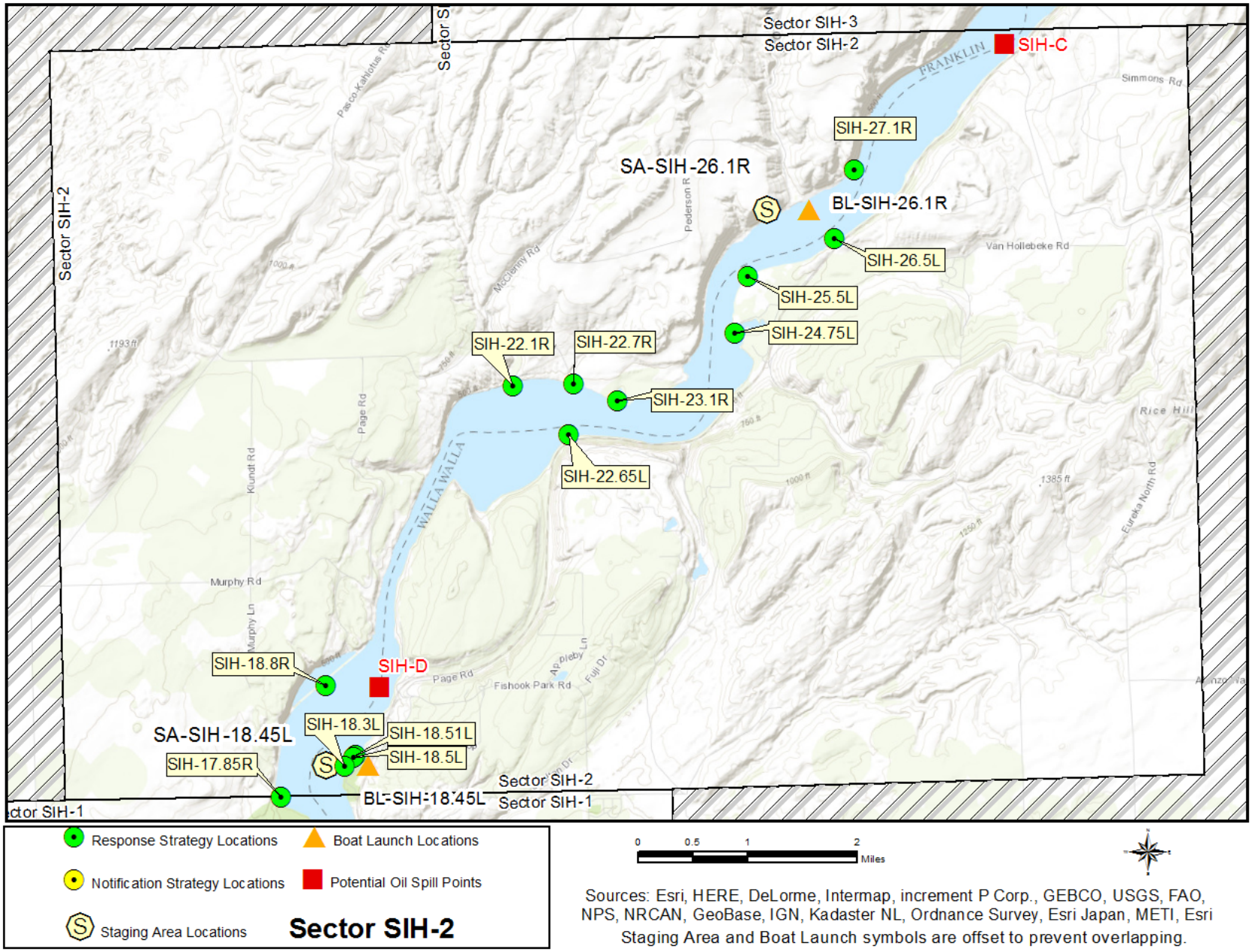
SIH-D (Emma Lake SIH-19.0)				
Implementation Priority	**Strategy Number**	**Sector Map**	**Strategy Matrix**	**Strategy Details**
1	SIH-17.85R	49	61	127
2	SIH-15.65L	49	60	121
3	SIH-17.0L	49	60	123
4	SIH-17.1R	49	61	125
5	SIH-18.3L	49	61	129
6	SIH-18.5L	50	62	131
7	SIH-18.51L	50	62	133
8	SIH-18.8R	50	62	135
9	SIH-14.65R	49	60	119
10	SIH-14.5R	49	59	117

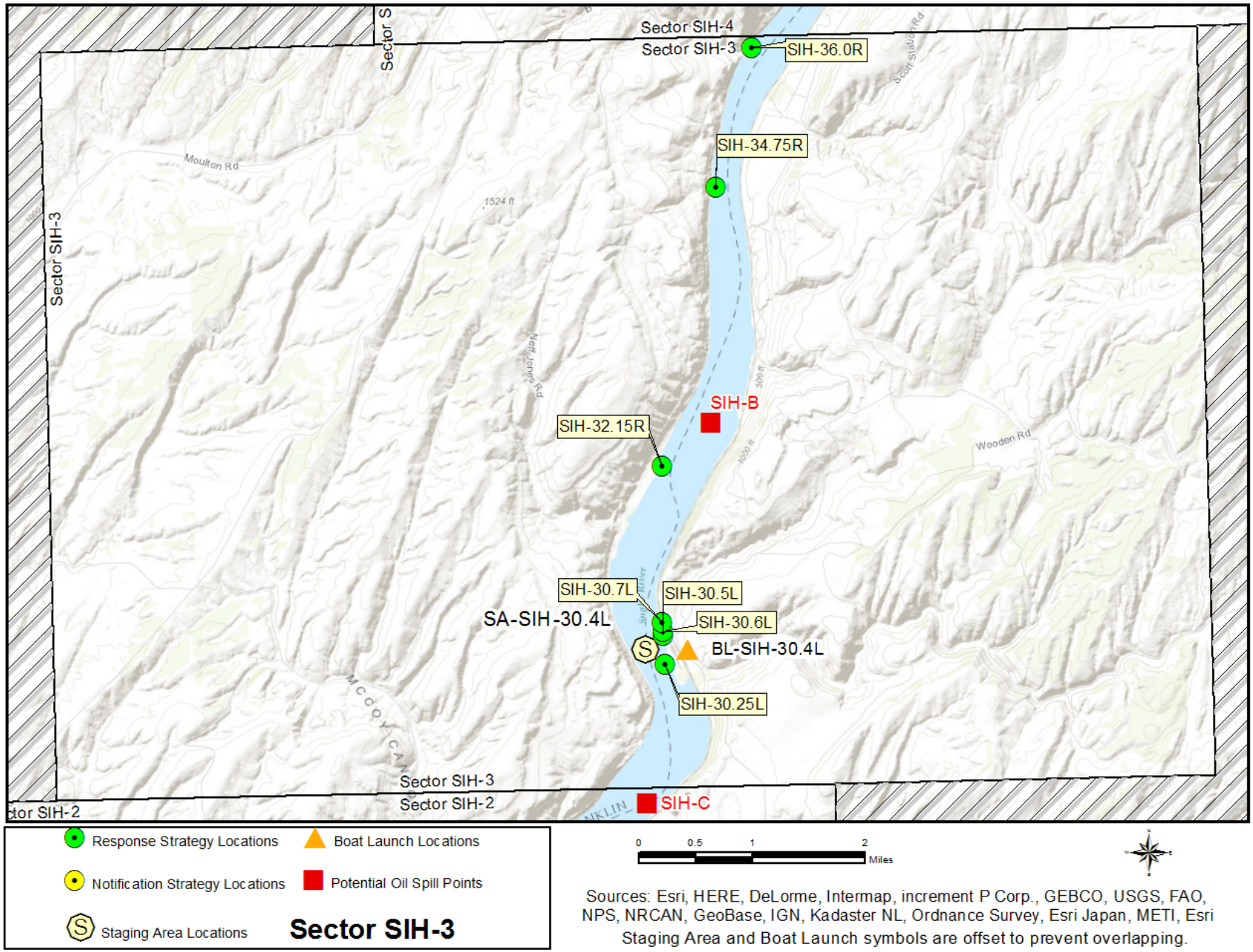
Table 4-7: SIH-E (Levey Park ~SIH-13.5)

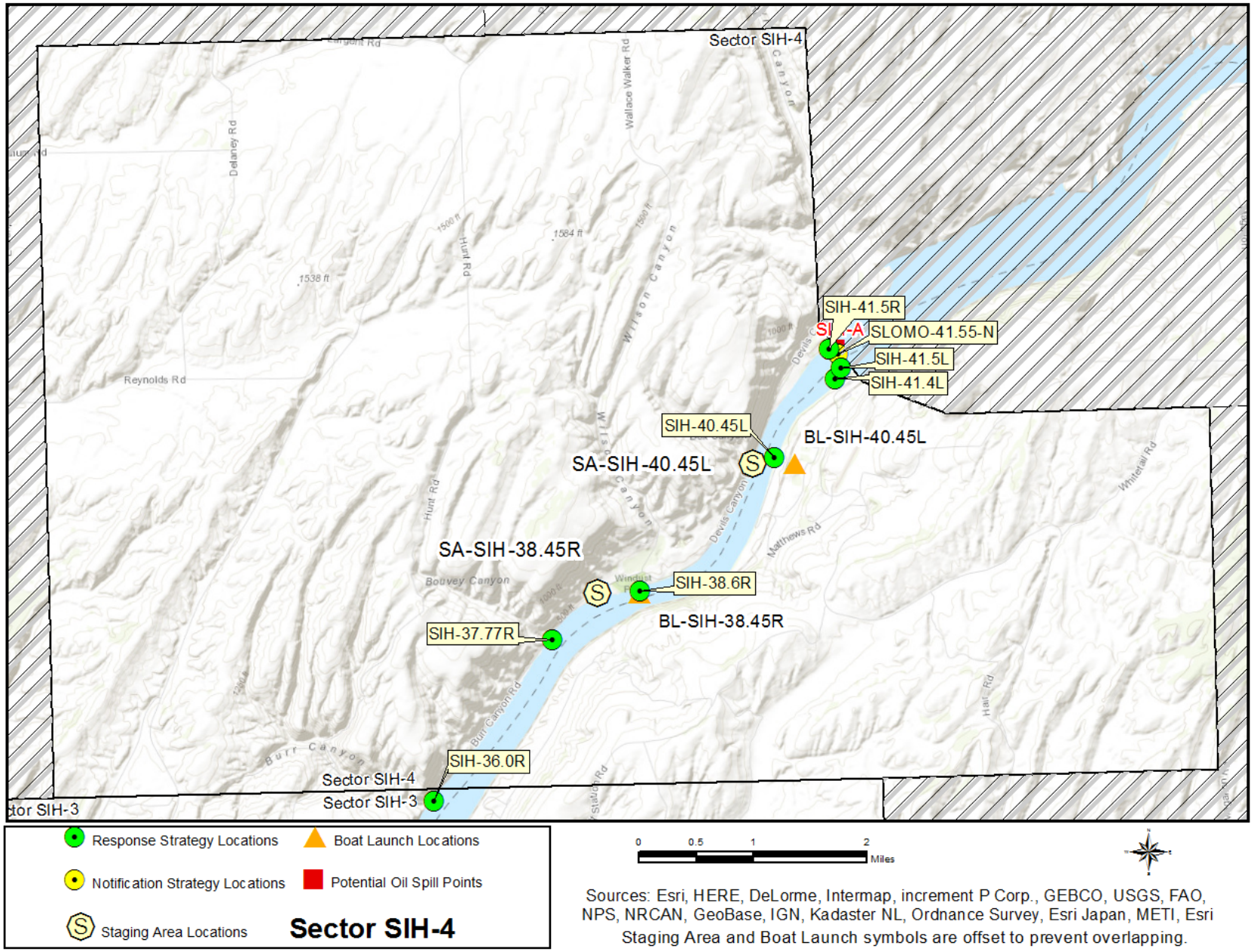
SIH-E (Levey Park SIH-13.5)				
Implementation Priority	**Strategy Number**	**Sector Map**	**Strategy Matrix**	**Strategy Details**
1	SIH-11.25L	49	56	95
2	SIH-11.5L	49	56	97
3	SIH-11.55R	49	56	99
4	SIH-12.4R	49	57	101
5	SIH-12.5R	49	57	103
6	SIH-12.65L	49	57	105
7	SIH-12.89R	49	58	107
8	SIH-13.1R	49	58	109
9	SIH-13.2R	49	58	111
10	SIH-11.0L	49	55	91

4.4 SECTOR MAPS (STRATEGY LOCATIONS)




Sector SIH-3
Sector SIH-2
SIH-C
SIH-27.1R
SA-SIH-26.1R
BL-SIH-26.1R
SIH-26.5L
SIH-25.5L
SIH-24.75L
SIH-22.1R
SIH-22.7R
SIH-23.1R
SIH-22.65L
SIH-18.8R
SIH-D
SA-SIH-18.45L
SIH-18.3L
SIH-18.51L
SIH-18.5L
SIH-17.85R
BL-SIH-18.45L
Sector SIH-2
Sector SIH-1
Sector SIH-2
Response Strategy Locations
Boat Launch Locations
Notification Strategy Locations
Potential Oil Spill Points
Staging Area Locations
Sector SIH-2
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri
Staging Area and Boat Launch symbols are offset to prevent overlapping.

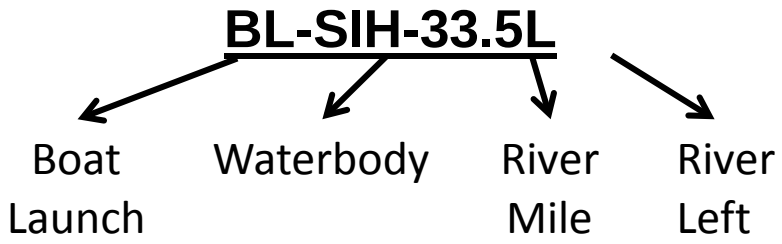

Sector SIH-4
Sector SIH-3
SIH-36.0R
SIH-34.75R
Moulton Rd
1524 ft
Sector SIH-3
Neff Jones Rd
SIH-B
SIH-32.15R
Wooden Rd
SIH-30.7L
SIH-30.5L
SA-SIH-30.4L
SIH-30.6L
BL-SIH-30.4L
SIH-30.25L
MCCOY CANYON
Sector SIH-3
Sector SIH-2
SIH-C
Response Strategy Locations
Boat Launch Locations
Notification Strategy Locations
Potential Oil Spill Points
Staging Area Locations
Sector SIH-3
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri
Staging Area and Boat Launch symbols are offset to prevent overlapping.


Sector SIH-4
SIH-41.5R
SLOMO-41.55-N
SIH-41.5L
SIH-41.4L
SIH-40.45L
BL-SIH-40.45L
SA-SIH-40.45L
SA-SIH-38.45R
SIH-38.6R
BL-SIH-38.45R
SIH-37.77R
SIH-36.0R
Sector SIH-4
Sector SIH-3
Reynolds Rd
Delaney Rd
Wallace Walker Rd
Hunt Rd
Wilson Canyon
Devils Canyon
Matthews Rd
Whitetail Rd
Hart Rd
Burr Canyon Rd
Bouvey Canyon
Burr Canyon
Response Strategy Locations
Boat Launch Locations
Notification Strategy Locations
Potential Oil Spill Points
Staging Area Locations
Sector SIH-4
0 0.5 1 2
Miles
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri
Staging Area and Boat Launch symbols are offset to prevent overlapping.

4.5 MATRICES

4.5.1 Naming Conventions (Short Names)

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



Associated river body short name designations used within the Snake include: SIH=Snake River/Ice Harbor Pool, and SLOMO = Snake River/Lower Monumental Pool

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#)
SIH-9.75R	Ice Harbor upstream Fishladder on river L, S shore 46.24632 -118.87874	Exclusion	Boom 200ft	No	Onsite Stage at the Ice Harbor Lock and Dam, must contact the Ice Harbor Dam for access and instructions.	Fish Ladder(s)	Contact Ice Harbor Dam for access and instructions.	49	81
SIH-9.75R	Ice Harbor upstream Fishladder on river R, N shore 46.25107 -118.88010	Exclusion	Boom 100ft	No	Onsite Stage at the Ice Harbor Lock and Dam, must contact the Ice Harbor Dam for access and instructions.	Fish Ladder(s)	Contact Ice Harbor Dam for access and instructions.	49	83
SIH-9.8R	Ice Harbor Navigation Lock on the upstream side 46.25152 -118.87950	Collection	Boom 200ft	Yes	Onsite Stage at SA-SIH-9.9R or stage on-site at the Ice Harbor Lock and Dam. Must contact the Ice Harbor Dam for access	Downstream Resources, Lock and Dam	Launch at BL-SIH-9.9R unless this can be deployed using a line throwing devise. Contact Ice Harbor Dam for access and instructions.	49	85

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-10.0R	Devil's Bench boat basin 46.25296 -118.87395	Deflection	Boom 800ft	Yes	Remote SA-SIH-9.9R	Boat Launch/Ramp, Economic Resource, Riparian Habitat	Launch at BL-SIH-9.9R Devil's Bench	49	87
SIH-10.2L	Shoreline Drive Parking upstream of Ice Harbor Dam 46.24860 -118.86977	Collection	Boom 1000ft	Yes	Onsite Stage on-site at the Shoreline Drive parking area just upstream of the dam. Large gravel lot available.	Downstream Resources, Recreational Use Area	Launch at BL-SIH-9.9R	49	89
SIH-11.0L	Charbonneau Park South Shoreline 46.25504 -118.84979	Deflection	Boom 600ft	Yes	Remote Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area	Public Recreation Site/Area, Recreational Shoreline Area, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area	49	91

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-11.1L	Charbonneau Park Beaches 46.25584 -118.84846	Exclusion	Boom 900ft	Yes	Remote Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area	Recreational Swimming Area	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area	49	93
SIH-11.25L	Charbonneau Recreation Area (Old Name SIH-18) 46.25873 -118.84757	Deflection	Boom 400ft	Yes	Remote Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area	Marina, Public Recreation Site/Area	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area	49	95
SIH-11.5L	Charbonneau Park N Shore 46.26139 -118.84565	Deflection	Boom 700ft	Yes	Remote Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area	Recreational Shoreline Area, Sensitive Resources Nearby, Waterfowl Concentrations and Habitat	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area	49	97
SIH-11.55R	(SIH-19) Entrance to Lake Charlene HMU 46.26514 -118.85193	Exclusion	Boom 100ft	Yes	Remote Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area	Public Lands/Facilities, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area	49	99

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-12.4R	Levey Park South Shore 46.27632 -118.84117	Exclusion	Boom 600ft	Yes	Onsite Stage on site or at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	101
SIH-12.5R	Levy Park Swim Area 46.27620 -118.83617	Exclusion	Boom 300ft	Yes	Onsite Stage on site or at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Recreational Swimming Area, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	103
SIH-12.65L	Just upstream of Anchor Bay 46.27312 -118.82595	Deflection	Boom 1000ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Recreational Boating, Sensitive Resources Nearby, Water Intakes, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	105

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-12.89R	Levey Park Shoreline E of boat launch 46.27913 -118.83348	Deflection	Boom 800ft	Yes	Onsite Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	107
SIH-13.1R	N Shore of Levey Park 46.28161 -118.83364	Deflection	Boom 1000ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Recreational Shoreline Area, Waterfowl and Shorebird Concentrations	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	109
SIH-13.2R	Collection Point 1/3 mile upriver from Levey Park 46.28502 -118.83421	Collection	Boom 1000ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Downstream Resources	Launch at BL-SIH-12.9R Levey Park boat launch and staging area.	49	111

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-14.1R	Big Flat HMU westernmost inlet (old name SIH-15) 46.29177 -118.81755	Exclusion	Boom 700ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	113
SIH-14.3R	Inlet on the S shore at Big Flat HMU 46.29199 -118.81482	Exclusion	Boom 500ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	115
SIH-14.5R	SW of Dalton Lake at Big Flat HMU 46.29186 -118.80897	Deflection	Boom 800ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	117

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-14.65R	Inlet to Dalton Lake at Big Flat HMU 46.29293 -118.80235	Deflection	Boom 800ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Lake Habitat, Waterfowl and Salmonid Concentrations and Habitat, Wetlands	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	119
SIH-15.65L	Across from Big Flat Habitat Management Unit 46.28834 -118.78326	Collection	Boom 1000ft	Yes	Remote Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters	Downstream Resources, Habitat Management Unit	Launch at BL-SIH-12.9R Levey Park boat launch and staging area	49	121
SIH-17.0L	South Pond, Fishhook Habitat Management Unit 46.30360 -118.76211	Exclusion	Boom 100ft, Sorbent 100ft	Yes	Remote SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Habitat Management Unit, Public Lands/Facilities, Riparian Habitat	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	49	123

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-17.1R	Side channel Big Flat HMU (old name SIH-12) 46.30363 -118.77287	Exclusion	Boom 500ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Habitat Management Unit, Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	49	125
SIH-17.85R	N end of Big Flat HMU 46.31300 -118.78014	Collection	Boom 1000ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Habitat Management Unit, Recreational Use Area, Sensitive Resources Nearby, Waterfowl Concentrations	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	49	127
SIH-18.3L	Fishhook Park Parking Lot, SW corner 46.31687 -118.76790	Deflection	Boom 600ft	Yes	Onsite Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Recreational Shoreline Area, Waterfowl Concentrations	Launch onsite at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	49	129

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-18.5L	Fishhook Park Launch and Beach (old name SIH-10) 46.31800 -118.76615	Deflection	Boom 500ft	Yes	Onsite Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Boat Launch/Ramp, Public Recreation Site/Area, Sensitive Shoreline and Back-Beach	Launch on site at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	131
SIH-18.51L	Fishhook Park N shoreline 46.31832 -118.76564	Collection	Boom 600ft	Yes	Onsite Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Downstream Resources, Recreational Use Area	Launch onsite at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	133
SIH-18.8R	Lake Emma culverts (old name SIH-9) 46.32767 -118.77120	Exclusion	Boom 200ft, Sorbent 200ft	Yes	Remote Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Public Lands/Facilities	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	135

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-22.1R	Lost Island HMU - downstream end (old name SIH-7) 46.36683 -118.73402	Exclusion	Boom 300ft, Sorbent 100ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Riparian Habitat	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	137
SIH-22.65L	Across the river from Lost Island Recreation Area 46.36012 -118.72363	Deflection	Boom 1000ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Recreational Boating, Sensitive Resources Nearby, Waterfowl Concentrations	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	139
SIH-22.7R	Lost Island HMU (old name SIH-6) 46.36687 -118.72244	Exclusion	Boom 300ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Recreational Use Area, Riparian Habitat, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	141

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-23.1R	Lost Island HMU (old name SIH-5) 46.36456 -118.71406	Exclusion	Boom 1000ft	Yes	Remote Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	Deer Habitat, Habitat Management Unit, Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking	50	143
SIH-24.75L	Hollebeke Habitat Management Unit (old name SIH-3) 46.37317 -118.69124	Deflection	Boom 1000ft	Yes	Remote Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	Habitat Management Unit, Public Lands/Facilities, Raptors, Sensitive Resources, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	50	145
SIH-25.5L	Hollebeke Habitat Management Unit (old name SIH-2) 46.38065 -118.68865	Deflection	Boom 1000ft	Yes	Remote Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	Habitat Management Unit, Raptors, Sensitive Resources Nearby, Waterfowl Concentrations	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	50	147

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Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-26.5L	Across the river from Snake River Junction 46.38532 -118.67185	Collection	Boom 1000ft	Yes	Remote Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	Downstream Resources, Habitat Management Unit, Raptors	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms	50	149
SIH-27.1R	One Mile upstream from Snake River Junction 46.39435 -118.66765	Deflection	Boom 700ft	Yes	Remote Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking. More parking and bathrooms nearby	Raptors, Sensitive Resources Nearby	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking. More parking and bathrooms nearby	50	151
SIH-30.25L	Walker Pit Habitat Management Unit (old name SIH-1) 46.42830 -118.63433	Deflection	Boom 800ft	Yes	Onsite Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	Habitat Management Unit, Public Lands/Facilities, Raptors, Waterfowl Concentrations	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	51	153
SIH-30.5L	Walker Pit HMU N Shoreline 46.43208 -118.63471	Deflection	Boom 700ft	Yes	Onsite Stage onsite or at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	Boat Launch/Ramp, Habitat Management Unit, Raptors, Waterfowl and Salmonid Concentrations and Habitat	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	51	155

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-30.6L	Northernmost shoreline at Walker Pit HMU 46.43262 -118.63454	Collection	Boom 900ft	Yes	Onsite Stage onsite or at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	Downstream Resources, Habitat Management Unit, Public Lands/Facilities, Raptors	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	51	157
SIH-30.7L	Culvert to N wetland at Walker Pit HMU 46.43377 -118.63481	Exclusion	Boom 100ft, Sorbent 100ft	Yes	Remote Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	Habitat Management Unit, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	51	159
SIH-32.15R	Columbia Plateau Trail river mile 32.15R 46.45379 -118.63407	Deflection	Boom 800ft	Yes	Remote Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	Recreational Shoreline Area, Waterfowl Concentrations	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area	51	161

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Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-34.75R	1.25 miles S of Burr Canyon 46.48937 -118.62282	Deflection	Boom 700ft	Yes	Remote Stage at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked	Sensitive Resources Nearby, Waterfowl Concentrations	Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)	51	163
SIH-36.0R	Burr Canyon Road 46.50719 -118.61550	Deflection	Boom 1000ft, Sorbent 100ft	Yes	Remote Stage at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked	Sensitive Resources, Waterfowl Concentrations	Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)	51	165
SIH-37.77R	Bouvey Canyon 46.52734 -118.59304	Collection	Boom 1000ft	Yes	Onsite Gravel parking, or at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area	Downstream Resources, Waterfowl Concentrations	Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)	52	167

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-38.6R	Windust Park 46.53334 -118.57651	Collection	Boom 1000ft	Yes	Onsite Stage onsite at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities	Deer Habitat, Recreational Use Area, Sensitive Resources Nearby, Waterfowl Concentrations	Launch onsite at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)	52	169
SIH-40.45L	Matthews Boat Ramp 46.54990 -118.55115	Collection	Boom 1000ft, Sorbent 100ft	Yes	Onsite Stage on site at SA-SIH-40.5L, Matthews boat launch, lights, parking, and bathrooms	Boat Launch/Ramp, Downstream Resources, Waterfowl Concentrations	Launch on site at BL-SIH-40.5L, Matthews boat launch, lights, parking, and bathrooms	52	171
SIH-41.4L	Downstream Lower Monumental Lock (old name SLOMO-23) 46.55975 -118.53959	Collection	Boom 100ft	Unknown	Onsite Stage onsite or at SA-SIH-40.45L Matthews boat launch - lights, parking, bathroom	Downstream Resources, Lock and Dam	May be able to deploy by hand but if using boat, launch from SIH-40.45L Matthews boat launch - lights, parking, bathroom	52	173

Strategy Name	Location	Strategy Type	Boom Length	Boat Req?	Staging Area	Resources At Risk	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-41.5L	Lower Monumental Dam S Fish Ladder 46.56114 -118.53848	Exclusion	Boom 100ft, Sorbent 100ft	No	Onsite Stage onsite or use SA-SIH-40.45L if allowed to access the site by boat.	Fish Ladder(s), Salmon Concentrations	Deploy boom by hand, use line throwing devise if needed. If allowed to access by boat, launch at BL-SIH-40.45L Matthews boat launch	52	175
SIH-41.5R	Lower Monumental Dam N Fish Ladder 46.56350 -118.54046	Exclusion	Boom 100ft, Sorbent 100ft	No	Onsite Stage onsite or use SA-SIH-40.45L if allowed to access the site by boat.	Fish Ladder(s), Salmon Concentrations	Deploy boom by hand, use line throwing devise if needed. If allowed to access by boat, launch at BL-SIH-40.45L Matthews boat launch	52	177

4.5.3 Notification Strategy Matrices

Notification Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
SIH-9.7-N	Ice Harbor 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 Ice Harbor pool include: SIH-9.75R and SIH-9.75L exclusion strategies to protect the fish ladders on the upstream side of the dam, and SIH-9.8R, a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the McNary pool, include: MSN-9.5R, a collection strategy at the W end of the lock.	Protection of fish ladders, lock and/or spillway closure, deployment of GRP strategies	49	181

Notification Strategy Name	Location	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page #)	Strategy Details (Page#)
SLOMO-41.55-N	Lower Monumental Lock and Dam Notification 46.56294 -118.53900	Notification	Downstream Resources, Fish Ladder(s), 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 on the upstream side of the dam will be included in the SLOMO-GRP. On the downstream side of the dam is a collection strategy, SIH-41.4L, at the end of the lock, and two exclusion strategies for the fish ladders SIH-41.5R and SIH-41.5L - all three are listed in the SIH-GRP.	Protection of fish ladders, lock &/or spillway closure, deployment of GRP strategies	52	183

4.5.4 Staging Area Matrices

Staging Area Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
-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 Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	MSN-9.5R, SIH-10.0R, SIH-9.8R, SIH-10.2L	Paved staging area with two 7 degree concrete boat ramps	49	187
-SA-SIH-11.22L	Charbonneau Marina	46.25670 -118.84671	642 Campground Rd Burbank, WA 99323	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-11.25L, SIH-11.0L, SIH-11.55R, SIH-11.5L, SIH-11.1L	Paved lighted double ramp with most facilities	49	189

Staging Area Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-SIH-12.9R	Levey Park Boat Launch	46.27905 -118.83409	1701 Levey Rd Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-16.1R, SIH-14.3R, SIH-13.1R, SIH-12.5L, SIH-12.5R, SIH-12.4R, SIH-14.65R, SIH-12.65L, SIH-13.2R, SIH-12.9R, SIH-12.89R, SIH-14.5R, SIH-14.1R, SIH-15.65L	Paved staging area	49	191
SA-SIH-18.45L	Fishhook Park Boat Launch	46.31702 -118.76724	3170 Fishhook Park Rd Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-17.85R, SIH-17.1R, SIH-18.51L, SIH-23.1R, SIH-22.7R, SIH-23.25R, SIH-23.4R, SIH-17.0L, SIH-18.5L , SIH-18.8R, SIH-22.65L	Seasonal, paved, lighted, staging area (bring bolt cutters in off-season)	50	193

Staging Area Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-SIH-26.1R	Snake River Junction	46.38933 -118.68041	3198 Pederson Rd Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-26.5L, SIH-25.5L, SIH-27.1R, SIH-24.75L	Gravel staging area, bathrooms available at Columbia Plateau Trail 600 ft away	50	195
SA-SIH-30.4L	Walk Pit HMU Boat Launch	46.43029 -118.63401	Walker Pit Road Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-30.25L, SIH-30.7L, SIH-32.15R	Gravel staging area	51	197
SA-SIH-38.45R	Windust Park Boat Launch	46.53311 -118.58045	5252 Burr Canyon Road Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-38.6R, SIH-36.0R, SIH-39.2R, SIH-39.3L, SIH-34.75R	Paved, marked, well lit staging area with facilities (locked gate off season)	52	199

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Staging Area Name	Location	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
SA-SIH-40.45L	Matthews Boat Launch	46.54909 -118.55117	16721 Lower Monumental Rd Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-40.45L	Paved lighted staging area	52	201

4.5.5 Boat Launch Matrices

Boat Launch Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
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 Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	MSN-9.5R, SIH-10.2L, SIH-9.8R, SIH-10.0R	Paved staging area with two 7 degree concrete boat ramps	49	207
BL-SIH-11.22L	Charbonneau Marina	46.25670 -118.84671	642 Campground Rd Burbank, WA 99323	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-11.5L, SIH-11.1L, SIH-11.0L, SIH-11.55R, SIH-11.25L	Paved lighted double ramp with most facilities	49	209
BL-SIH-12.9R	Levey Park Boat Launch	46.27905 -118.83409	1701 Levey Rd Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-14.1R, SIH-14.5R, SIH-12.65L, SIH-15.65L, SIH-12.9R, SIH-12.5R, SIH-13.1R, SIH-12.5L, SIH-14.3R, SIH-16.1R, SIH-12.89R, SIH-14.65R, SIH-12.4R, SIH-13.2R	Paved single ramp 7 degree grade	49	211

Boat Launch Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-SIH-18.45L	Fishhook Park Boat Launch	46.31702 -118.76724	3170 Fishhook Park Rd Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-22.65L, SIH-18.5L , SIH-17.0L, SIH-17.85R, SIH-18.51L, SIH-18.8R, SIH-23.25R, SIH-22.7R, SIH-23.1R, SIH-23.4R, SIH-17.1R	Seasonal, paved, lighted double boat ramps with 8 degree grade (bring bolt cutters in off-season)	50	213
BL-SIH-26.1R	Snake River Junction	46.38933 -118.68041	3198 Pederson Rd Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-24.75L, SIH-25.5L, SIH-27.1R, SIH-26.5L	Single primitive boat launch	50	215
BL-SIH-30.4L	Walk Pit HMU Boat Launch	3.64098 18.96233	Walker Pit Road Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-30.25L, SIH-30.7L, SIH-30.6L, SIH-32.15R, SIH-30.5L	Primitive gravel launch ok for medium to small boats and small vac truck	51	217

Boat Launch Name	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page #)	Strategy Details (Page#)
BL-SIH-38.45R	Windust Park Boat Launch	46.53311 - 118.58045	5252 Burr Canyon Road Pasco, WA 99301	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-39.3L, SIH-36.0R, SIH-39.2R, SIH-38.6R, SIH-37.77R, SIH-34.75R	Paved double ramp (may be closed off season)	52	219
BL-SIH-40.45L	Matthews Boat Launch	46.54909 - 118.55117	16721 Lower Monumental Rd Prescott, WA 99348	USACE Ice Harbor pool Tri-Rivers Natural Resources Management Office Ice Harbor Dam, WA 509-547-2048	SIH-40.45L, SIH-41.4L	Paved single ramp 9 degree grade	52	221

APPENDIX 4A

Response Strategy 2-Pagers

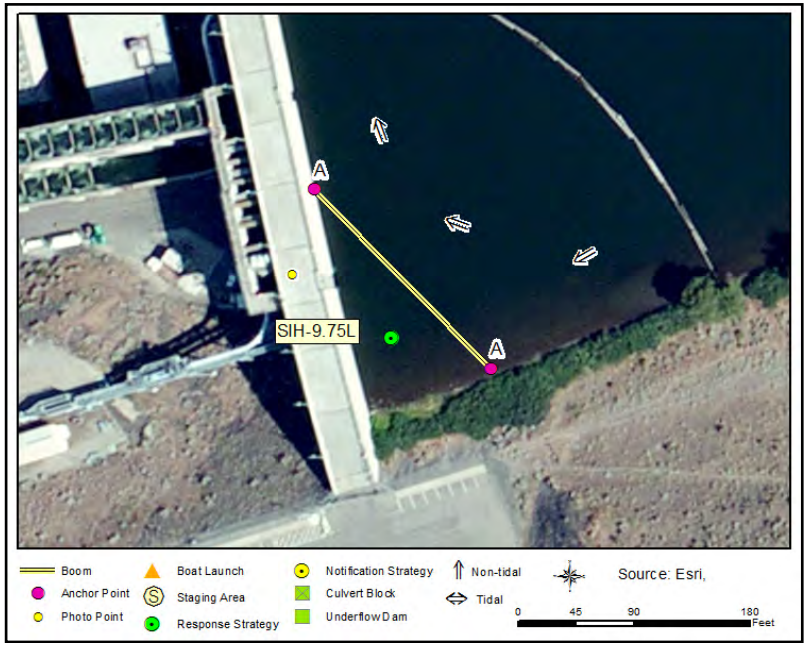
RESPONSE STRATEGIES LIST

SIH-9.75L	SIH-9.75R	SIH-9.8R	SIH-10.0R
SIH-10.2L	SIH-11.0L	SIH-11.1L	SIH-11.25L
SIH-11.5L	SIH-11.55R	SIH-12.4R	SIH-12.5R
SIH-12.65L	SIH-12.89R	SIH-13.1R	SIH-13.2R
SIH-14.1R	SIH-14.3R	SIH-14.5R	SIH-14.65R
SIH-15.65L	SIH-17.0L	SIH-17.1R	SIH-17.85R
SIH-18.3L	SIH-18.5L	SIH-18.51L	SIH-18.8R
SIH-22.1R	SIH-22.65L	SIH-22.7R	SIH-23.1R
SIH-24.75L	SIH-25.5L	SIH-26.5L	SIH-27.1R
SIH-30.25L	SIH-30.5L	SIH-30.6L	SIH-30.7L
SIH-32.15R	SIH-34.75R	SIH-36.0R	SIH-37.77R
SIH-38.6R	SIH-40.45L	SIH-41.4L	SIH-41.5L
SIH-41.5R			

Ice Harbor upstream Fishladder on river L, S shore — SIH-9.75L

46° 14.779', -118° 52.724'	46° 14' 46.8", -118° 52' 43.5"	46.24632, -118.87874	Burbank

Strategy Objective:	Exclusion : Prevent oil from entering the south side upstream fish ladder.
Implementation:	Use 200' of exclusion boom. Attached on shore using shoreline anchor system. Use extra line (or line throwing device) to bring opposite end of boom to the N side of the fish lader intake and anchor near the dam wall. Tie line onto railing above N anchor point. Must work with USACE personnel to implement if they are not going to deploy this themselves.
Staging Area:	Onsite: Stage at the Ice Harbor Lock and Dam, must contact the Ice Harbor Dam for access and instructions.
Site Safety:	Slips, Trips, Falls, Water Hazard, vehicle traffic, working lock and dam
Field Notes:	Contact Ice Harbor Dam for access and instructions.
Watercourse:	River - Above a Dam - Ice Harbor Pool
Resources at Risk:	Fish Ladder(s)



Recommended Equipment

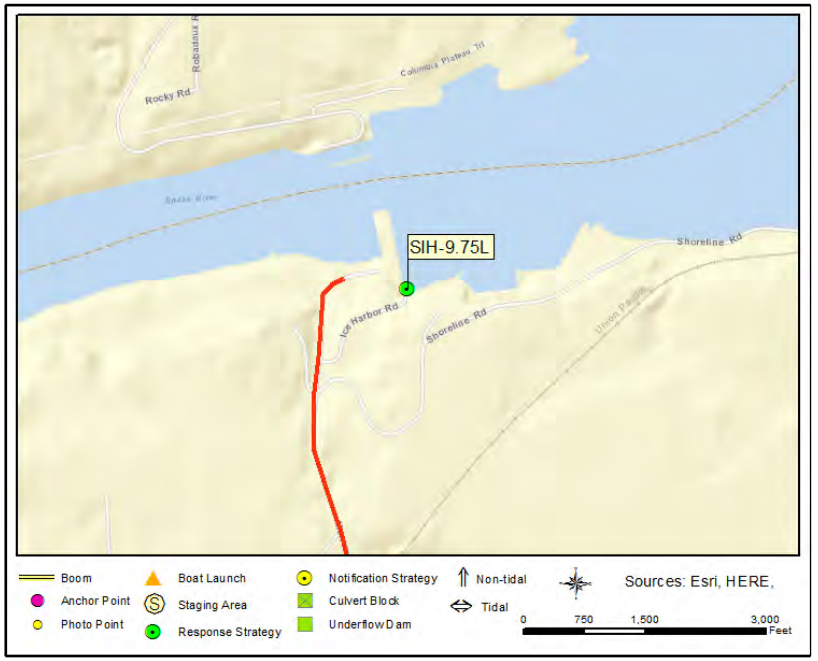
1	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
200	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Line - 1/2" poly line

Recommended Personnel

2	Laborer
1	Supervisor

Ice Harbor upstream Fishladder on river L, S shore SIH-9.75L

SIH-9.75L Photo: View of railing on top of Ice Harbor Dam directly above the Ice Harbor S Shore (L) Fishladder on the upstream side of the dam



Site Contact

USACE Ice Harbor Dam Control Room
Secondary Contact : 24 Hour Emergency Contact
509-547-7783

Nearest Address

2339 Monument Dr
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on Ice Harbor Dr (WA-124) (5.14 miles)
8. Turn left on Monument Dr (2.33 miles)
9. Finish at the Ice Harbor Lock and Dam, 2339 Monument Dr, 99323. Report directly to the guard at the main gate.

Ice Harbor upstream Fishladder on river R, N shore SIH-9.75R

	46.25107, -118.88010	Burbank

Strategy Objective:	Exclusion : Prevent oil from entering the north side upstream fish ladder.
Implementation:	Deploy boom along the inside of the existing log boom. Use extra line to drop anchors from the top of the dam. Anchor to existing anchor points or tie off to railing atop the dam. Must work with USACE personnel to implement if they are not going to deploy this themselves.
Staging Area:	Onsite: Stage at the Ice Harbor Lock and Dam, must contact the Ice Harbor Dam for access and instructions.
Site Safety:	Slips, Trips, Falls, Water Hazard, vehicle traffic, working lock and dam
Field Notes:	Contact Ice Harbor Dam for access and instructions.
Watercourse:	River - Above a Dam - Ice Harbor Pool
Resources at Risk:	Fish Ladder(s)

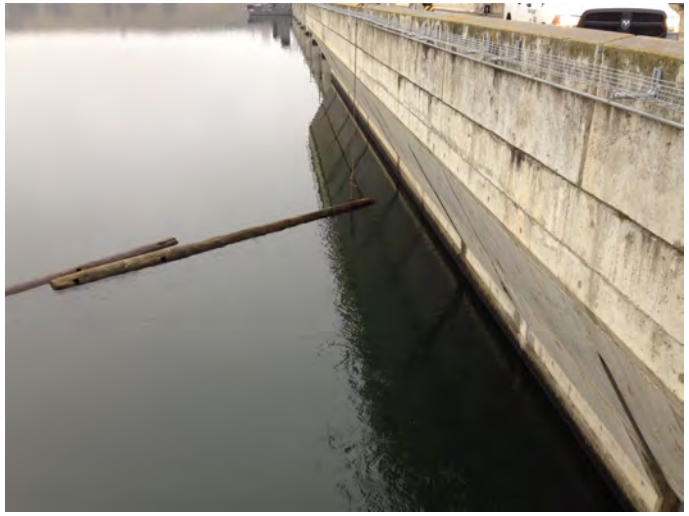
Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
100	Feet	Boom - B2 (Contractor Boom) or equivalent
300	Feet	Line - 1/2" poly line

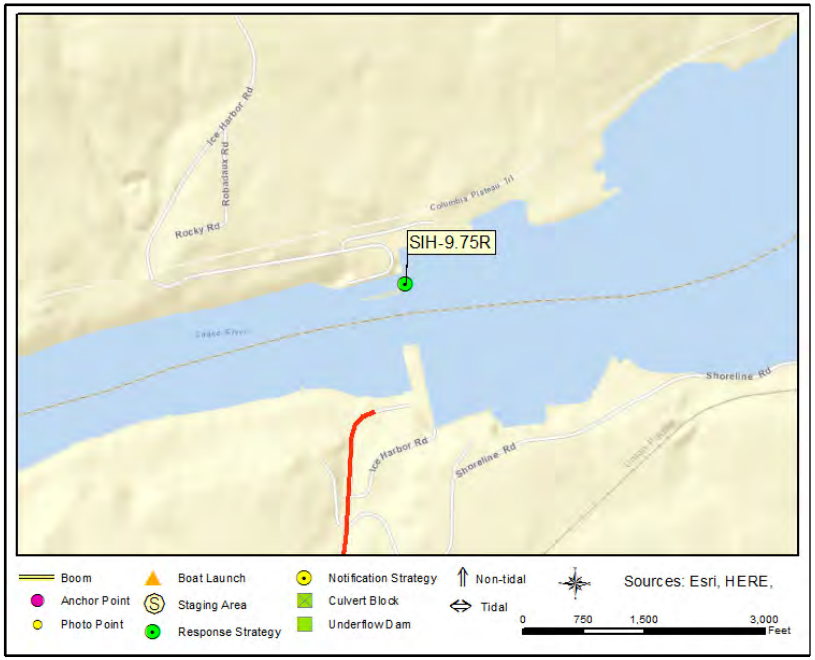
Recommended Personnel

2	Laborer
1	Supervisor

Ice Harbor upstream Fishladder on river R, N shore SIH-9.75R



SIH-9.75R Photo: View of the SW end of the log boom and anchor line which is in front of the N shore upstream fishladder intake at the Ice Harbor Dam (river R)



Site Contact

USACE Ice Harbor Dam Control Room
Secondary Contact : 24 Hour Emergency Contact
509-547-7783

Nearest Address

2339 Monument Dr
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on Ice Harbor Dr (WA-124) (5.14 miles)
8. Turn left on Monument Dr (2.33 miles)
9. Finish at the Ice Harbor Lock and Dam 2339 Monument Dr, 99323, report directly to the guard at the main gate

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Ice Harbor Navigation Lock on the upstream side SIH-9.8R

	46.25152, -118.87950	Pasco

Strategy Objective:	Collection : Collect oil as it enters the lock or if spilled in the lock itself
Implementation:	Deploy 200' of boom at an angle across the lock to create a collection point. Anchor to the ladder on the N side of the lock next to the gate, anchor on the S side of the lock to any available anchor points, such as ladders or hand railings. Bring a vac truck onto the dock wall for collection or use skimmer and portable storage. Must work with USACE personnel to implement if they are not going to deploy this themselves.
Staging Area:	Onsite: Stage at SA-SIH-9.9R or stage on-site at the Ice Harbor Lock and Dam. Must contact the Ice Harbor Dam for access
Site Safety:	Slips, Trips, Falls, Water Hazard, vehicle traffic, working lock and dam
Field Notes:	Launch at BL-SIH-9.9R unless this can be deployed using a line throwing devise.Contact Ice Harbor Dam for access and instructions.
Watercourse:	River - Above a Dam - Ice Harbor Pool
Resources at Risk:	Downstream Resources, Lock and Dam

Recommended Equipment

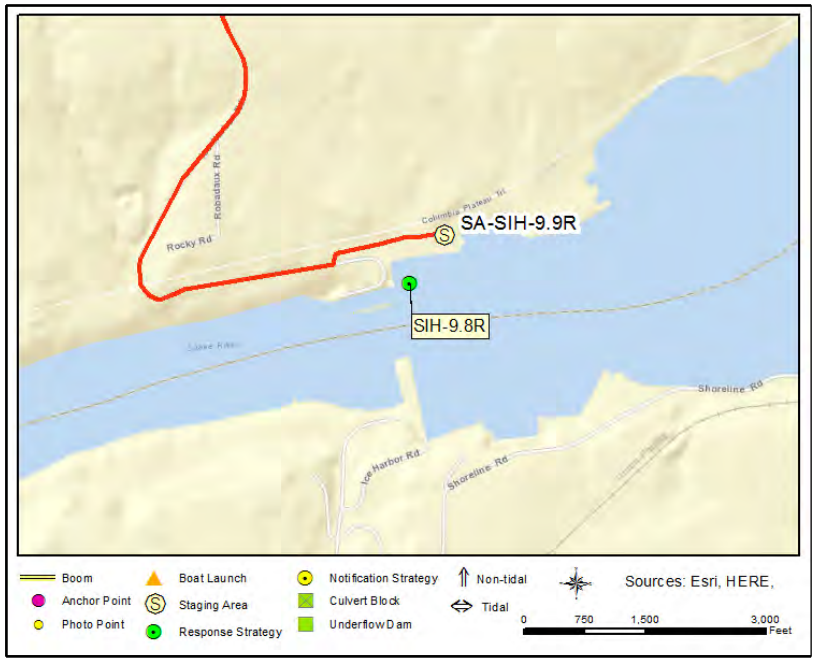
2	Each	Anchoring System(s) - (anchor, lines, floats)
200	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Line - 1/2" poly line
1	Each	Line throwing gun(s) or device(s)
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer
1	Supervisor

Ice Harbor Navigation Lock on the upstream side SIH-9.8R

SIH-9.8R Photo: View of the N shore side of the nav lock next to the gate where there is a ladder to tie off the boom. Angle of view is pointing to the upstream S side of the nav lock where the boom should go



Site Contact

USACE Ice Harbor Dam Control Room
Primary Contact : 24 Hour Emergency Contact
509-547-7783

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Nearest Address

1240 Ice Harbor Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (8.83 miles)
6. Turn right on Ice Harbor Rd (1.5 miles) across the tracks and continue to the first left
7. Finish at the Ice Harbor Boat Launch, 1240 Ice Harbor Rd, 99301, on the left or continue on to the N shore of the dam if staging on site. Must await USACE personnel to allow access inside gated area.

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Devil's Bench boat basin SIH-10.0R

Pasco

Strategy Objective:	Deflection : Deflection: keep the boat launch open if at all possible, turn into exclusion strategy if necessary.
Implementation:	Using workboat, secure one end of 800' length of boom to shore, upstream and across from the boat launch (near 46.252968, -118.873740), then extend boom downstream toward the lock where there should be a collection point established. Adjust angle of boom, quantity and placement of anchors based on conditions of the day.
Staging Area:	Remote: SA-SIH-9.9R
Site Safety:	Slips, trips, falls, water hazard, and boat launch traffic.
Field Notes:	Launch at BL-SIH-9.9R Devil's Bench
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Boat Launch/Ramp, Economic Resource, Riparian Habitat

Recommended Equipment

7	Each	Anchoring System(s) - (anchor, lines, floats)
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

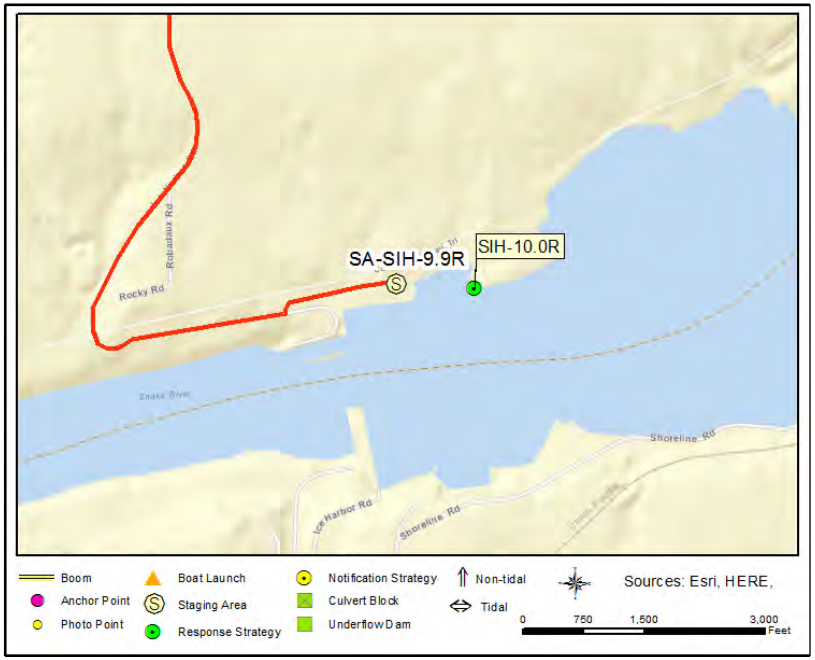
Recommended Personnel

1	Boat Operator
3	Laborer
2	Supervisor

<<Go Back

Devil's Bench boat basin SIH-10.0R

SIH-10.0R Photo: View of the shoreside anchor for SIH-10.0R point taken from the boat launch directly downstream



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1240 Ice Harbor Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (8.83 miles)
6. Turn right on Ice Harbor Rd (1.5 miles), continue over the railroad tracks and take the first left
7. Finish at Devil's Bench boat launch, 1240 Ice Harbor Rd, 99301, on the left

Shoreline Drive Parking upstream of Ice Harbor Dam SIH-10.2L

46° 14.916', -118° 52.186'	46° 14' 55.0", -118° 52' 11.2"	46.24860, -118.86977	Burbank

Strategy Objective:	Collection : Collect oil before it reaches the dam
Implementation:	Secure one end of a 1000' length of boom to shore at the NW tip of the parking area (near 46.248466, -118.869933). Using workboat, take the other end of the boom upstream and anchor off-shore at an angle to create a collection pocket in the small inlet, use a vac truck to collect oil (or skimmer and portable storage). Adjust angle of boom, quantity and placement of anchors based on conditions of the day.
Staging Area:	Onsite: Stage on-site at the Shoreline Drive parking area just upstream of the dam. Large gravel lot available.
Site Safety:	Slips, trips, falls, water hazard, fishermen and vehicle traffic.
Field Notes:	Launch at BL-SIH-9.9R
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Downstream Resources, Recreational Use Area

Recommended Equipment

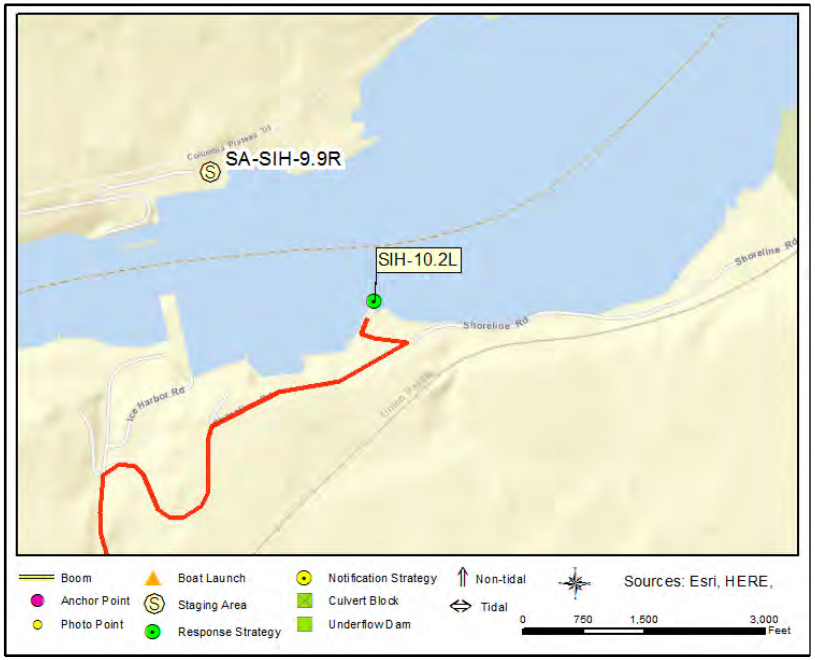
8	Each	Anchoring System(s) - (anchor, lines, floats)
3	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Shoreline Drive Parking upstream of Ice Harbor Dam SIH-10.2L

SIH-10.2L Photo: View of the shore next to the inlet for the collection pocket for SIH-10.2L, looking upstream in the direction boom should be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5953 Shoreline Rd
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on Ice Harbor Dr (WA-124) (5.14 miles)
8. Turn left on Monument Dr (2.36 miles)
9. Turn right on Shoreline Rd (1.17 miles)
10. Finish at parking area 5953 Shoreline Rd, 99323, on the left

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Charbonneau Park South Shoreline SIH-11.0L

46° 15.302', -118° 50.987'	46° 15' 18.1", -118° 50' 59.2"	46.25504, -118.84979	Burbank

Strategy Objective:	Deflection : Deflection, keep oil off the park's southwest shoreline
Implementation:	Deploy 600' of boom from point (near 46.254901, -118.849696) using perm anchor point on the concrete pad at the tip of the point, and anchor boom offshore to the SSW. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Site Safety:	Recreational users, boats & vehicles, slips, trips & falls, rip rap at shoreside anchor point
Field Notes:	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Public Recreation Site/Area, Recreational Shoreline Area, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
600	Feet	Boom - B2 (Contractor Boom) or equivalent
25	Feet	Line - 1/2" poly line
1	Each	Workboat(s) - of adequate size for type and amount of boom

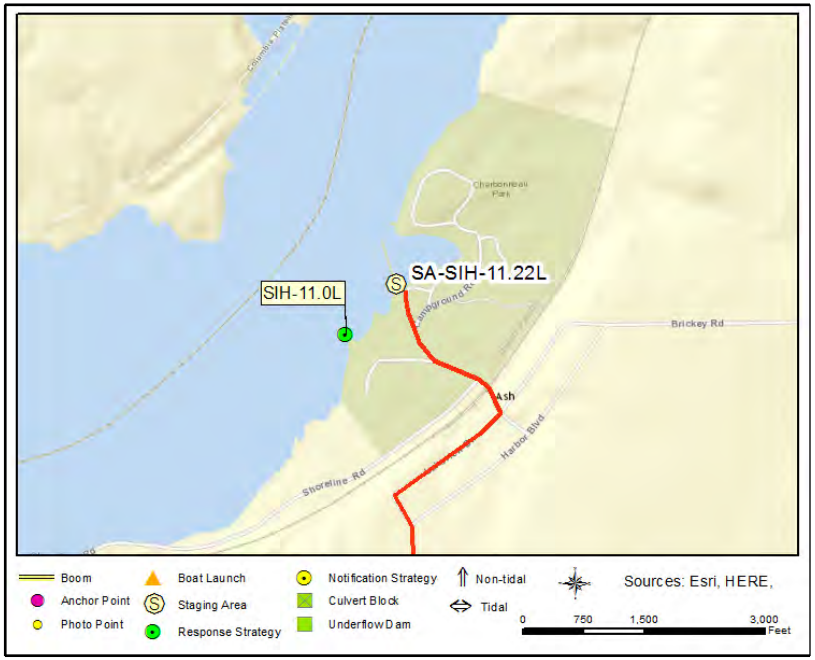
Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

<<Go Back

Charbonneau Park South Shoreline SIH-11.0L

SIH-11.0L Photo: View from the shoreside anchor point for SIH-11.0L looking downstream in the direction the boom should be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at BL-SIH-11.22L, 642 Campground Rd, 99323, on the left

Charbonneau Park Beaches SIH-11.1L

46° 15.350', -118° 50.908'	46° 15' 21.0", -118° 50' 54.5"	46.25584, -118.84846	Burbank

Strategy Objective:	Exclusion : Exclude oil from Charbonneau Park Beaches
Implementation:	Deploy 900' of boom across opening to the two Charbonneau Park Beaches (400' for E beach and 500' for W beach). Anchor the upstream end of the boom to shore on the jetty beside the boat launch, attach the boom to the concrete block on the spit of land between the two beaches, run boom along the pilings ot the opening to the west beach and then anchor the downstream end of the boom to the concrete block on the spit downstream of the west beach. Concrete blocks have anchor points already installed. Use danforth type anchors as needed to hold boom in place depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Site Safety:	Recreational users, boats & vehicles, slips, trips & falls, rip rap at shoreside anchor point
Field Notes:	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Recreational Swimming Area

Recommended Equipment

7	Each	Anchoring System(s) - (anchor, lines, floats)
900	Feet	Boom - B2 (Contractor Boom) or equivalent
50	Feet	Line - 1/2" poly line
1	Each	Workboat(s) - of adequate size for type and amount of boom

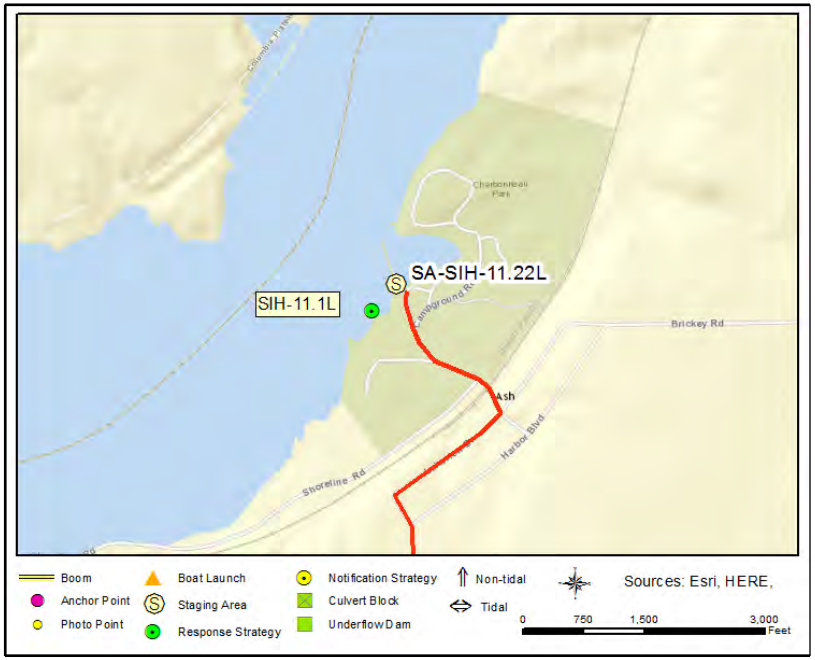
Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

<<Go Back

Charbonneau Park Beaches SIH-11.1L

SIH-11.1L Photo: View of the Charbonneau Park Beaches taken from the jetty beside the boat launch where shoreside anchor system should be installed for SIH-11.1L exclusion strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

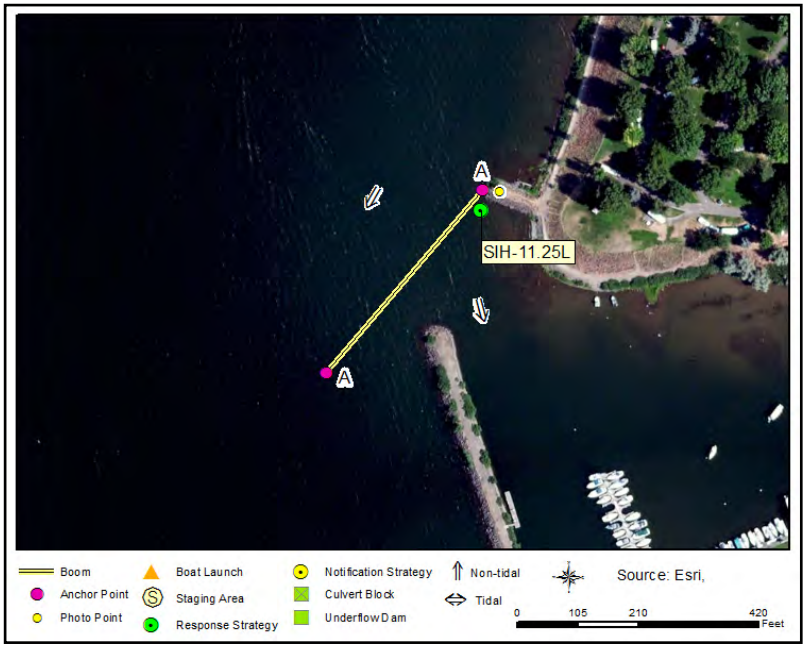
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at BL-SIH-11.22L Charbonneau Park Boat Launch/Staging Area, 642 Campground Rd, 99323, on the left

Charbonneau Recreation Area (Old Name SIH-18) SIH-11.25L

	46° 15' 31.4", -118° 50' 51.3"	46.25873, -118.84757	Burbank

Strategy Objective:	Deflection : Deflection, keep oil out of boat basin and away from shoreline immediatly downstream
Implementation:	Deploy 400' of boom from point (near 46.258822, -118.84754) and anchor boom offshore to the SSW keeping open access to the boat basin. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Site Safety:	Recreational users, boats & vehicles, slips, trips & falls, rip rap at shoreside anchor point
Field Notes:	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Watercourse:	River - Below a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Marina, Public Recreation Site/Area



Recommended Equipment

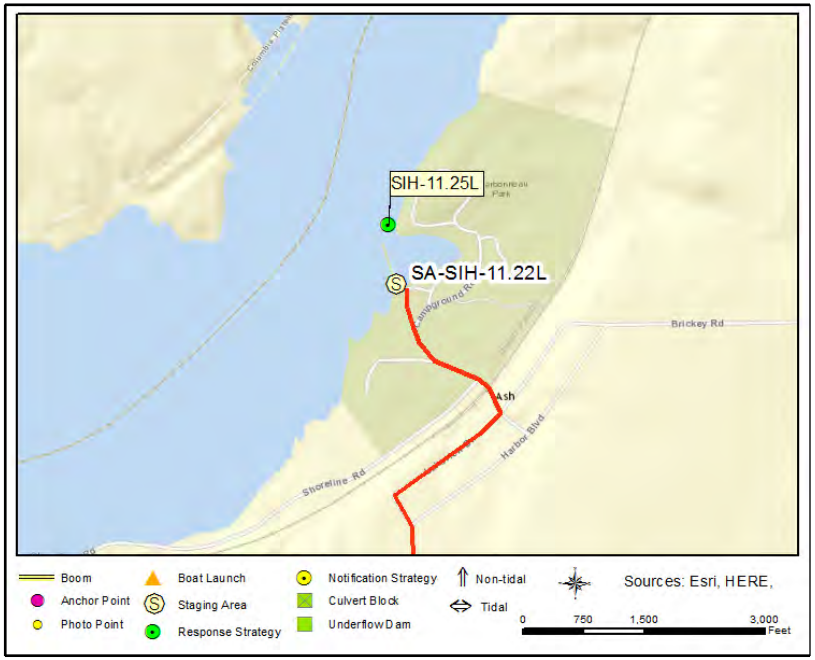
3	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
400	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Charbonneau Recreation Area (Old Name SIH-18) SIH-11.25L

SIH-11.25L Photo: View from the point by the Charbonneau Campground adjacent to the marina, looking downstream past the jetty in the direction SIH-11.25L should be deployed to leave boat access to the marina



Site Contact

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at 642 Campground Rd, 99323, on the left

Charbonneau Park N Shore SIH-11.5L

46° 15.683', -118° 50.739'	46° 15' 41.0", -118° 50' 44.3"	46.26139, -118.84565	Burbank

Strategy Objective:	Deflection : Deflect oil away from Charbonneau Park N Shore
Implementation:	Deploy 700' of boom from shore (near 46.261327, -118.845524) using shoreside anchoring system, tow boom offshore to the SW and anchor using danforth or other appropriate type anchors. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Site Safety:	Recreational users, boats & vehicles, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Recreational Shoreline Area, Sensitive Resources Nearby, Waterfowl Concentrations

Recommended Equipment

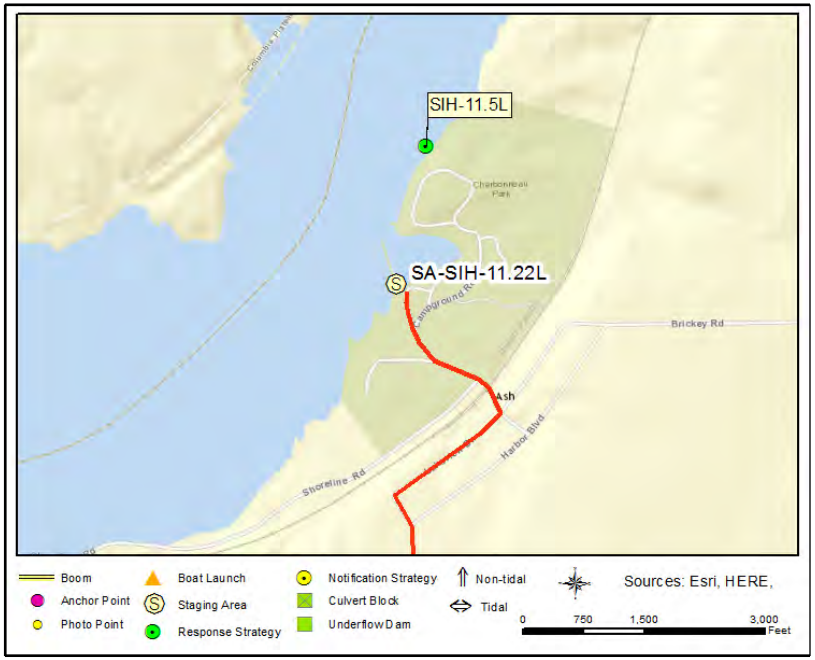
6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Charbonneau Park N Shore SIH-11.5L

SIH-11.5L Photo: View of the anchor point on shore for SI-11.5L



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at the Charbonneau Boat Launch/Staging Area, 642 Campground Rd, 99323, on the left

<<Go Back

(SIH-19) Entrance to Lake Charlene HMU SIH-11.55R

46° 15.908', -118° 51.116'	46° 15' 54.5", -118° 51' 6.9"	46.26514, -118.85193	Burbank

Strategy Objective:	Exclusion : Exclusion - keep oil out of Lake Charlene
Implementation:	Close off opening in the isthmus in front of the railroad trestle using 100' of boom anchored on ether side of the opening. If oil gets inside then additional boom can be used to block the culvert under the railroad trestle.
Staging Area:	Remote: Stage at SA-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Site Safety:	Recreational boats, slips, trips & falls
Field Notes:	Launch at BL-SIH-11.22L the Charbonneau Boat Launch/Staging Area
Watercourse:	River - Below a Dam - Snake River, Ice Harbor Pool
Resources at Risk:	Public Lands/Facilities, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

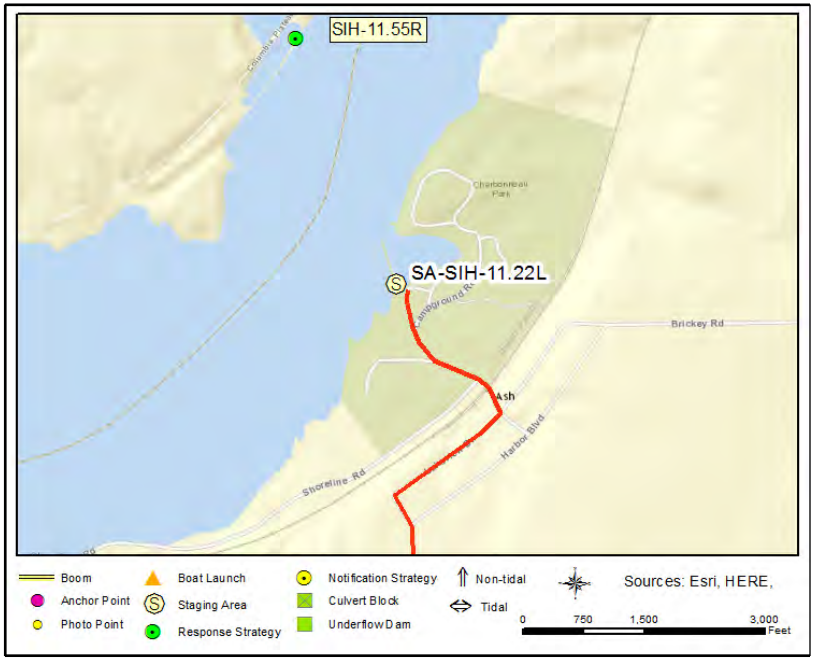
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer
1	Supervisor

(SIH-19) Entrance to Lake Charlene HMU SIH-11.55R

SIH-11.55R Photo: View of the opening in the isthmus at Lake Charlene where SIH-11.55R is to be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

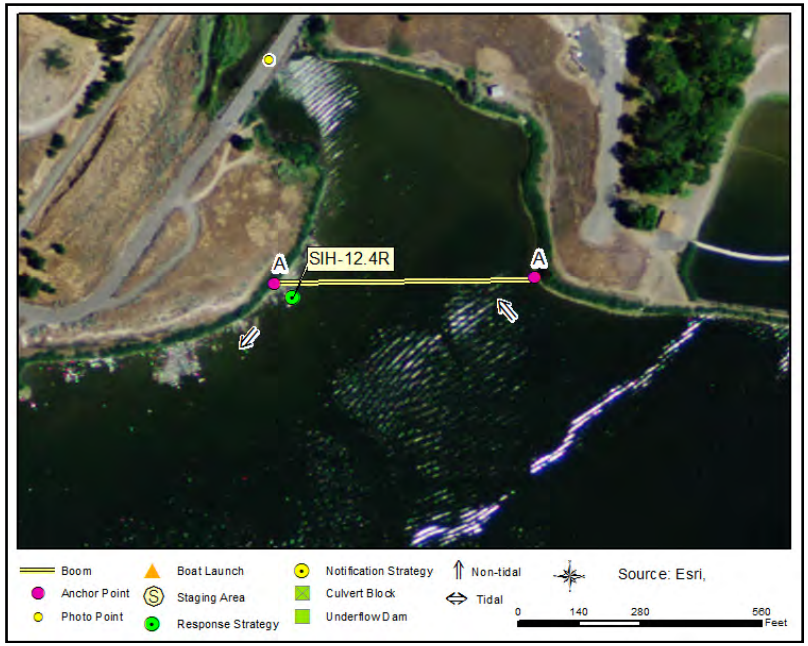
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at Charbonneau Park Launch/Staging Area, 642 Campground Rd, 99323, on the left

<<Go Back

Levey Park South Shore SIH-12.4R

46° 16.579', -118° 50.470'	46° 16' 34.8", -118° 50' 28.2"	46.27632, -118.84117	Pasco

Strategy Objective:	Exclusion : Exclude oil from entering Levey Park south shore inlet
Implementation:	Close off the mouth of the inlet. Deploy 600' of boom from the southeast shore of the inlet, tow boom to the opposite bank to the southwest and anchor using shoreside anchoring systems.
Staging Area:	Onsite: Stage on site or at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

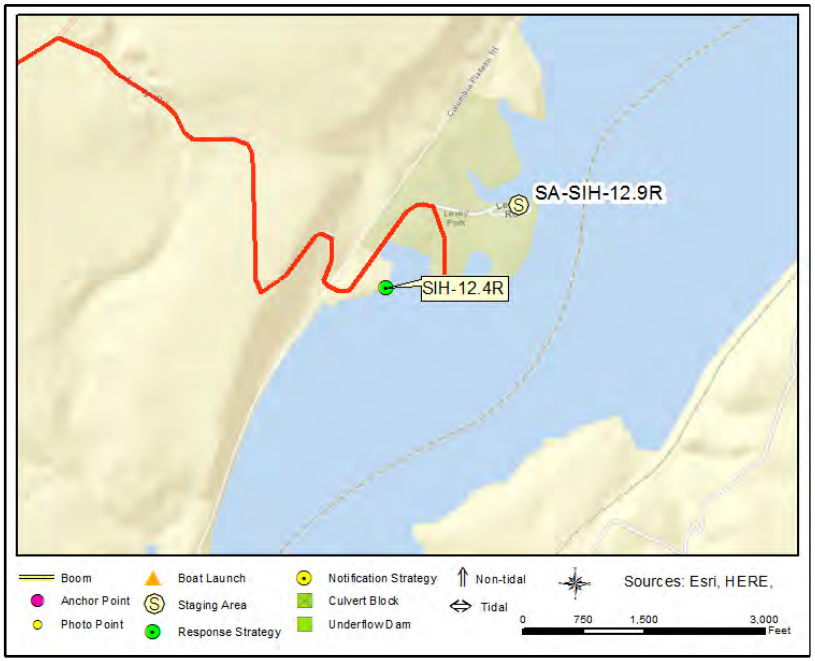
4	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Levey Park South Shore SIH-12.4R

SIH-12.4R Photo: View of the opening to inlet at the south shore of Levey Park taken from the bridge between inlet and pond



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles), continue straight to head to the boat launch, or take the first
7. Finish at Levey Park, 1701 Levey Rd, 99301

Levy Park Swim Area SIH-12.5R

46° 16.572', -118° 50.170'	46° 16' 34.3", -118° 50' 10.2"	46.27620, -118.83617	Pasco

Strategy Objective:	Exclusion : Exclude oil from entering Levey Park inlet and swim area
Implementation:	Close off the mouth of the inlet with the Levey Park swim area. Deploy 300' of boom from the southeast shore of the inlet, tow boom to the tip of the jetty on the opposite shore, anchoring each end of the boom using shoreside anchoring systems.
Staging Area:	Onsite: Stage on site or at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, slips, trips & falls, rip rap and vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Swimming Area, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

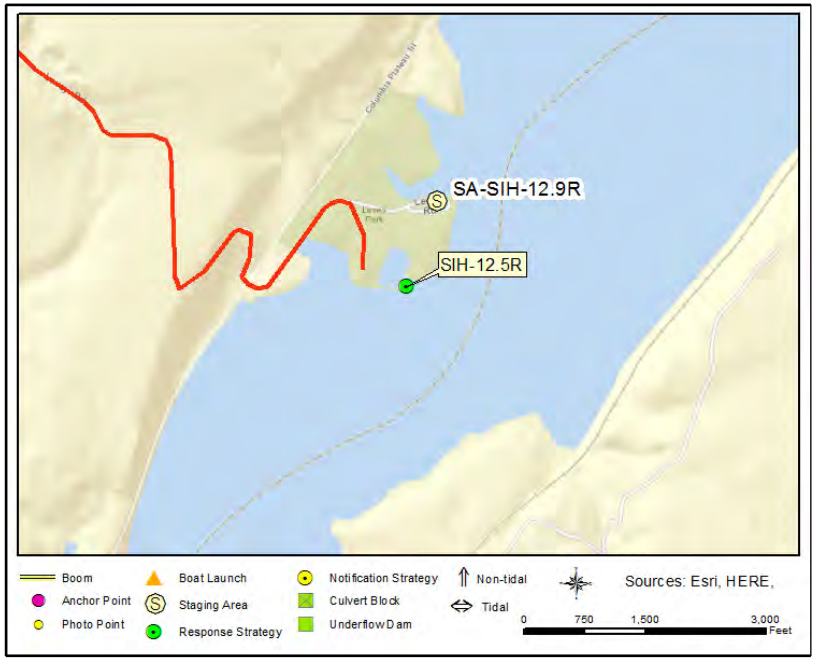
1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer
1	Supervisor

Levy Park Swim Area SIH-12.5R

SIH-12.5R Photo: View of the eastern anchor point for SIH-12.5R taken from the tip of the jetty by the swim area



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles), continue straight to head to the boat launch, or take the first right after the bridge to drive to the strategy location.
7. Finish at Levey Park, 1701 Levey Rd, 99301

Just upstream of Anchor Bay SIH-12.65L

46° 16.387', -118° 49.557'	46° 16' 23.2", -118° 49' 33.4"	46.27312, -118.82595	Pasco

Strategy Objective:	Deflection : DeflectION, keep oil away from Anchor Bay
Implementation:	Anchor 1000' of boom, using shoreside anchoring system, to NE shore of Anchor Bay (near 46.273006, -118.825959), then tow boom to the SW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Boating, Sensitive Resources Nearby, Water Intakes, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

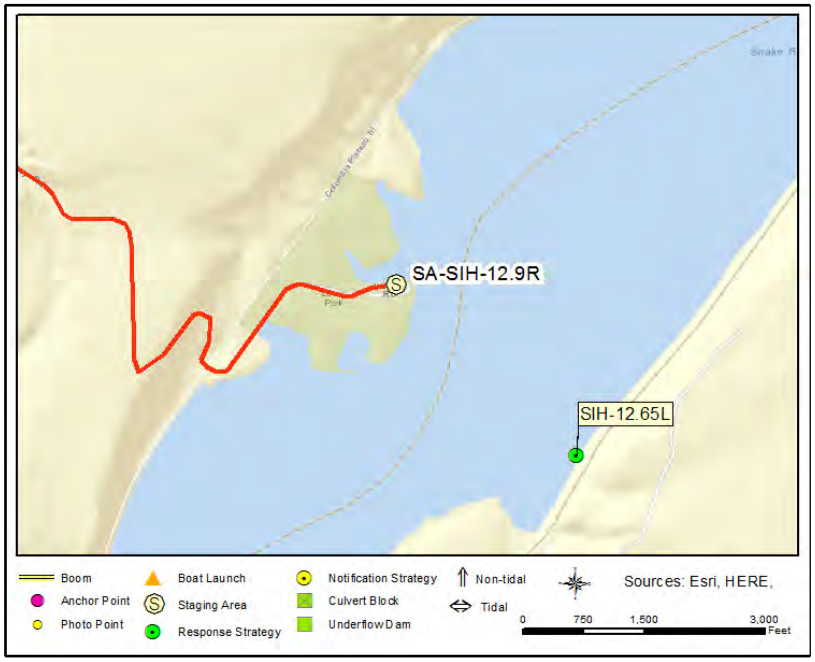
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1		Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Just upstream of Anchor Bay SIH-12.65L

SIH-12.65L Photo: View of the shoreside anchor point for SIH-12.65L



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

1701 Levey Rd
Pasco, WA 99301

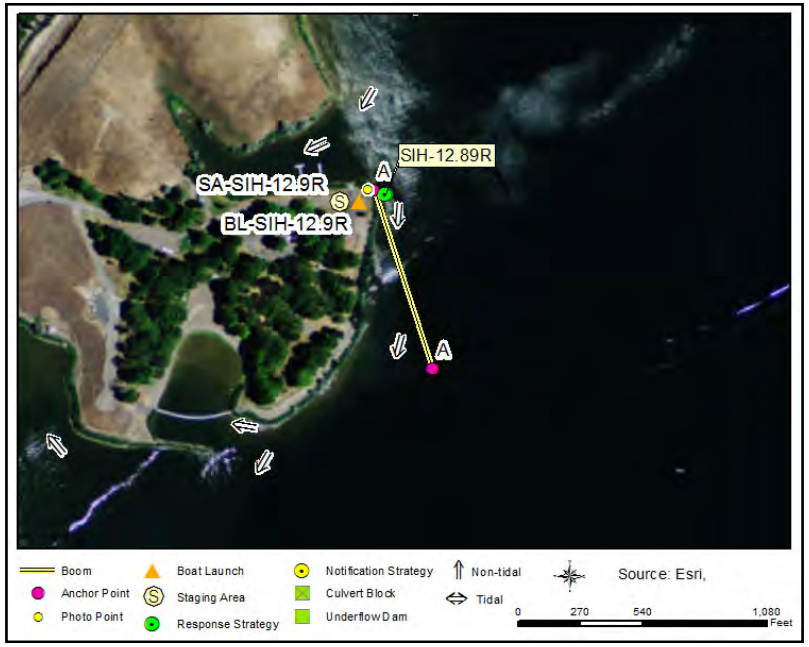
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.5 miles)
7. Continue to Levey Park boat launch parking area, finish at 1701 Levey Road, 99301

Levey Park Shoreline E of boat launch SIH-12.89R

46° 16.748', -118° 50.009'	46° 16' 44.9", -118° 50' .5"	46.27913, -118.83348	Pasco

Strategy Objective:	Deflection : Deflect oil away from the Levey Park shoreline
Implementation:	Anchor 800' of boom, using shoreside anchoring system, to the E of the boat launch (near 46.279072, 118.833763), then tow boom to the SSE and anchor off shore. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.
Staging Area:	Onsite: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, vehicles, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Shoreline Area, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

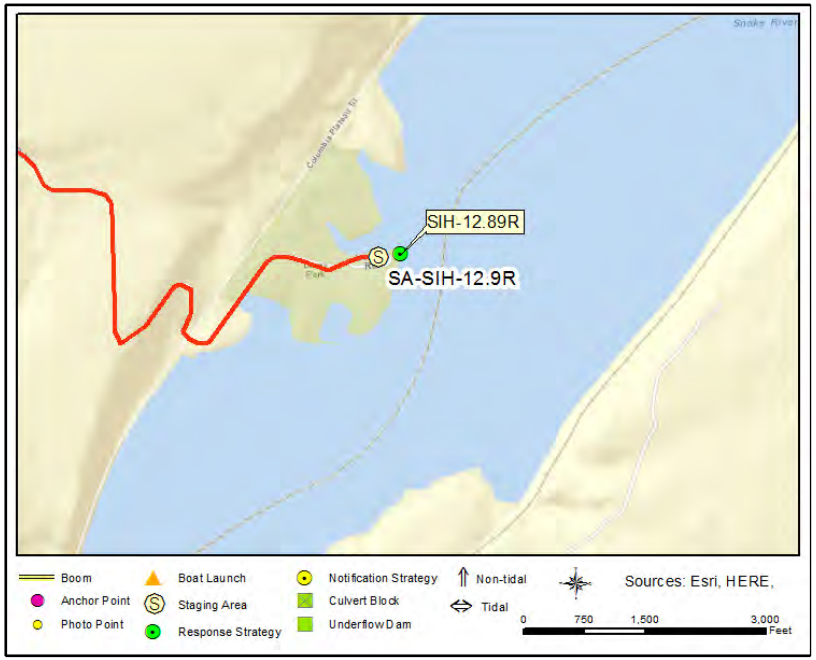
7	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Levey Park Shoreline E of boat launch SIH-12.89R

SIH-12.89R Photo: View from shore adjacent to the Levey Park boat launch looking downstream in the direction which SIH-12.89R is to be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.5 miles) continue to the boat launch parking area
7. Finish at Levey Park boat launch, 1701 Levey Rd, 99301

N Shore of Levey Park SIH-13.1R

46° 16.897', -118° 50.018'	46° 16' 53.8", -118° 50' 1.1"	46.28161, -118.83364	Pasco

Strategy Objective:	Deflection : Deflect oil away from Levey Park inlets and shoreline
Implementation:	Anchor 1000' of boom, using shoreside anchoring system, to the tip 2nd peninsula N of the boat launch (near 46.281954, -118.833422), then tow boom to the SSE and anchor off shore, leaving room for boats to access the Levey Park boat launch. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, vehicles, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Shoreline Area, Waterfowl and Shorebird Concentrations

Recommended Equipment

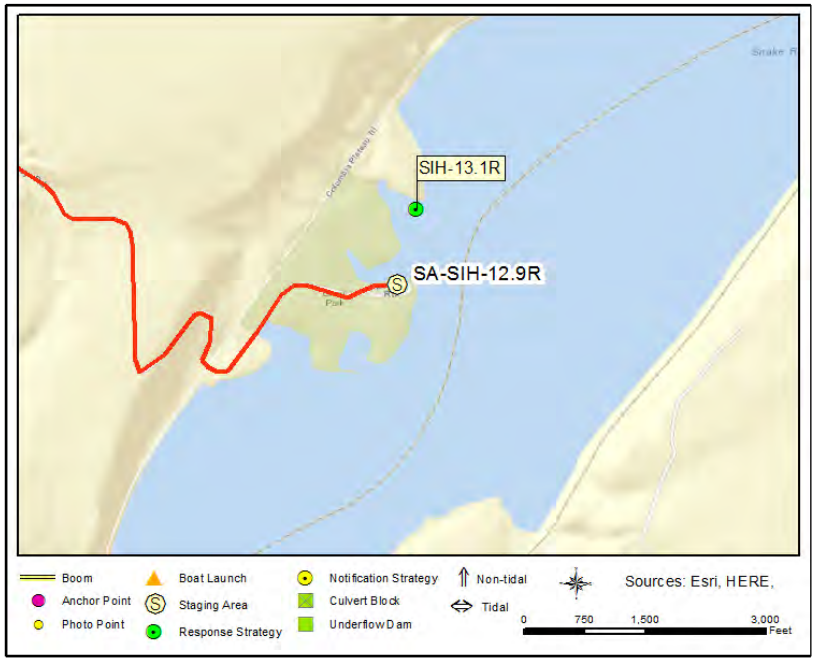
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

N Shore of Levey Park SIH-13.1R

SIH-13.1R Photo: View of the shoreside anchor point for SIH-13.1R from downstream in the direction boom should be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Road
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles) and continue to the boat launch parking area
7. Finish at Levey Park, 1701 Levey Road, 99301

<<Go Back

Collection Point 1/3 mile upriver from Levey Park SIH-13.2R

46° 17.101', -118° 50.053'	46° 17' 6.1", -118° 50' 3.2"	46.28502, -118.83421	Pasco

Strategy Objective:	Collection : Collect oil - keep it from moving downstream
Implementation:	Anchor 1000' of boom, using shoreside anchoring system, at the sharp bend in the river 1/3 N of Levey Park (near 46.28503, -118.834542). Tow boom out to the ENE and anchor off shore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Bring in portable storage or on-water bladder to store oil collected with skimmers.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational boats, water hazard, slips, trips & falls, rip rap at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area.
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year. This area has a depth of ~40 ft.
Resources at Risk:	Downstream Resources

Recommended Equipment

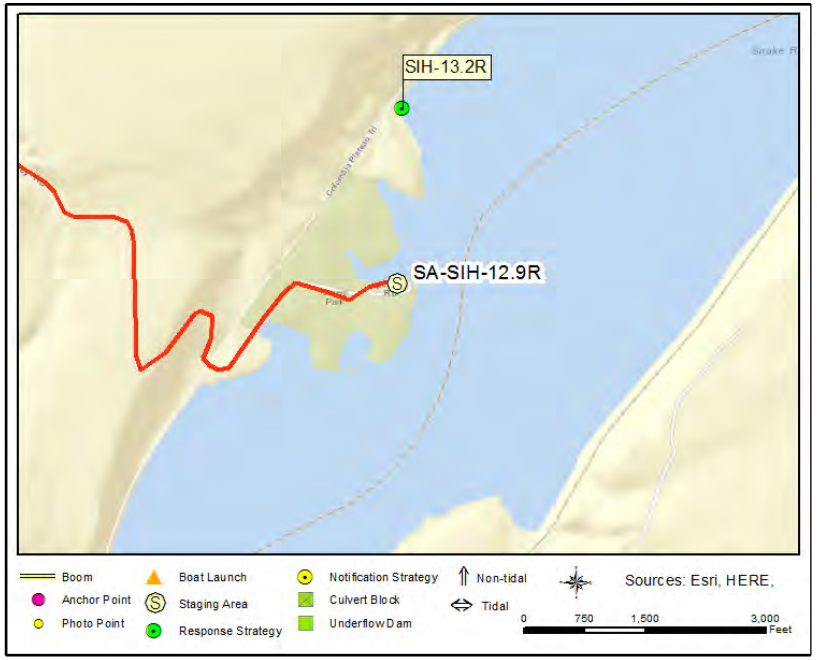
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Collection Point 1/3 mile upriver from Levey Park SIH-13.2R

SIH-13.2R Photo: View of the shoreside anchor point for SIH-13.2R taken from the water



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Continue to the Levey Park boat launch parking area, finish at 1701 Levey Park Road, 99301

Big Flat HMU westernmost inlet (old name SIH-15) SIH-14.1R

	46° 17' 30.4", -118° 49' 3.2"	46.29177, -118.81755	Pasco

Strategy Objective:	Exclusion : Exclusion - keep oil out of inlet
Implementation:	Close off the mouth of the inlet by deploying 700' of boom from the southeast shore of the inlet (near 46.291721, -118.816043), tow boom to the opposite bank the west. Only anchor to tip of spit, limit ground intrusion if possible using shoreside anchoring systems. Shallow water ~4 ft in this inlet, bring waders.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

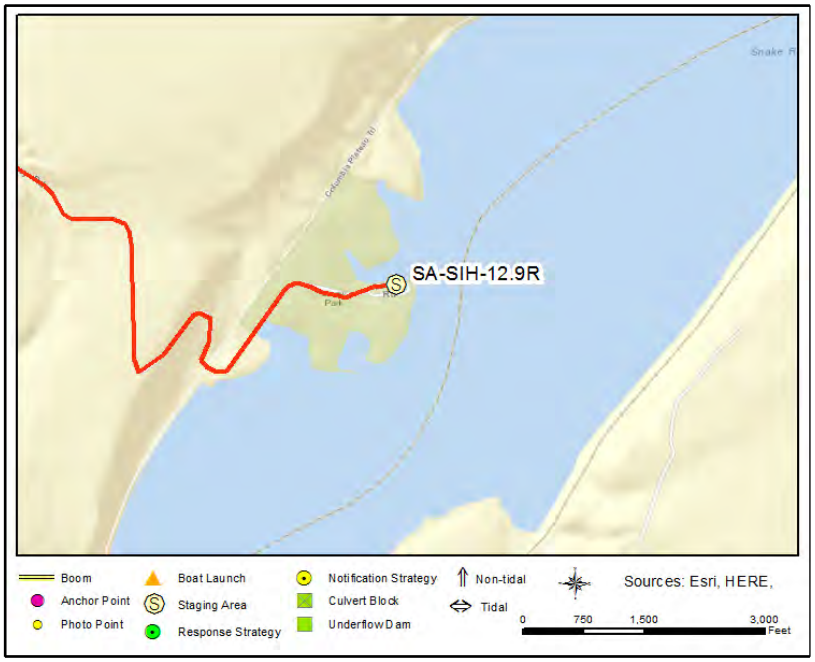
6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Big Flat HMU westernmost inlet (old name SIH-15) SIH-14.1R

SIH-14.1R Photo: View of the inlet and shoreline to be protected using SIH-14.1R. Photo taken from outside the inlet



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

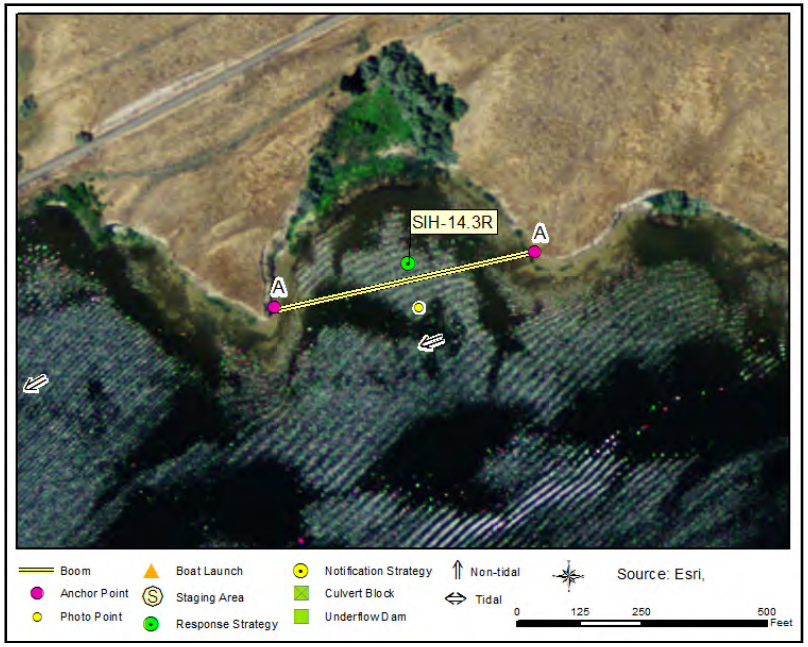
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Continue to the Levey Park boat launch parking area, finish at 1701 Levey Road, 99301

Inlet on the S shore at Big Flat HMU SIH-14.3R

	46° 17' 31.2", -118° 48' 53.4"	46.29199, -118.81482	Pasco

Strategy Objective:	Exclusion : Exclusion - keep oil out of inlet
Implementation:	Close off the mouth of the inlet. Deploy 500' of boom from the southeast shore of the inlet (near 46.292004, -118.813778), tow boom to the opposite bank the west. Anchor each end using shoreside anchoring systems. Shallow water ~4 ft in this inlet, bring waders.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

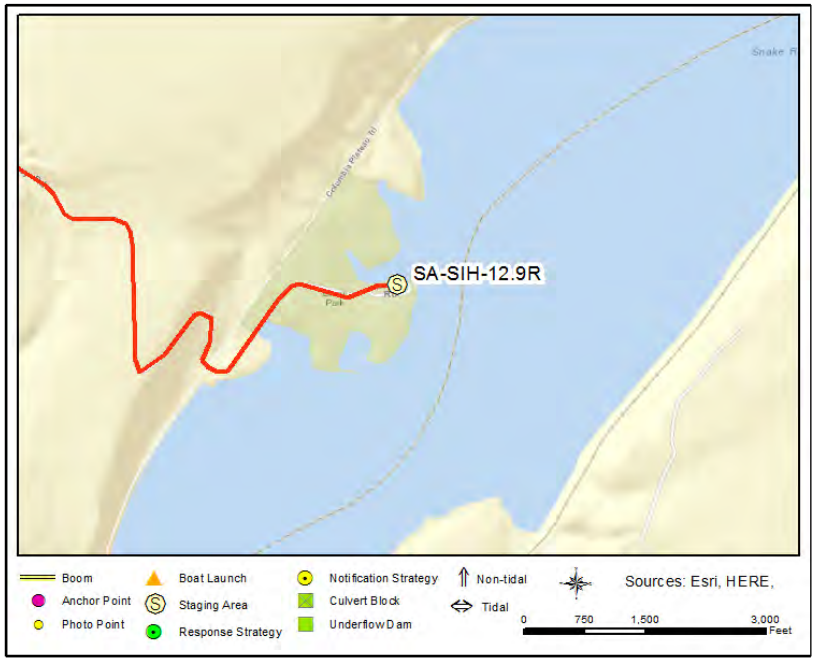
3	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Inlet on the S shore at Big Flat HMU SIH-14.3R

SIH-14.3R Photo: View of the inlet to be protected by SIH-14.3R taken from just outside



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

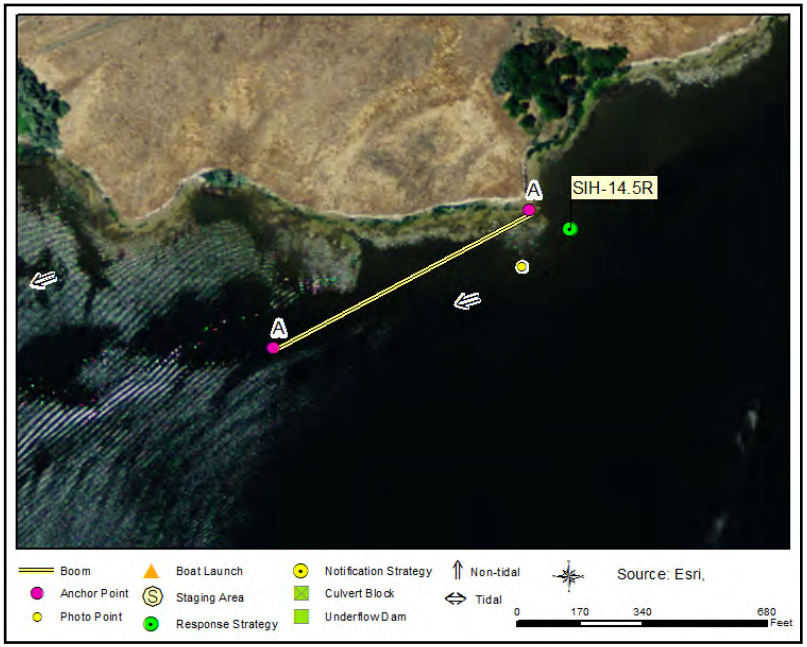
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Continue to the Levey Park boat launch parking lot, finish at 1701 Levey Rd, 99301

<<Go Back

SW of Dalton Lake at Big Flat HMU SIH-14.5R

	46.29186, -118.80897	Pasco

Strategy Objective:	Deflection : Deflect oil away from shoreline SW Dalton Lake at Big Flat HMU
Implementation:	Anchor 800' of boom, using shoreside anchoring system, to the tip of the spit of land on the S shore of Big Flat HMU to the W of Dalton Lake (near 46.292052, -118.809476), then tow boom to the SW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Shallow water near shoreline, bring waders.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Boats, slips, trips & falls, vegetation at shoreside anchor point, shallow water
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

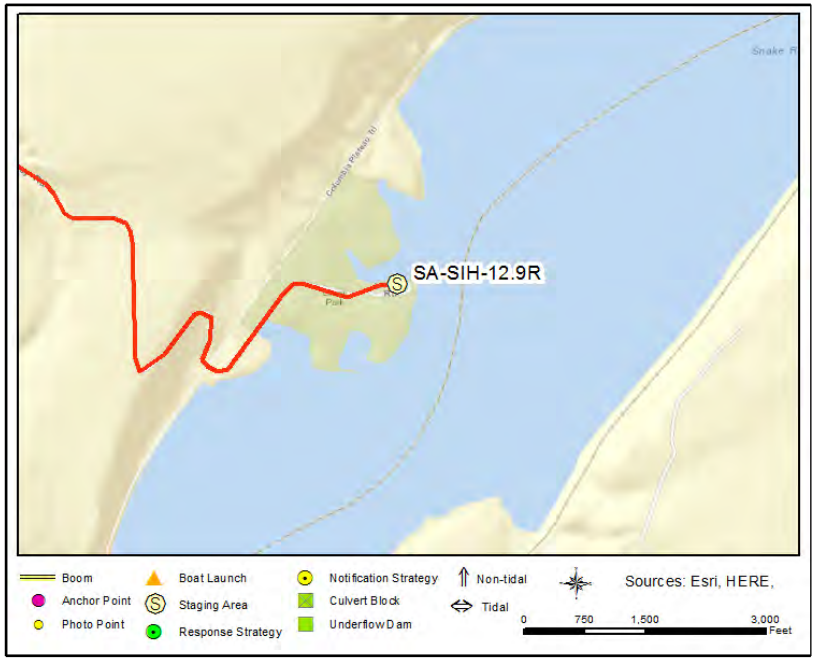
7	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

SW of Dalton Lake at Big Flat HMU SIH-14.5R

SIH-14.5R Photo: View of the SW shoreline at Big Flat HMU and location of shoreside anchor point for SIH-14.5R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

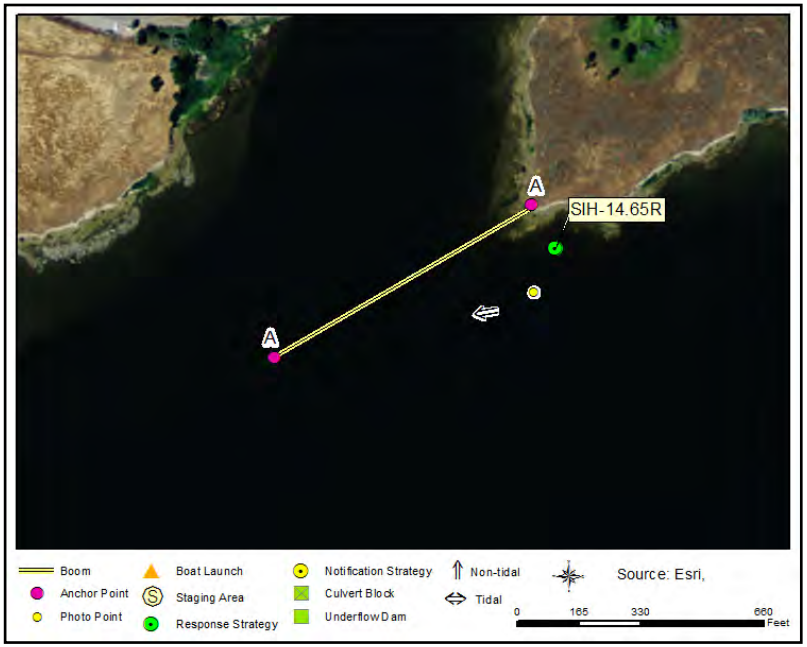
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Continue to Levey Park boat launch parking lot, finish at 1701 Levey Road, 99301

Inlet to Dalton Lake at Big Flat HMU SIH-14.65R

46° 17.576', -118° 48.141'	46° 17' 34.5", -118° 48' 8.5"	46.29293, -118.80235	Pasco

Strategy Objective:	Deflection : Deflect oil away from inlet leading into Dalton Lake
Implementation:	Anchor 800' of boom, using shoreside anchoring system, to the tip of the peninsula on the E side of the opening to Dalton Lake (near 46.293202, -118.80269), then tow boom to the SW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Shoreline has shallow water, bring waders.
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Boats, slips, trips & falls, vegetation at shoreside anchor point, shallow water
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Lake Habitat, Waterfowl and Salmonid Concentrations and Habitat, Wetlands



Recommended Equipment

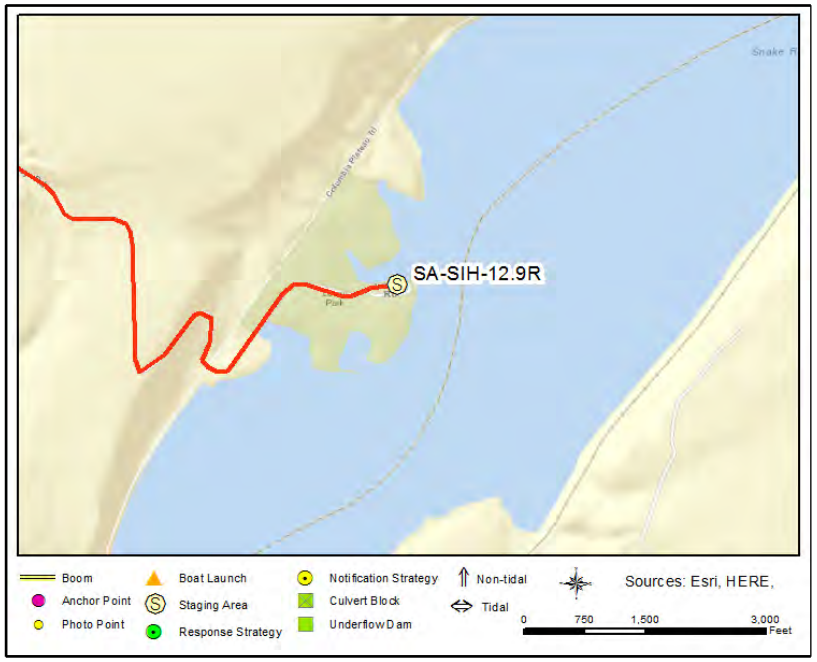
7	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Inlet to Dalton Lake at Big Flat HMU SIH-14.65R

SIH-14.65R Photo: View of the tip of the peninsula where SIH-14.65R is to be anchored



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Continue on to the Levey Park boat launch parking area, finish at 1701 Levey Road, 99301, on the left

Across from Big Flat Habitat Management Unit SIH-15.65L

46° 17.300', -118° 46.996'	46° 17' 18.0", -118° 46' 59.7"	46.28834, -118.78326	Pasco

Strategy Objective:	Collection : Collection, keep oil from moving downstream
Implementation:	Anchor 1000' of boom, using shoreside anchoring system (or screw if having to anchor to rock), at the sharp bend in the river across from Big Flat Habitat Management Unit (near 46.288208, -118.783963). Tow boom out to the ENE and anchor off shore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Bring in portable storage or on-water bladder to store oil collected with skimmers. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267
Staging Area:	Remote: Stage at SA-SIH-12.9R Levey Park: boat ramp, docks, bathrooms, shelters
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-12.9R Levey Park boat launch and staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Downstream Resources, Habitat Management Unit

Recommended Equipment

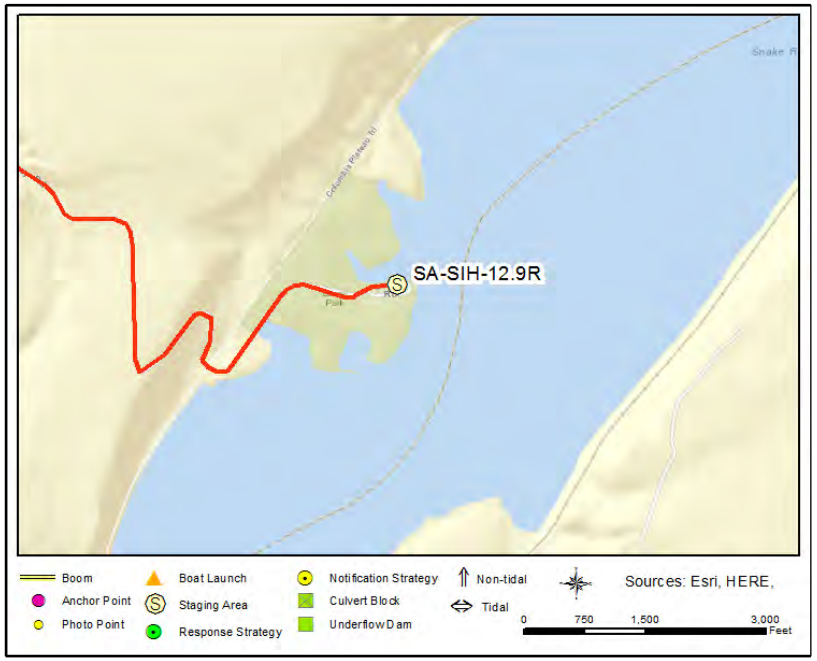
1	Each	Anchor - Screw (or other appropriate type)
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Across from Big Flat Habitat Management Unit SIH-15.65L

SIH-15.65L Photo: View of anchor point location for SIH-15.65L collection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

1701 Levey Rd
Pasco, WA 99301

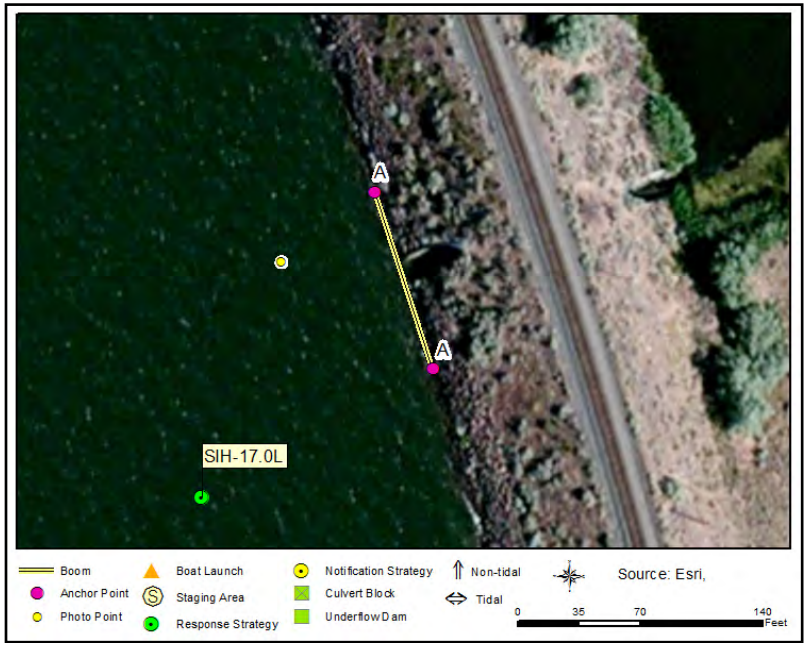
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.5 miles), continue on to boat launch parking lot
7. Finish at Levey Park, 1701 Levey Road, 99301,

South Pond, Fishhook Habitat Management Unit SIH-17.0L

	46° 18' 13.0", -118° 45' 43.6"	46.30360, -118.76211	Prescott

Strategy Objective:	Exclusion : Exclusion
Implementation:	Anchor 100' of boom in front of the culvert using shorelide anchoring systems (culvert is at 46.303965, -118.761309). Back with sorbent boom. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267
Staging Area:	Remote: SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Habitat Management Unit, Public Lands/Facilities, Riparian Habitat, Waterfowl and Salmonid Concentrations and Habitat



Recommended Equipment

100	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Workboat(s) - of adequate size for type and amount of boom

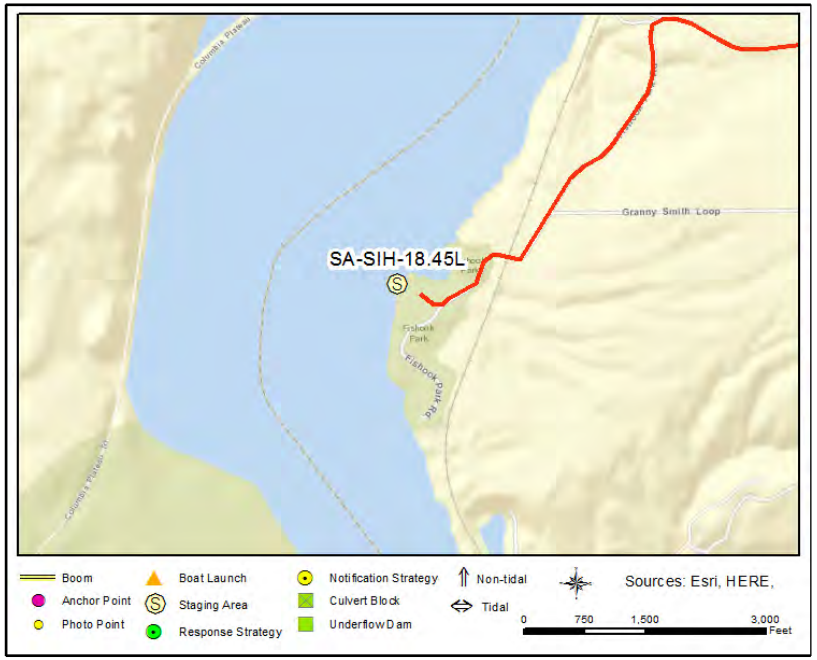
Recommended Personnel

1	Boat Operator
1	Laborer
1	Supervisor

<<Go Back

South Pond, Fishhook Habitat Management Unit SIH-17.0L

SIH-17.0L Photo: Looking into the culvert at the south pond at Fishook Park site of SIH-17.0L



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Side channel Big Flat HMU (old name SIH-12) SIH-17.1R

46° 18.218', -118° 46.372'	46° 18' 13.1", -118° 46' 22.3"	46.30363, -118.77287	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of shallow water habitat
Implementation:	Close off mouth of inlet. Using shoreside anchoring systems, deploy 500' of boom from the north side of the inlet (near 46.3045, -118.772825), to the opposite bank to the south. Shallow water ~4 ft or less in this inlet, bring john boat or waders. do not anchor further north than the tip of the northern side of the channel.
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation at shoreside anchor point, shallow water
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Habitat Management Unit, Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

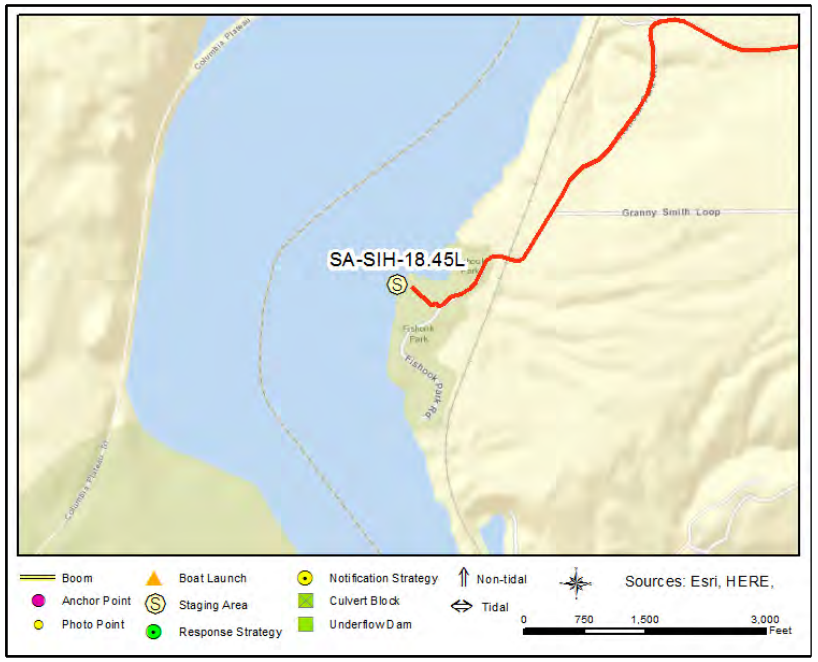
4	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
500	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Side channel Big Flat HMU (old name SIH-12) SIH-17.1R

SIH-17.1R Photo: View of the entrance to the side channel at Big Flat HMU, site of SIH-17.1R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

Driving Directions

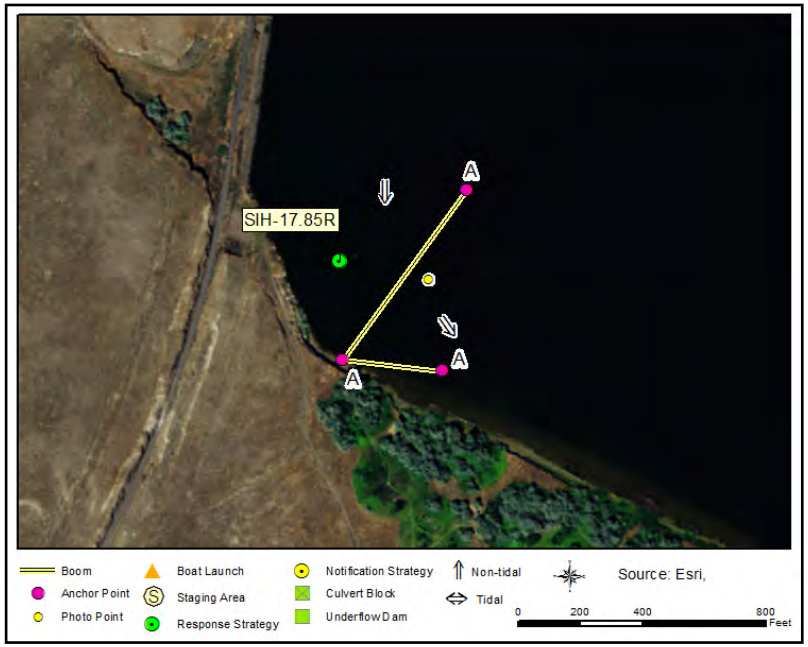
1. Start at Location 1
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.19 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

<<Go Back

N end of Big Flat HMU — SIH-17.85R

46° 18.780', -118° 46.808'	46° 18' 46.8", -118° 46' 48.5"	46.31300, -118.78014	Prescptt

Strategy Objective:	Collection : Collection, protect, sensitive downstream resources
Implementation:	Deploy 1000' of boom. Anchor 800' as close to 46.312027, -118.780328 as possible using shoreside anchoring system, tow boom offshore to the NNE to divert oil into collection pocket. Tow the remaining 200' out to the SE to provide some protection along shoreline for entrained oil. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Little to no land access, will need skimmer and portable storage. Do not move boom shoreside anchor point any further to SE.
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Habitat Management Unit, Recreational Use Area, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

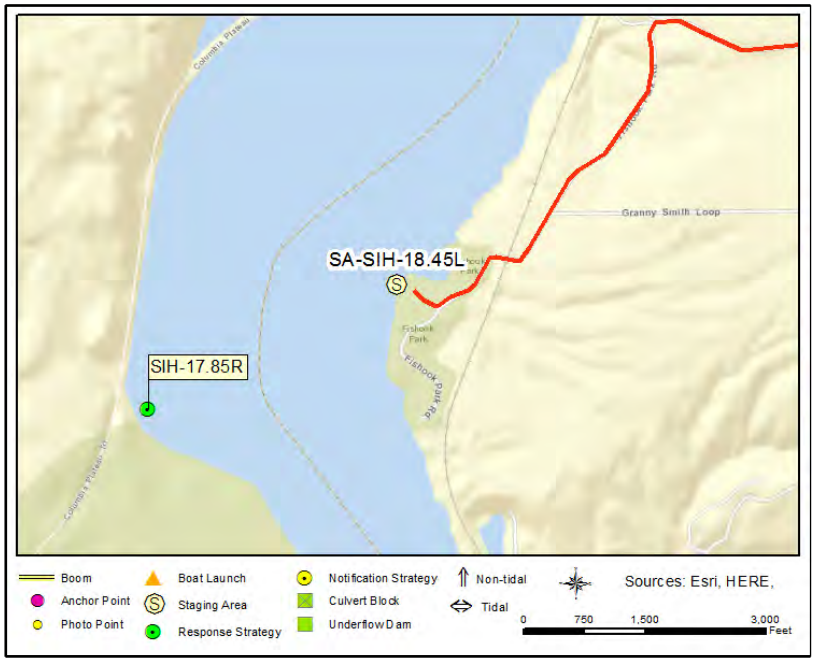
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

N end of Big Flat HMU SIH-17.85R

SIH-17.85R Photo: View of the shoreline where SIH-17.85R is to be deployed on the N shore of the Big Flat HMU



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishhook Park Rd
Prescptt, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

<<Go Back

Fishook Park Parking Lot, SW corner SIH-18.3L

	46.31687, -118.76790	Prescott

Strategy Objective:	Deflection : Deflection, keep oil off park shoreline. Park may be locked off season, bring bolt cutters but call Rangers using contact info.
Implementation:	Deploy 600' of boom, anchoring at the SW corner of the parking lot using shoreside permanent anchor pins in concrete pad, tow boom out to the SW and anchor offshore using appropriate anchors. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day.
Staging Area:	Onsite: Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point
Field Notes:	Launch onsite at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Recreational Shoreline Area, Waterfowl Concentrations

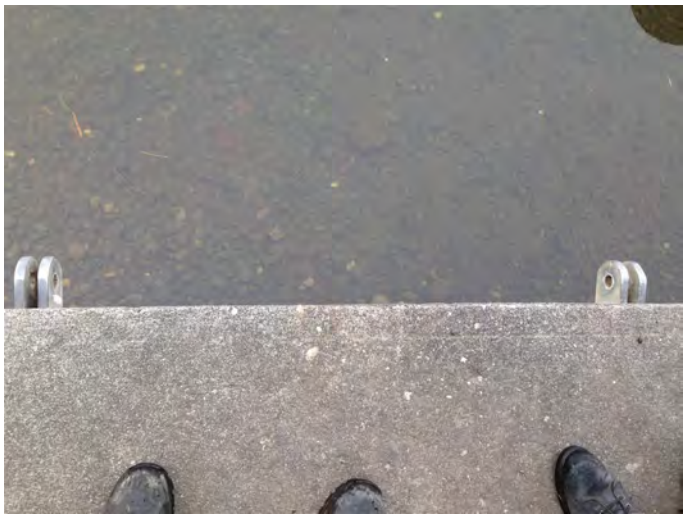
Recommended Equipment

5	Each	Anchoring System(s) - (anchor, lines, floats)
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

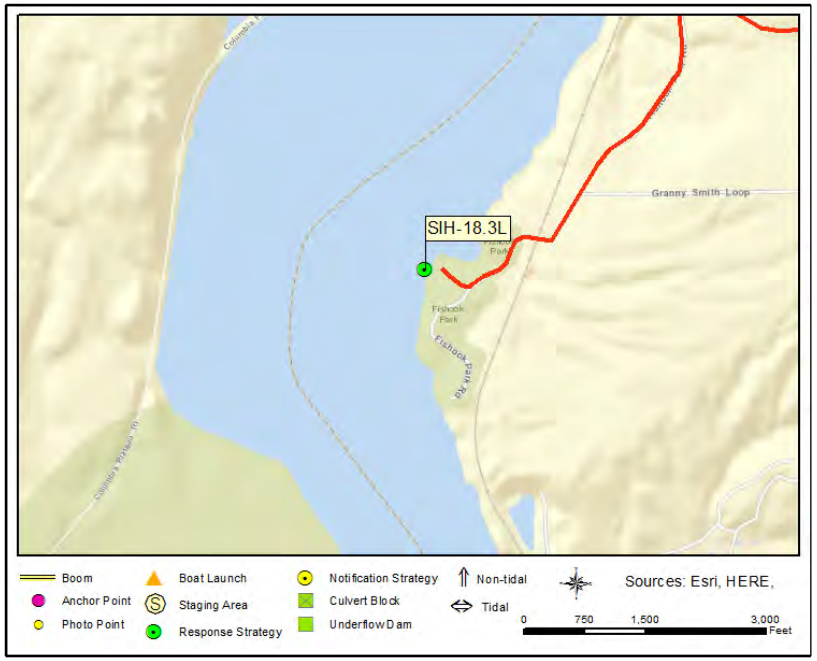
Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Fishook Park Parking Lot, SW corner SIH-18.3L



SIH-18.3L Photo: View permanent anchor points for SIH-18.3L at Fishook Park



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Fishhook Park Launch and Beach (old name SIH-10) SIH-18.5L

	46.31800, -118.76615	Prescott

Strategy Objective:	Deflection : Deflection- keep oil out of swim area while keeping launch open
Implementation:	Deploy 500' of boom along front of W dock, keeping launch open. Anchor onshore to pin in concrete block where dock and gangway are anchored (on the spit across from boat launch near 46.317898, -118.765731). Tie off to dock along lenght and anchor out to the SW using danforth or other appropriate anchors.
Staging Area:	Onsite: Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, recreational users, water hazard, slips, trips & falls
Field Notes:	Launch on site at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Boat Launch/Ramp, Public Recreation Site/Area, Sensitive Shoreline and Back-Beach

Recommended Equipment

2	Each	Anchoring System(s) - (anchor, lines, floats)
500	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Line - 1/2" poly line
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

	Boat Operator
2	Laborer
1	Supervisor

Fishhook Park Launch and Beach (old name SIH-10) SIH-18.5L

SIH-18.5L Photo: View of Fishook Park launch and swim area, location for SIH-18.5L to be deployed

Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

<<Go Back

Fishook Park N shoreline SIH-18.51L

46° 19.099', -118° 45.938'	46° 19' 6.0", -118° 45' 56.3"	46.31832, -118.76564	Prescott

Strategy Objective:	Collection : Collection, keep oil from downstream resources
Implementation:	Anchor 600' of boom to the permanent anchor point at the dock/gangplank (same anchorpoint as SIH-18.5L), or use shoreside anchor system. Tow boom to the N to divert oil to collection pocket. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Collect oil using small vac truck or skimmer and portable storage. Bring machete to clear out false indigo plants at shoreline.
Staging Area:	Onsite: Stage onsite at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, recreational users, water hazard, slips, trips & falls, vegetation and riprap at shoreside anchor point
Field Notes:	Launch onsite at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Downstream Resources, Recreational Use Area

Recommended Equipment

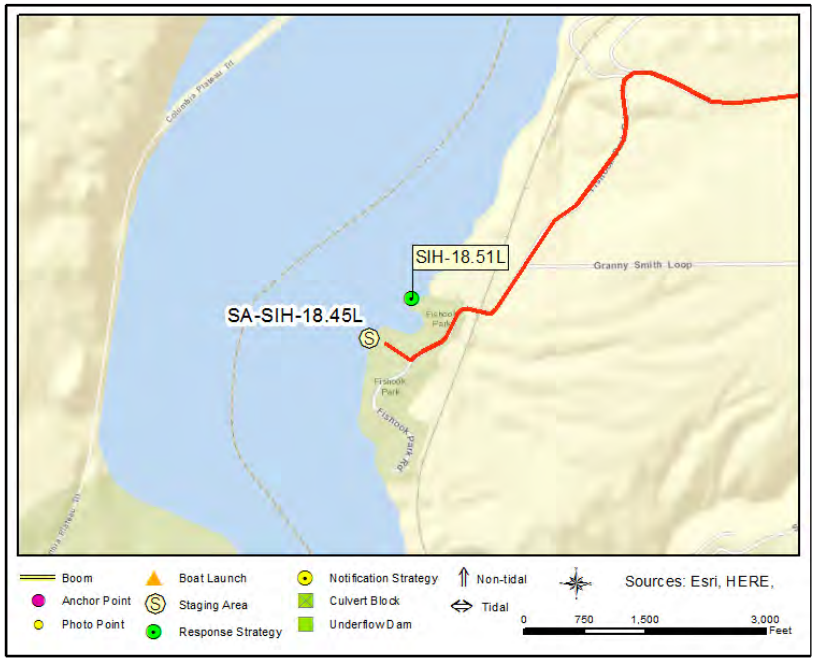
5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
600	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Fishook Park N shoreline SIH-18.51L

SIH-18.51L Photo: View of permanent anchor point at dock for SIH-18.51L and SIH-18.5L at Fishook Park



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishook Park Rd
Prescott, WA 99348

Driving Directions

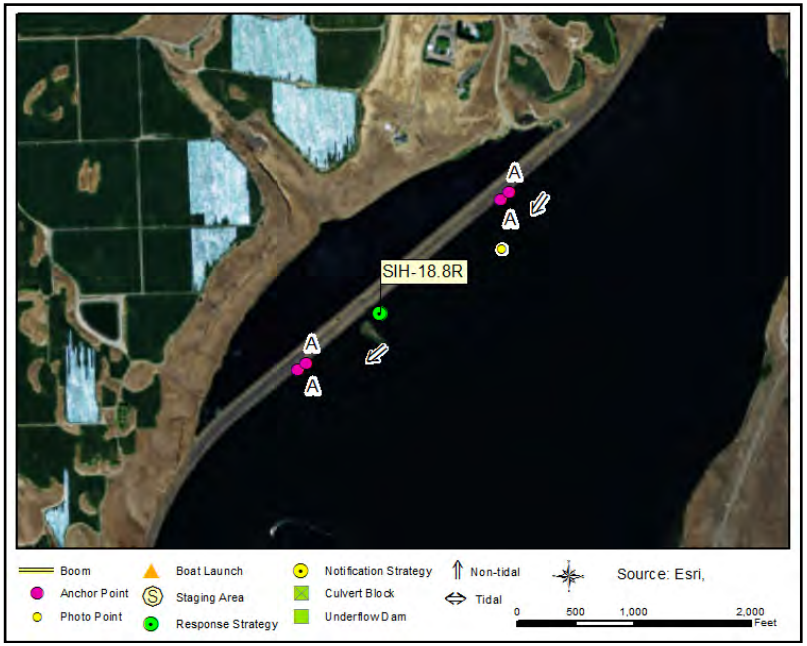
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

<<Go Back

Lake Emma culverts (old name SIH-9) SIH-18.8R

46° 19.660', -118° 46.272'	46° 19' 39.6", -118° 46' 16.3"	46.32767, -118.77120	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of Lake Emma
Implementation:	Deploy two 100' lengths of boom, backed by sorbent boom, 100' at each of the two culverts leading to Lake Emma. Anchor on either side of each culvert using shoreside anchoring systems.
Staging Area:	Remote: Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, water hazard
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Below a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Public Lands/Facilities



Recommended Equipment

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

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Lake Emma culverts (old name SIH-9) SIH-18.8R

SIH-18.8R Photo: View of one of the two culverts leading into Lake Emma, site of SIH-18.8R

Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

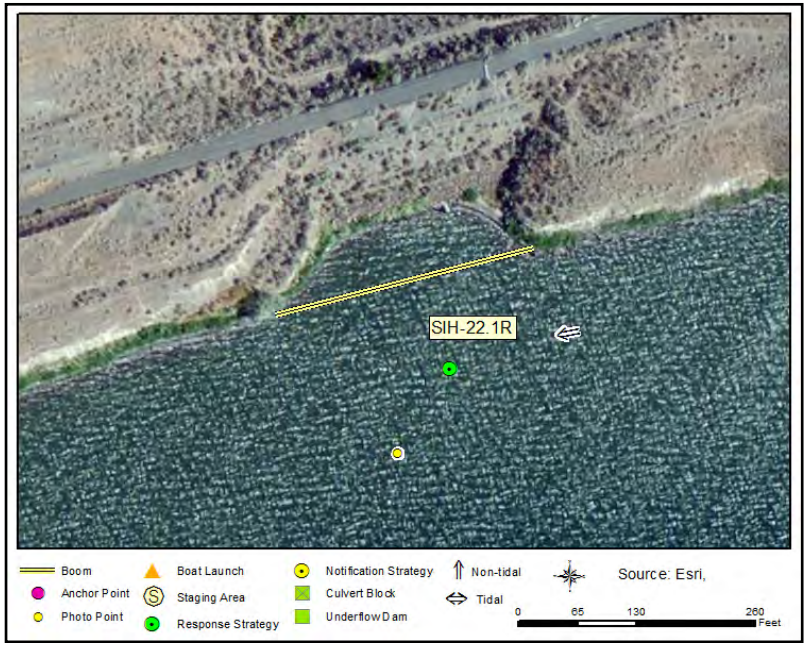
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Lost Island HMU - downstream end (old name SIH-7) SIH-22.1R

46° 22.010', -118° 44.041'	46° 22' .6", -118° 44' 2.5"	46.36683, -118.73402	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of pond and wetland
Implementation:	Close off the mouth of the inlet. Deploy 300' of boom from shore to shore at the mouth of the inlet and then block the culvert with sorbent boom (culvert is near 46.367338, -118.734006). Anchor each end of boom using shoreside anchoring systems. Deep water ~40 ft in this inlet.
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boats, slips, trips & falls, vegetation at shoreside anchor point, water hazard
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Riparian Habitat



Recommended Equipment

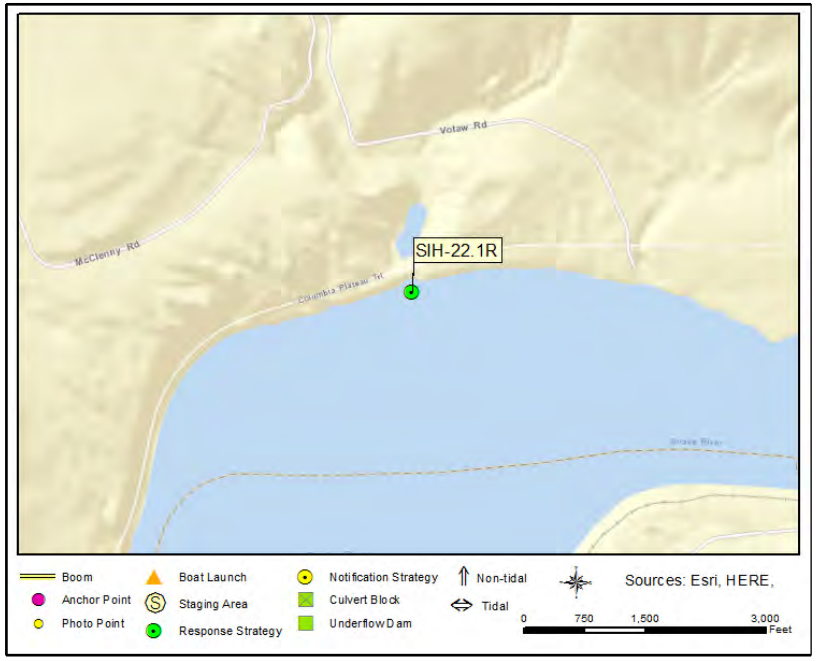
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Lost Island HMU - downstream end (old name SIH-7) SIH-22.1R

SIH-22.1R Photo: View of the culvert 1 mile W of Lost Island HMU, site of SIH-22.1R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Prescott, WA 99348

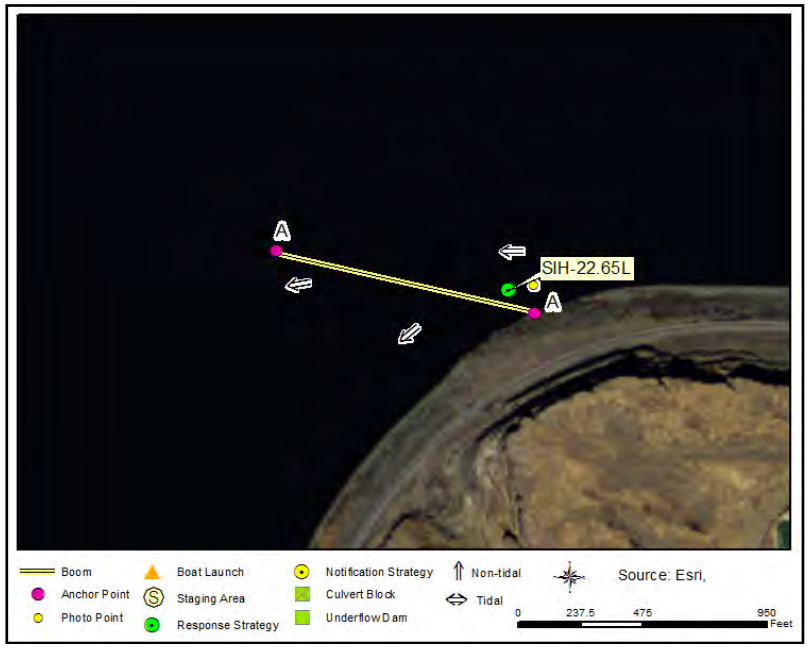
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at the boat launch at 3170 Fishook Park Rd, 99348, on the right

Across the river from Lost Island Recreation Area SIH-22.65L

46° 21.607', -118° 43.418'	46° 21' 36.4", -118° 43' 25.1"	46.36012, -118.72363	Prescott

Strategy Objective:	Deflection : Deflection, keep oil out of the large bay on river left
Implementation:	Anchor 1000' of boom using shoreside anchoring system, to the left bank just before the shoreline extends south into a large bay (near 46.360033, -118.722179), then tow boom to the WNW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267.
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Boating, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

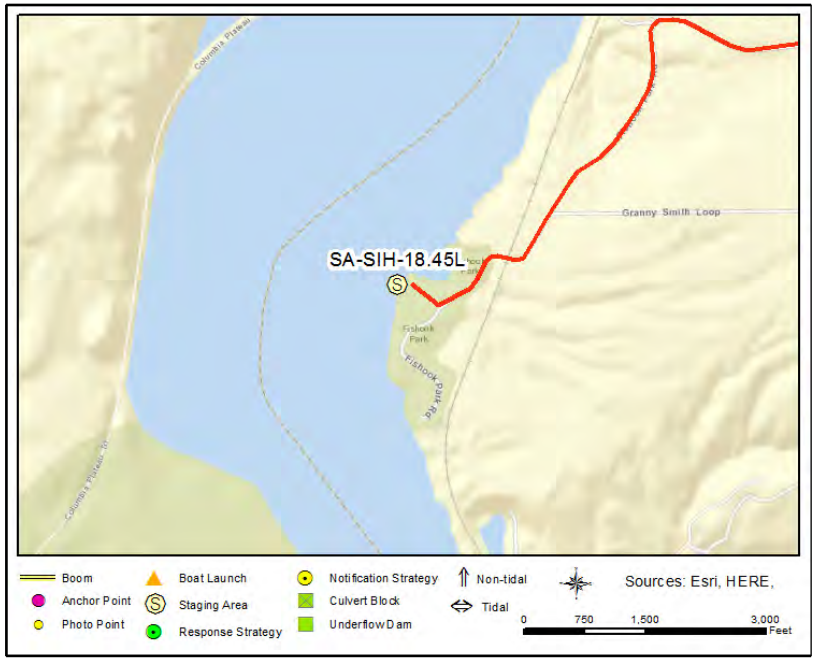
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Across the river from Lost Island Recreation Area SIH-22.65L

SIH-22.65L Photo: View of the shoreline where SIH-22.65L is to be deployed



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

<<Go Back

Lost Island HMU (old name SIH-6) SIH-22.7R

46° 22.012', -118° 43.346'	46° 22' .7", -118° 43' 20.8"	46.36687, -118.72244	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of pond and wetland
Implementation:	Close off the mouth of the inlet. Deploy 300' of boom from the E shore of the inlet (near 46.36673, -118.721898), tow boom to the opposite bank the west. Anchor each end using shoreside anchoring systems. Shallow water ~4 ft in this inlet, bring waders and machete
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Boats, slips, trips & falls, vegetation at shoreside anchor point, water hazard
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Use Area, Riparian Habitat, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

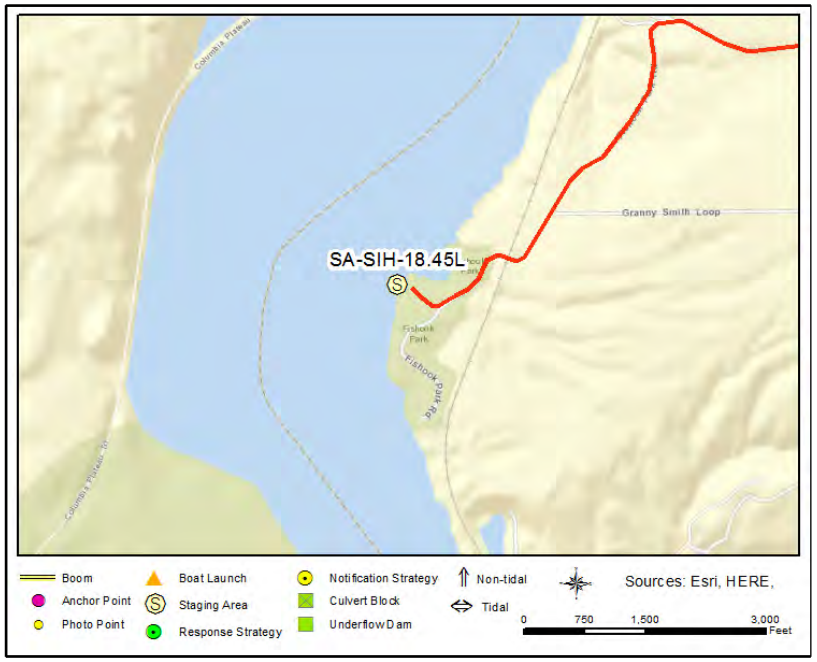
1	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
300	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Machete(s) - (or other vegetation cutting tool)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Lost Island HMU (old name SIH-6) SIH-22.7R

SIH-22.7R Photo: Veiw of the shoreline at Lost Island Recreation Area, site of SIH-22.7R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Lost Island HMU (old name SIH-5) SIH-23.1R

	46° 21' 52.4", -118° 42' 50.6"	46.36456, -118.71406	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of wetland
Implementation:	Close off the mouth of the inlet. Deploy 1000' of boom from the W shore of the inlet (near 46.364793, -118.716066), tow boom to the opposite bank. Anchor each end using shoreside anchoring systems. Shallow water ~4 ft in this inlet, bring waders and machetes. Minimize ground distrubing activities.
Staging Area:	Remote: Stage at SA-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-18.45L Fishhook Park - camping, shelters, boat launch, parking
Watercourse:	River - Below a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Deer Habitat, Habitat Management Unit, Riparian Habitat, Sensitive Resources Nearby, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

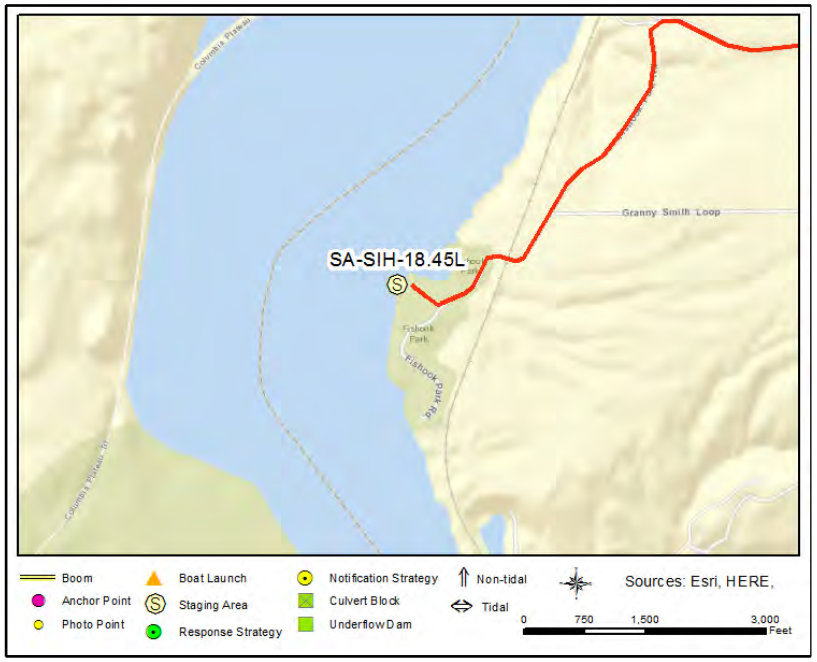
9	Each	Anchoring System(s) - (anchor, lines, floats)
2	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
2	Each	Machete(s) - (or other vegetation cutting tool)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Lost Island HMU (old name SIH-5) SIH-23.1R

SIH-23.1R Photo: View of Lost Island Wetlands, site of SIH-23.1R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Hollebeke Habitat Management Unit (old name SIH-3) SIH-24.75L

	3.45124, 18.83701	Pasco

Strategy Objective:	Deflection : Deflection, keep oil out of small inlet and shoreline immediatly downstream. Do not anchor boom on south side of inlet (Sensitive)
Implementation:	Anchor 1000' of boom to end of spit by Osprey nesting platform (near 46.373897, -118.691357) with shoreside anchoring system, tow other end of boom to the SSW and anchor offshore. Limit ground intrusion, and do not anchor to south shore. Steep banks, shallow water, bring waders.
Staging Area:	Remote: Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point, shallow water, steep banks.
Field Notes:	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Watercourse:	River - Above a Dam - Shallow water area, Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Habitat Management Unit, Public Lands/Facilities, Raptors, Sensitive Resources, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat

Recommended Equipment

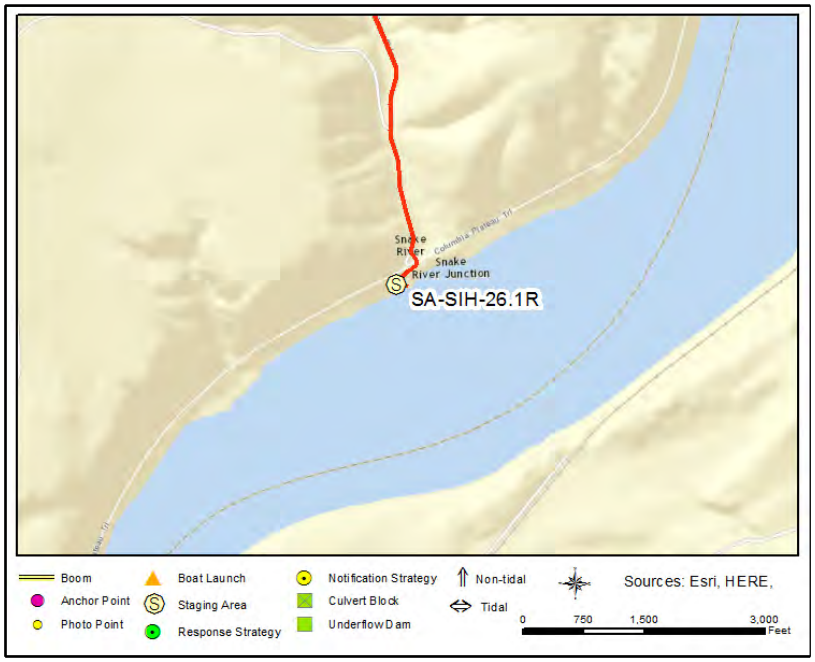
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Hollebeke Habitat Management Unit (old name SIH-3) SIH-24.75L

SIH-24.75L Photo: View of the shore at Hollebeke HMU, anchoring site of SIH-24.75L deflection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

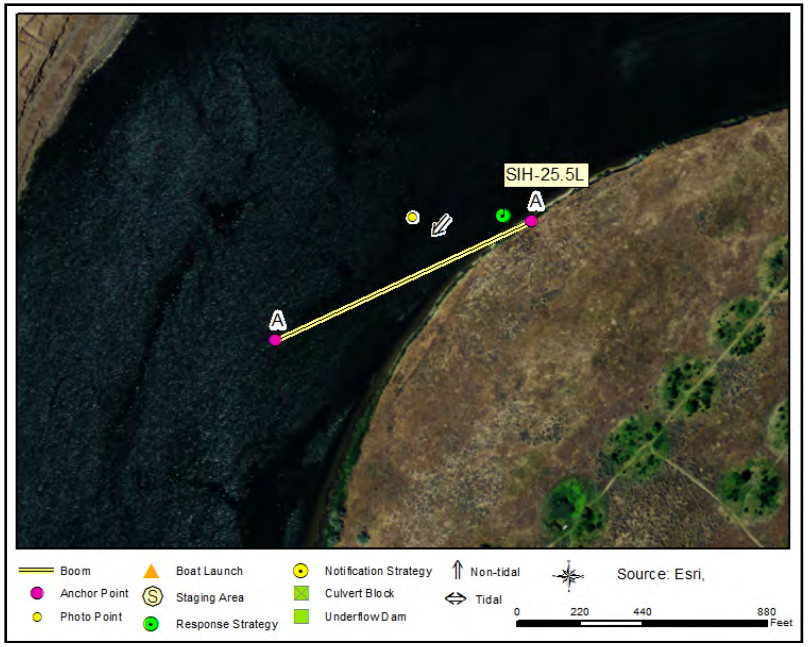
Driving Directions

1. Start at PAsco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd (0.04 miles), past the Columbia Plateau Trail parking area to the boat launch
8. Finish at 3198 Pederson Rd, 99301

Hollebeke Habitat Management Unit (old name SIH-2) SIH-25.5L

	46.38065, -118.68865	Pasco

Strategy Objective:	Deflection : Deflection, keep oil away from shoreline at Hollebeke HMU
Implementation:	Anchor 1000' of boom at 46.380049, -118.689260 using shoreline anchoring system. Tow other end of boom to the WSW and anchor off-shore. Adjust angle of boom, quantity and placement of anchors depending on conditions of the day. Do not anchor on shore any further to the South than coordinates given. Limit ground intrusion. Steep banks, deep water.
Staging Area:	Remote: Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point, steep banks, water hazard
Field Notes:	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Watercourse:	River - Below a Dam - Deep water by site, Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Habitat Management Unit, Raptors, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

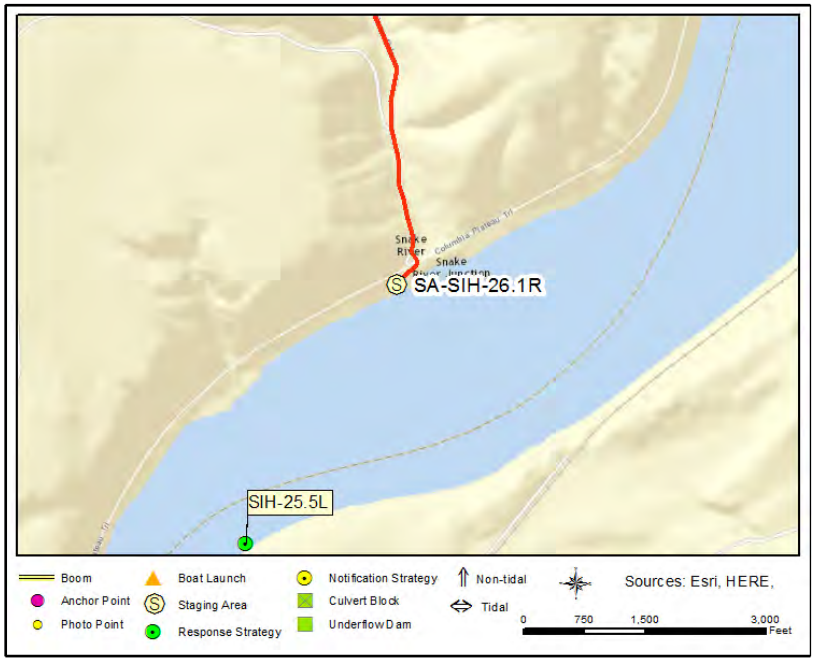
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Hollebeke Habitat Management Unit (old name SIH-2) SIH-25.5L

SIH-25.5L Photo: View of shoreline at Hollebeke HMU, anchor site of SIH-25.5L deflection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd (0.04 miles), past the Columbia Plateau Trail parking area to the boat launch
8. Finish at 3198 Pederson Rd, 99301

Across the river from Snake River Junction SIH-26.5L

46° 23.119', -118° 40.311'	46° 23' 7.2", -118° 40' 18.7"	46.38532, -118.67185	Pasco

Strategy Objective:	Collection : Collection, keep oil from moving downstream
Implementation:	Anchor 1000' of boom, using shoreside anchoring system, across the river from Snake River Juncktion (near 46.382629, -118.677404). Tow boom out to the NE and anchor off shore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Bring in portable storage or on-water bladder to store oil collected with skimmers.
Staging Area:	Remote: Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation shoreline anchor point, steep banks, active railroad nearby
Field Notes:	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking and bathrooms
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Downstream Resources, Habitat Management Unit, Raptors

Recommended Equipment

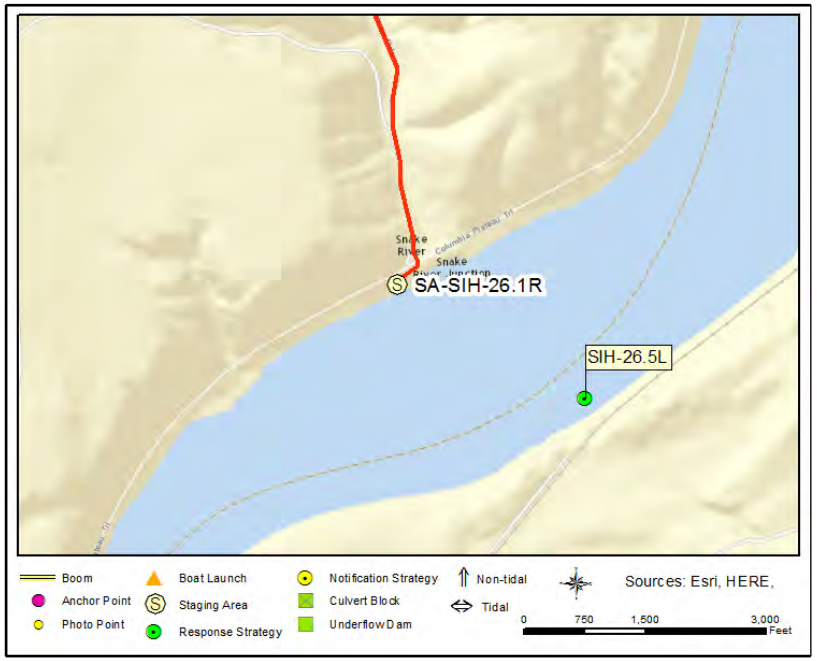
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Skimmer (appropriately sized) with Portable Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Across the river from Snake River Junction SIH-26.5L

SIH-26.5L Photo: View of the shore across from Snake River Junction, site of SIH-26.1L collection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd (0.04 miles), past the Columbia Plateau Trail parking area to the boat launch
8. Finish at 3198 Pederson Rd, 99301

One Mile upstream from Snake River Junction SIH-27.1R

46° 23.661', -118° 40.059'	46° 23' 39.7", -118° 40' 3.5"	46.39435, -118.66765	Pasco

Strategy Objective:	Deflection : Deflect oil away from sensitive resources
Implementation:	Anchor 700' of boom using shoreline anchor system at 46.394498 -118.667624 (do not anchor on shore any further downstream-sensitive resources), tow boom due S to anchor offshore and deflect oil away from shoreline. Deep water ~70' just off shore.
Staging Area:	Remote: Stage at SA-SIH-26.1R, Snake River Junction – primitive launch with parking. More parking and bathrooms nearby
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point, water hazard
Field Notes:	Launch at BL-SIH-26.1R, Snake River Junction – primitive launch with parking. More parking and bathrooms nearby
Watercourse:	River - Above a Dam - Deep water near strategy SIH-27.1R, Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Raptors, Sensitive Resources Nearby

Recommended Equipment

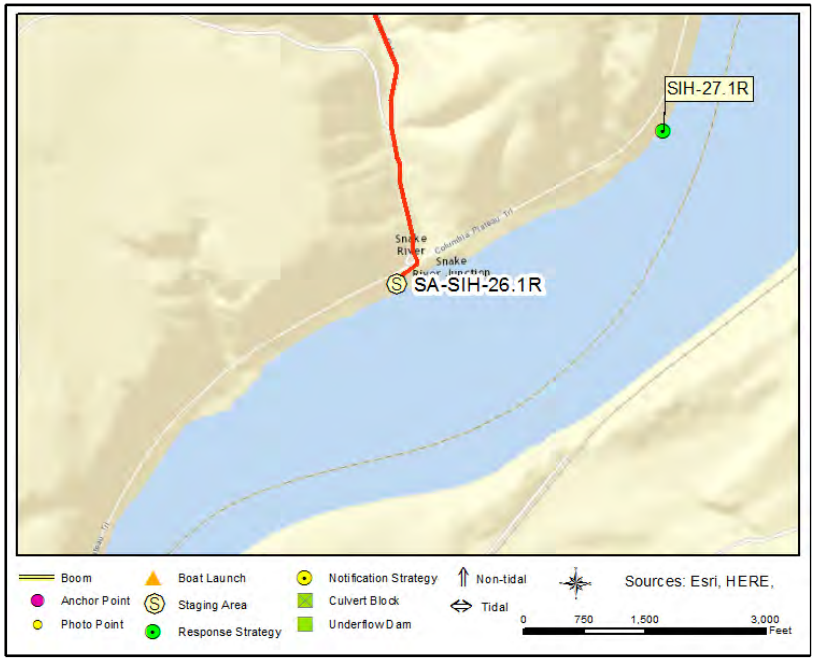
6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

One Mile upstream from Snake River Junction SIH-27.1R

SIH-27.1R Photo: View of the shoreline anchor point for SIH-27.1R deflections strategy, a mile upstream from Snake River Junction



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd (0.04 miles), past the Columbia Plateau Trail parking area to the boat launch
8. Finish at 3198 Pederson Rd, 99301

<<Go Back

Walker Pit Habitat Management Unit (old SIH-1) SIH-30.25L

46° 25.698', -118° 38.060'	46° 25' 41.9", -118° 38' 3.6"	46.42830, -118.63433	Prescott

Strategy Objective:	Deflection : Deflection, keep oil off of shore at Walker Pit HMU
Implementation:	Anchor 800' of boom, using shoreside anchoring system, to shore at Walker Pit HMU (near 46.428759, -118.634357). Tow other end of boom to the SW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.
Staging Area:	Onsite: Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Watercourse:	River - Below a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Habitat Management Unit, Public Lands/Facilities, Raptors, Waterfowl Concentrations

Recommended Equipment

7	Each	Anchoring System(s) - (anchor, lines, floats)
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
1	Supervisor

Walker Pit Habitat Management Unit (old SIH-1) SIH-30.25L

SIH-30.25L Photo: View of the shore at Walker Pit HMU, anchor site for SIH-30.25L deflection strategy

Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Walker Pit Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right, strategy location for SIH-30.25L is just a little further down on the right

Walker Pit HMU N Shoreline SIH-30.5L

	46.43208, -118.63471	Prescott

Strategy Objective:	Deflection : Deflection, keep oil off Walker Pit HMU shore and boat launch
Implementation:	Anchor 700' of boom, using shoreside anchoring system, to the Walker Pit HMU N shore (near 46.43022, -118.634438), then tow boom to the SSW and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day. Shallow water, bring waders.
Staging Area:	Onsite: Stage onsite or at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point, unguarded railroad crossing at Walker Pit HUM
Field Notes:	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Watercourse:	River - Above a Dam - Shallow water at shore for this strategy, Snake River, Ice Harbor Pool, dam controlled and lake like most of the
Resources at Risk:	Boat Launch/Ramp, Habitat Management Unit, Raptors, Waterfowl and Salmonid Concentrations and Habitat

Recommended Equipment

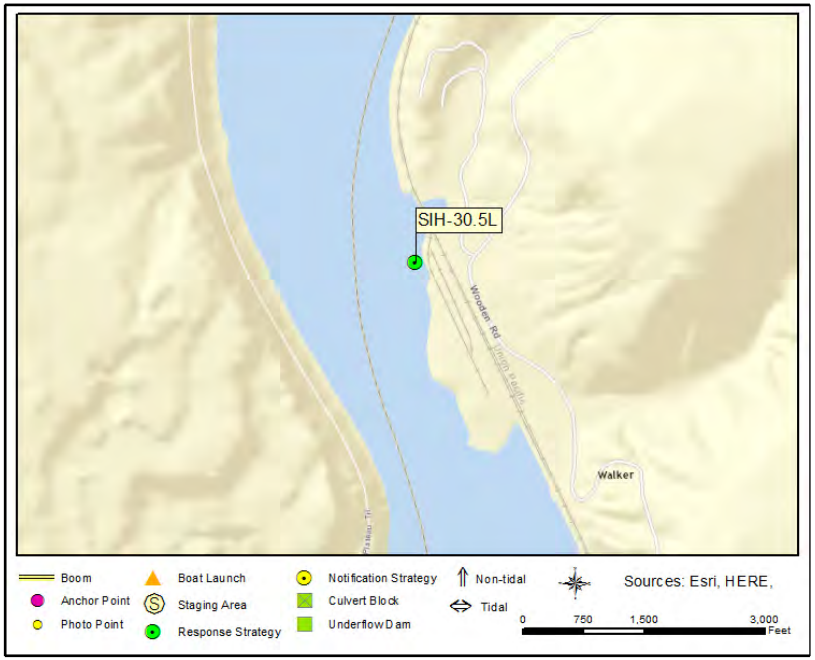
6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
2	Laborer
1	Supervisor

Walker Pit HMU N Shoreline SIH-30.5L

SIH-30.5L Photo: View of the shore at Walker Pit HMU, site of SIH-30.5L deflection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Walker Pit Road
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Go right to go to SIH-30.5L site or go left and continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right

Northernmost shoreline at Walker Pit HMU SIH-30.6L

46° 25.957', -118° 38.072'	46° 25' 57.4", -118° 38' 4.3"	46.43262, -118.63454	Prescott

Strategy Objective:	Collection : Collection, keep oil from moving downstream
Implementation:	Secure one end of a 900' length of boom to shore at the N end of Walker Pit HMU (near 46.432667, -118.634391). Using workboat, take the other end of the boom upstream and anchor off-shore at an angle to create a collection pocket, use a "small" vac truck, or skimmer and portable storage, to collect oil. Adjust angle of boom, quantity and placement of anchors based on conditions of the day. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267.
Staging Area:	Onsite: Stage onsite or at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Site Safety:	Boat traffic, water hazard, slips, trips & falls, shallow water, vegetation at shoreside anchor point, active railroad nearbyy.
Field Notes:	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year, shallow near shore at Walker Pit HMU
Resources at Risk:	Downstream Resources, Habitat Management Unit, Public Lands/Facilities, Raptors

Recommended Equipment

8	Each	Anchoring System(s) - (anchor, lines, floats)
1	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
1	Supervisor

Northernmost shoreline at Walker Pit HMU SIH-30.6L

SIH-30.6L Photo: View of the shoreline at Walker Pit HMU, site of SIH-30.6L collection strategy

Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

Walker Pit Road
Prescott, WA 99348

Driving Directions

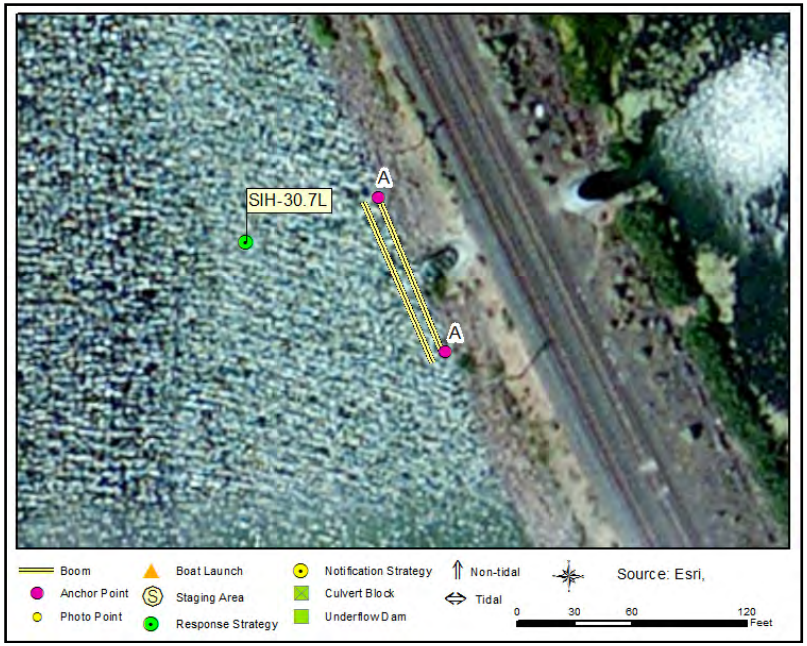
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks. Turn right to get to strategy location.
13. Turn left and continue another .15 miles, to finish at the Walker Pit HMU boat launch on the right

<<Go Back

Culvert to N wetland at Walker Pit HMU SIH-30.7L

	46° 26' 1.6", -118° 38' 5.3"	46.43377, -118.63481	Prescott

Strategy Objective:	Exclusion : Exclusion
Implementation:	Anchor 100' of boom on either side in front of the culvert in the river using shoreside anchoring systems (culvert is at 46.433689, -118.634437). Back with sorbent boom. Call UP RR 24 hr# to let them know you are working close to active tracks (888) 877-7267. Bring waders, may be shallow
Staging Area:	Remote: Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Site Safety:	Boat traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point, active railroad
Field Notes:	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Habitat Management Unit, Waterfowl and Salmonid Concentrations and Habitat, Wetland Habitat



Recommended Equipment

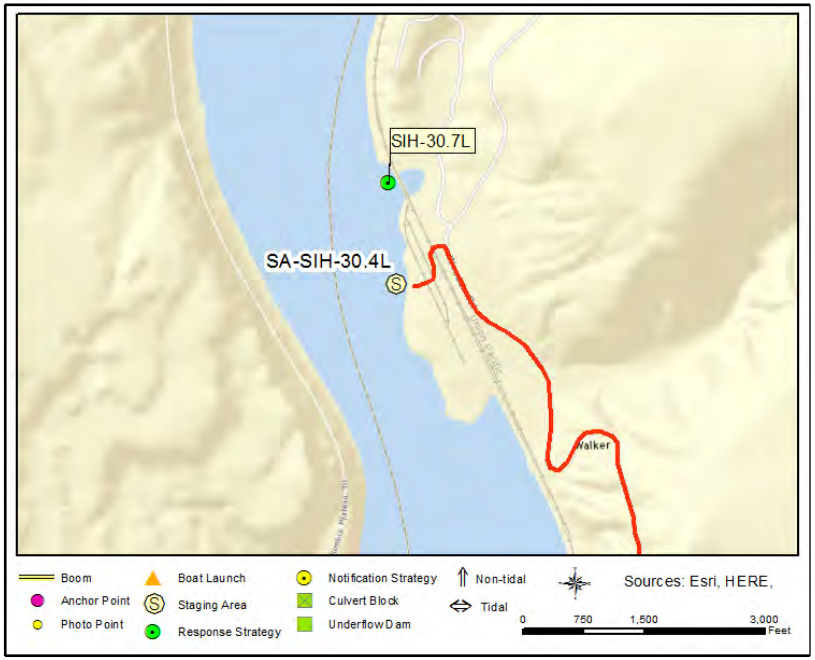
2	Each	Anchoring System(s)- Shoreside
100	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
1	Laborer
1	Supervisor

Culvert to N wetland at Walker Pit HMU SIH-30.7L

SIH-30.7L Photo: View of culvert just N of Walker Pit HMU, site of SIH-30.7L, exclusion strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office
509-547-2048

Union Pacific Railroad
Emergency Contact :
888-877-7267

Nearest Address

Walker Pit Road
Prescott, WA 99348

Driving Directions

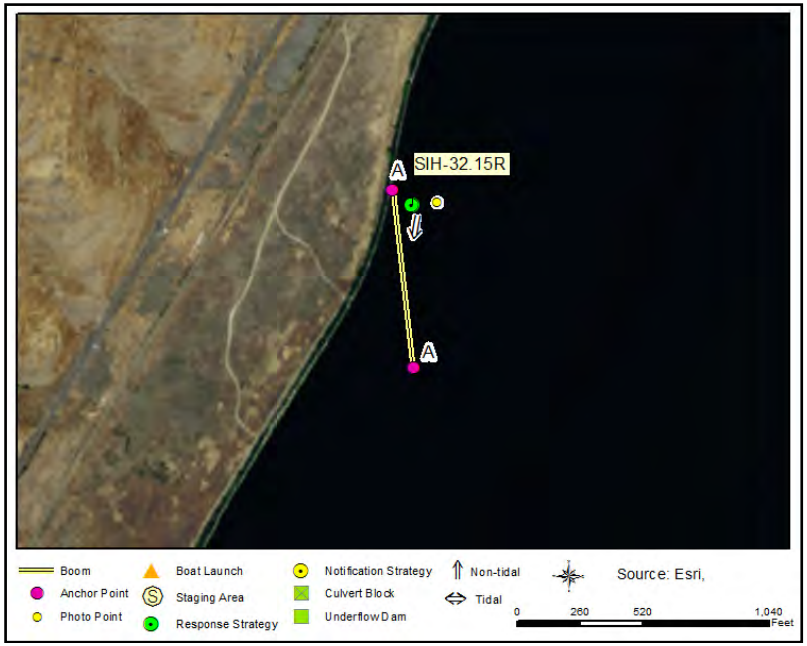
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right

<<Go Back

Columbia Plateau Trail river mile 32.15R SIH-32.15R

46° 27.227', -118° 38.044'	46° 27' 13.6", -118° 38' 2.7"	46.45379, -118.63407	Prescott

Strategy Objective:	Deflection : Deflection, keep oil off of river banks downstream
Implementation:	Anchor 800' of boom, using shoreside anchoring system, to the shore near 46.453514, -118.634593, then tow boom to the SSE and anchor off shore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Site Safety:	Recreational users, boats, slips, trips & falls, vegetation at shoreside anchor point
Field Notes:	Launch at BL-SIH-30.4L Walk Pit HMU Boat Launch, primitive launch and gravel staging area
Watercourse:	River - Above a Dam - Deep water at this location, Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Recreational Shoreline Area, Waterfowl Concentrations



Recommended Equipment

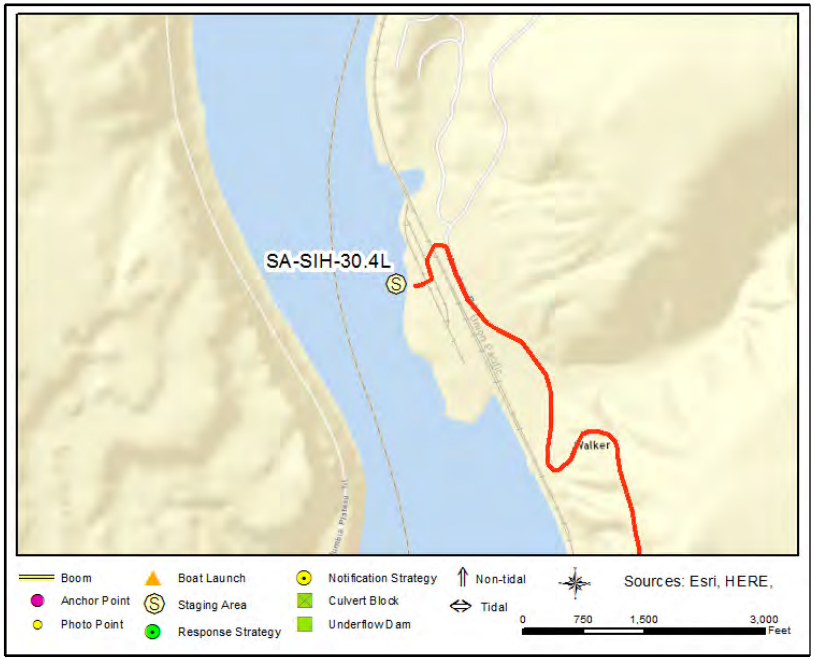
7	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
800	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Machete(s) - (or other vegetation cutting tool)
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Columbia Plateau Trail river mile 32.15R SIH-32.15R

SIH-32.15R Photo: View of the shoreline at the anchor point of SIH-32.15R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Walker Pit Road
Prescott, WA 99348

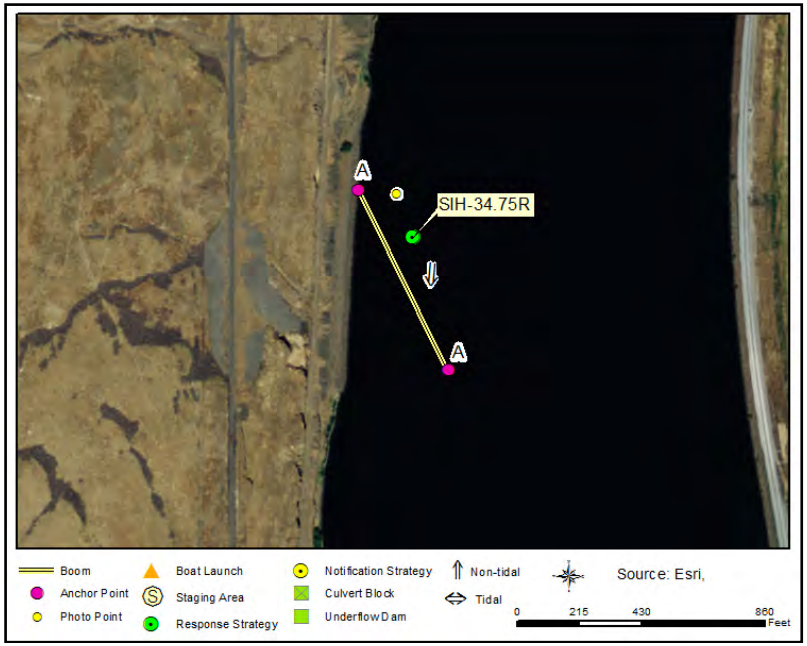
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right

1.25 miles S of Burr Canyon SIH-34.75R

46° 29.362', -118° 37.369'	46° 29' 21.7", -118° 37' 22.2"	46.48937, -118.62282	Pasco

Strategy Objective:	Deflection : Deflection, keep oil away from sensitive shoreline
Implementation:	Deploy 700' of boom anchored at 46.489645 -118.623672 using shoreside anchoring system (do not deviate up or down stream from shoreside anchor coordinates). Tow boom out to the SSE and anchor offshore. Adjust angle of boom, quantity and placement of anchors, depending on conditions of the day.
Staging Area:	Remote: Stage at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked
Site Safety:	Boat traffic, water hazard, slips, trips & falls, large cobbles at shoreside anchor point
Field Notes:	Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year, although deeper and with more current at this location than most (~1 knot per hr)
Resources at Risk:	Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

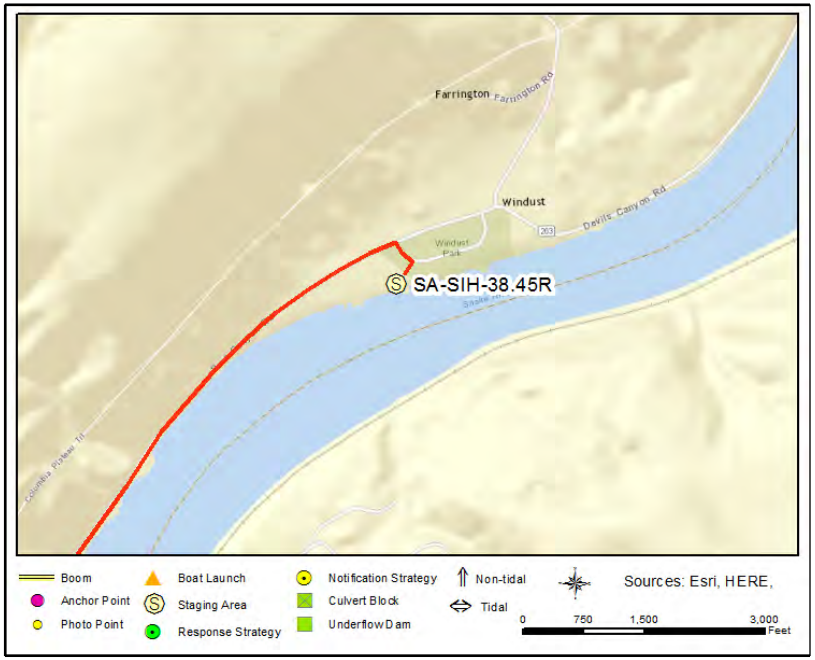
6	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
700	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

1.25 miles S of Burr Canyon SIH-34.75R

SIH-34.75R Photo: View of the shoreline anchor point for SIH-34.75R



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5252 Burr Canyon Road
Pasco, WA 99301

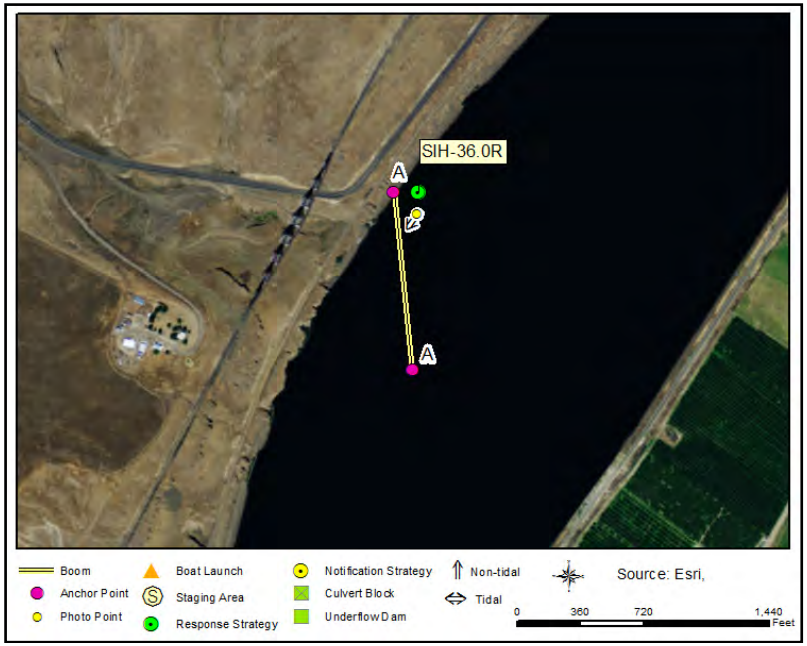
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (4.94 miles)
7. Finish at Windust Park, 5252 Burr Canyon Road, 99301, on the right

Burr Canyon Road SIH-36.0R

	46° 30' 25.9", -118° 36' 55.8"	46.50719, -118.61550	Pasco

Strategy Objective:	Deflection : Deflection, keep oil off shoreline
Implementation:	Anchor 1000' of boom, using shoreside anchoring system, to shore near 46.507087, -118.616154, then tow boom out to the S to anchor offshore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Do not move shoreside anchor point from designated spot, sensitive resources in the area. Bring 100' of sorbent boom to place in front of culverts located 300' downstream of shoreside anchor point are at, or just below, the waterline.
Staging Area:	Remote: Stage at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked
Site Safety:	Recreational users, boats, slips, trips & falls, steep and rocky banks at shoreside anchor point, water hazard
Field Notes:	Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year. Depth 30' and more current than most locations (< 1 knot per hour)
Resources at Risk:	Sensitive Resources, Waterfowl Concentrations



Recommended Equipment

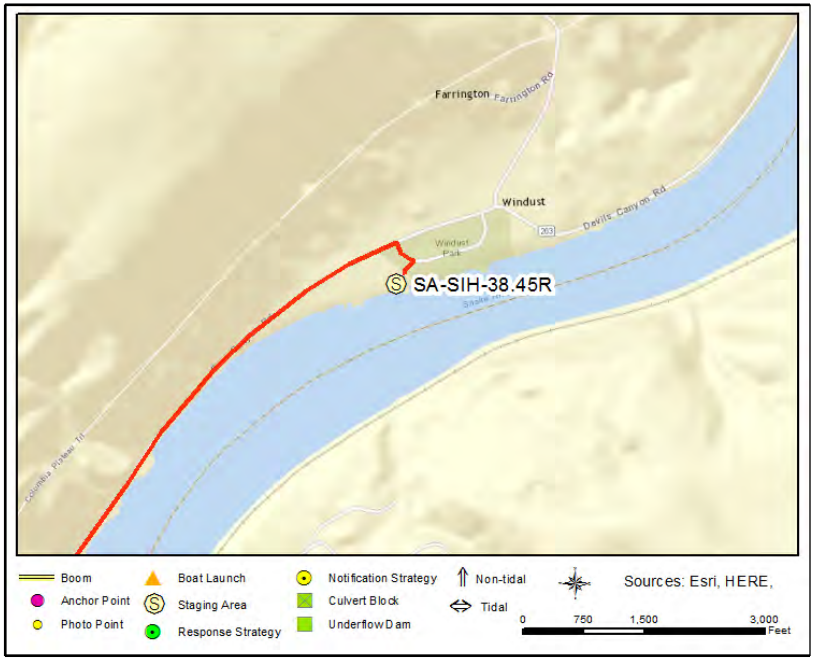
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
3	Laborer
1	Supervisor

Burr Canyon Road SIH-36.0R

SIH-36.0R Photo: View of shoreline anchor point for SIH-36.0R just off Burr Canyon Road near old RR trestle



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5252 Burr Canyon Road
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Finish at Windust Park 5252 Burr Canyon Road, 99301, on the right

Bouvey Canyon SIH-37.77R

Position - Location:	3° 57.619', 19° 2.845'	3° 57' 37.1", 19° 2' 50.7"	3.96031, 19.04741	Pasco

Strategy Objective: Collection : Collection, keep oil from moving downstream

Implementation: Anchor 1000' of boom, using shoreside anchoring system, at pull off 1/2 mile S of Windust Park (near46.527049, -118.593367). Tow boom out to the ENE and anchor off shore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Bring in vac truck or portable storage and skimmers to collect oil.

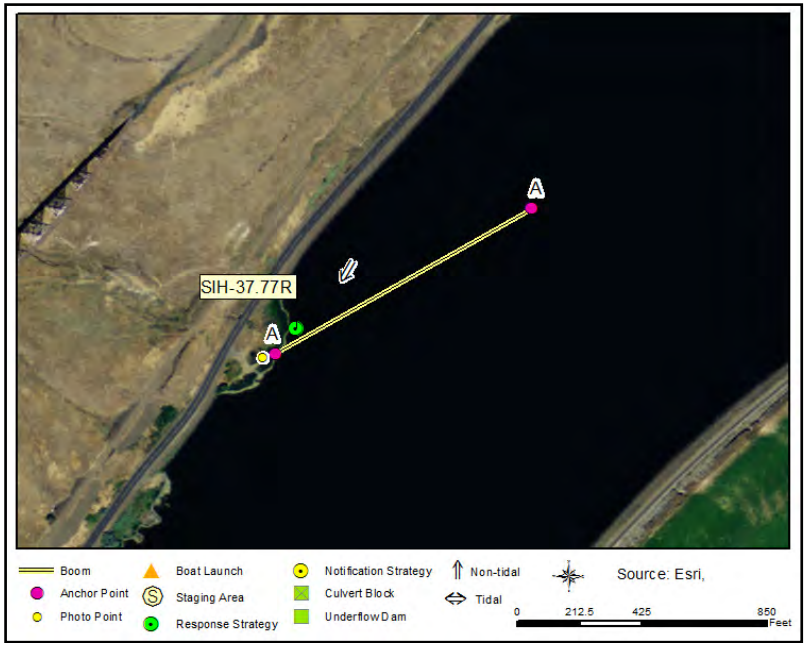
Staging Area: Onsite: Gravel parking, or at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area

Site Safety: Boats, slips, trips & falls, vegetation and/or cobbles at shoreside anchor point, vehicle traffic, water hazard

Field Notes: Launch at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)

Watercourse: River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.

Resources at Risk: Downstream Resources, Waterfowl Concentrations



Recommended Equipment

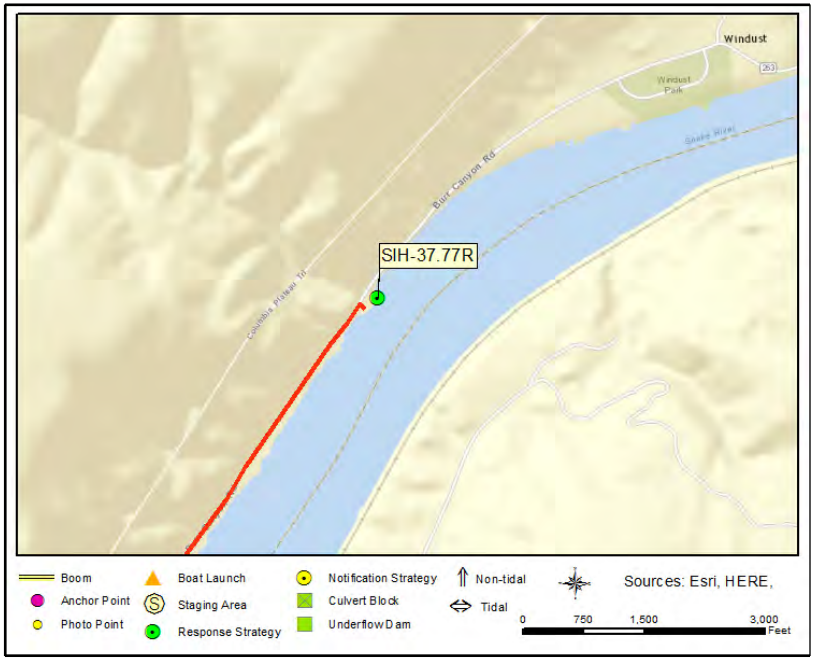
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Bouvey Canyon SIH-37.77R

SIH-37.77R Photo: View of shoreside anchor point for SIH-37.77R, collection strategy 1/2 mile S of Windust Park



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

4238 Burr Canyon Rd
Pasco, WA 99301

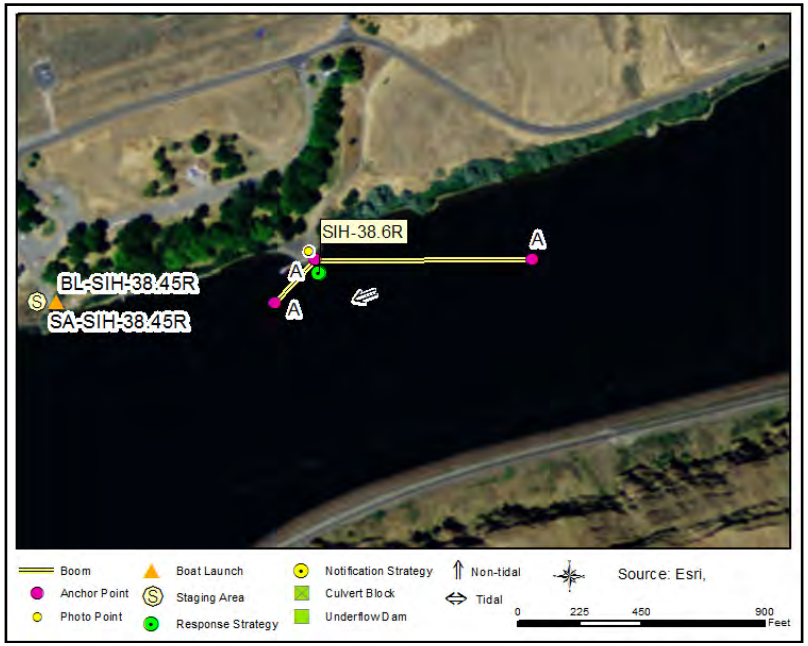
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (4.3 miles)
7. Finish at gravel turnout at 4238 Burr Canyon Rd, 99301, on the right

Windust Park SIH-38.6R

	46° 32' .0", -118° 34' 35.4"	46.53334, -118.57651	Pasco

Strategy Objective:	Collection : Collection, keep oil out of swimbeach area and off downstream park shoreline
Implementation:	Deploy 1000' of boom, anchor at 46.533446 -118.576538, which is the upstream edge of eastern boat launch. Run 800' out to the E to create a collection pocket and 200' to the SW to deflect any escaping oil away from park shoreline. Adjust angles of boom, quantity and placement of anchors, according to conditions of the day. Bring in vac trucks for collection
Staging Area:	Onsite: Stage onsite at SA-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities
Site Safety:	Boat and vehicle traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point
Field Notes:	Launch onsite at BL-SIH-38.45R Windust Park Boat Launch, double ramps, paved, well lit staging area with facilities (locked gate off season)
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year
Resources at Risk:	Deer Habitat, Recreational Use Area, Sensitive Resources Nearby, Waterfowl Concentrations



Recommended Equipment

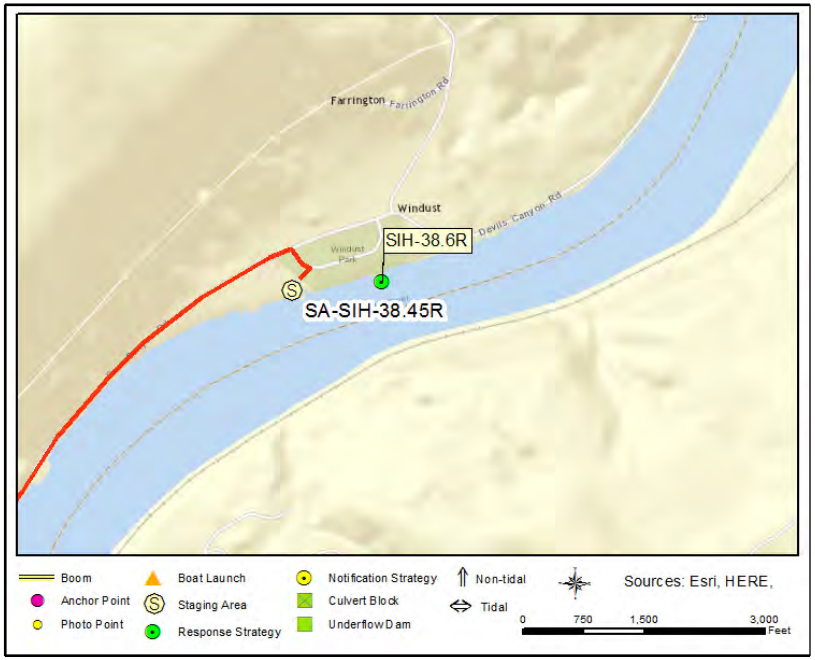
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
		Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - of adequate size for type and amount of boom

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Windust Park SIH-38.6R

SIH-38.6R Photo: View of downstream shoreline taken from shoreside anchor point of SIH-38.6R at Windust Park



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5252 Burr Canyon Road
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Finish at Windust Park 5252 Burr Canyon Road, 99301, on the right

Matthews Boat Ramp SIH-40.45L

46° 32.994', -118° 33.069'	46° 32' 59.6", -118° 33' 4.1"	46.54990, -118.55115	Prescott

Strategy Objective:	Collection : Collection, keep oil from moving downstream
Implementation:	Anchor 800' of boom, using shoreside anchoring system, at the upstream side of the Matthews boat launch (near 46.549167, -118.551265). Tow boom out to the N and anchor off shore. Adjust angle of boom, quantity and placement of anchors, based on conditions of the day. Bring in vac truck or portable storage with skimmers. Vac truck can be parked on the upstream side of the ramp. Line downstream side of dock with sorbent boom if needed, keep launch open.
Staging Area:	Onsite: Stage on site at SA-SIH-40.5L, Matthews boat launch, lights, parking, and bathrooms
Site Safety:	Boat and vehicle traffic, water hazard, slips, trips & falls, vegetation and/or rip rap at shoreside anchor point
Field Notes:	Launch on site at BL-SIH-40.5L, Matthews boat launch, lights, parking, and bathrooms
Watercourse:	River - Above a Dam - Snake River, Ice Harbor Pool, dam controlled and lake like most of the year.
Resources at Risk:	Boat Launch/Ramp, Downstream Resources, Waterfowl Concentrations

Recommended Equipment

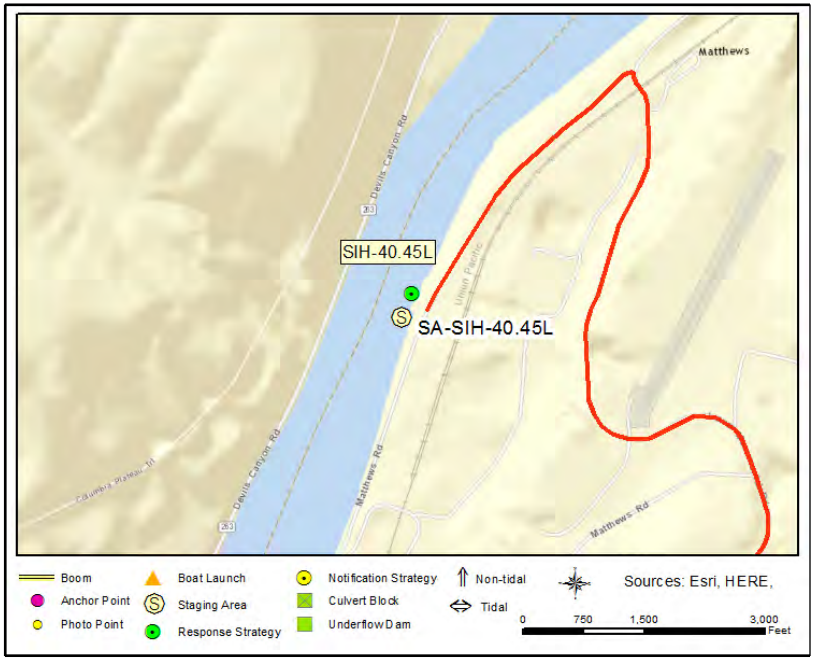
9	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Anchoring System(s)- Shoreside
1000	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
100	Feet	Line - 1/2" poly line
1	Each	Vac Truck or Skimmer and Storage
1	Each	Workboat(s) - (jon boat)

Recommended Personnel

1	Boat Operator
4	Laborer
1	Supervisor

Matthews Boat Ramp SIH-40.45L

SIH-40.45L Photo: View of the Matthews boat launch, site of SIH-40.45L collection strategy



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

16721 Lower Monumental Rd
Prescott, WA 99348

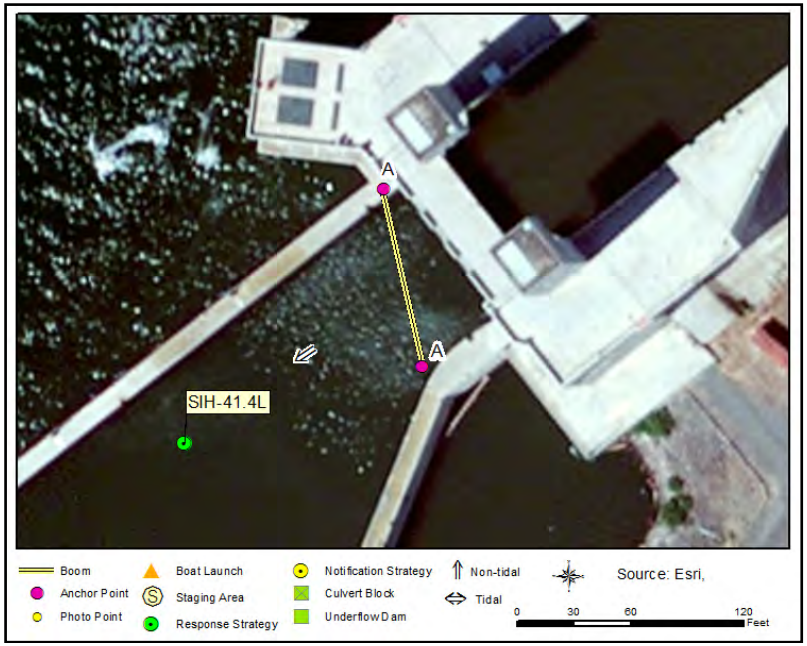
Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.9 miles), go across the railroad tracks and take the first left
13. Drive an additional 1.25 miles and finish at Matthews Boat Launch 16721 Lower Monumental Rd, 99348, on the right

Downstream Lower Monumental Lock (old SLOMO-23) SIH-41.4L

	46° 33' 35.1", -118° 32' 22.5"	46.55975, -118.53959	Prescott

Strategy Objective:	Collection : Collection, Collect oil coming downstream to or through the Lower Monumental Lock
Implementation:	Deploy a 100' 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 NW toward the SE. Anchor to ladders/railings. Use vac truck or skimmer/portable storage at the SE 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 access by boat, 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. Call USACE for access 509-282-3218 Ext. 231
Staging Area:	Onsite: Stage onsite or at SA-SIH-40.45L Matthews boat launch - lights, parking, bathroom
Site Safety:	Active dam and lock, boats, vehicle traffic,
Field Notes:	May be able to deploy by hand but if using boat, launch from SIH-40.45L Matthews boat launch - lights, parking, bathroom
Watercourse:	River - Below a Dam - Snake River at the base of Lower Monumental Dam, river speed fluctuates based on dam release
Resources at Risk:	Downstream Resources, Lock and Dam



Recommended Equipment

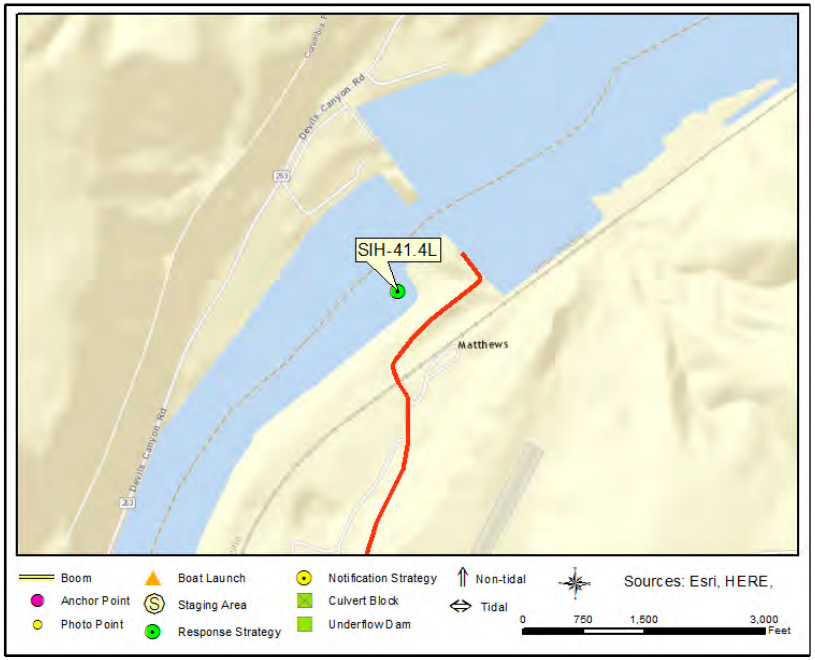
2	Each	Anchoring System(s) - (anchor, lines, floats)
100	Feet	Boom - B2 (Contractor Boom) or equivalent
200	Feet	Line - 1/2" poly line
1	Each	Line throwing gun(s) or device(s)
1	Each	Vac Truck or Skimmer and Storage

Recommended Personnel

3	Laborer
1	Supervisor

Downstream Lower Monumental Lock (old SLOMO-23) SIH-41.4L

SIH-41.4L Photo: View of the Lower Monumental Dam Lock, site of SIH-41.4L collection strategy



Site Contact

USACE Lower Monumental Dam Control Room
Emergency Contact :
509-282-3218 ext. 231

USACE Ice Harbor Dam Control Room
Emergency Contact : 24 Hour Emergency Contact
509-547-7783

Nearest Address

16920 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.75 miles)
13. Finish at Lower Monumental Dam security gate, 16920 Lower Monumental Rd, 99348

<<Go Back

Lower Monumental Dam S Fish Ladder SIH-41.5L

46° 33.668', -118° 32.309'	46° 33' 40.1", -118° 32' 18.5"	46.56114, -118.53848	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of the fishladder
Implementation:	Anchor 100' of boom, backed by sorbent boom, from the NE corner of the fishladder in/outtake at 46.561223, -118.538245 to the SW corner; use line throwing devise if needed and employee available ladders, railings etc. to assist with anchoring boom. Contact Dam Control room 509-282-3218 Ext. 231 for access to site and work with Dam Safety to deploy strategy
Staging Area:	Onsite: Stage onsite or use SA-SIH-40.45L if allowed to access the site by boat.
Site Safety:	Heavy equipment, water hazard, slips, trips, falls
Field Notes:	Deploy boom by hand, use line throwing devise if needed. If allowed to access by boat, launch at BL-SIH-40.45L Matthews boat launch
Watercourse:	River - Below a Dam - Downstream side of Lower Monumental Dam in the Snake Ice Harbor Pool, flow will depend on dam release.
Resources at Risk:	Fish Ladder(s), Salmon Concentrations

Recommended Equipment

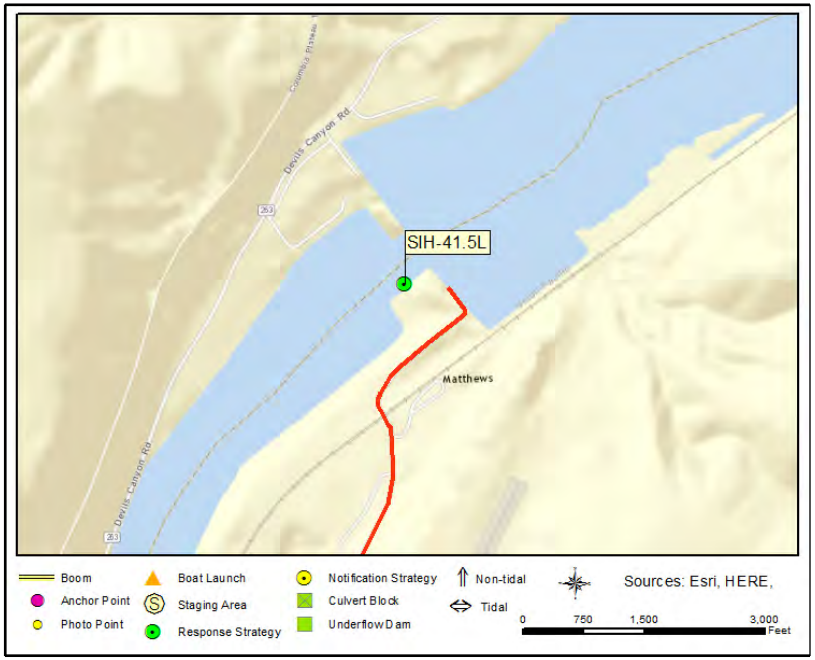
2	Each	Anchoring System(s) - (anchor, lines, floats)
100	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
200	Feet	Line - 1/2" poly line
1	Each	Line throwing gun(s) or device(s)

Recommended Personnel

2	Laborer
1	Supervisor

Lower Monumental Dam S Fish Ladder SIH-41.5L

SIH-41.5L Photo: View of the S fishladder opening, site of SIH-41.5L exclusion strategy



Site Contact

USACE Lower Monumental Dam Control Room
Emergency Contact :

Prescott, WA 99348
509-282-3218 ext. 231

Nearest Address

16920 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

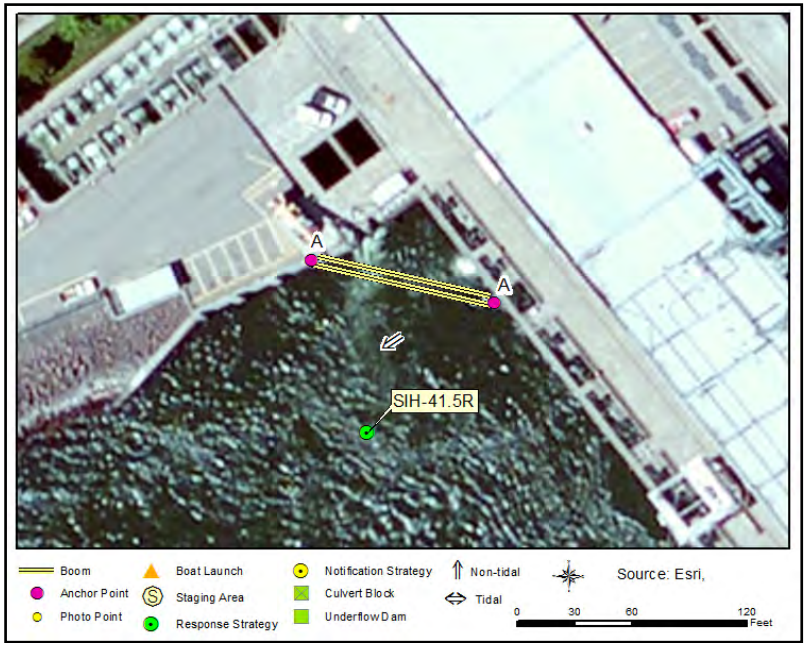
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.75 miles)
13. Finish at Lower Monumental Dam security gate, 16920 Lower Monumental Rd, 99348

<<Go Back

Lower Monumental Dam N Fish Ladder SIH-41.5R

46° 33.810', -118° 32.428'	46° 33' 48.6", -118° 32' 25.7"	46.56350, -118.54046	Prescott

Strategy Objective:	Exclusion : Exclusion, keep oil out of the fishladder
Implementation:	Anchor 100' of boom, backed by sorbent boom, from the NW corner of the fishladder in/outtake at 46.563730, -118.540592 to the SE corner; use line throwing devise if needed and employee available ladders, railings etc. to assist with anchoring boom. Contact Dam Control room 509-282-3218 Ext. 231 for access to site and work with Dam Safety to deploy strategy
Staging Area:	Onsite: Stage onsite or use SA-SIH-40.45L if allowed to access the site by boat.
Site Safety:	Heavy equipment, water hazard, slips, trips, falls
Field Notes:	Deploy boom by hand, use line throwing devise if needed. If allowed to access by boat, launch at BL-SIH-40.45L Matthews boat launch
Watercourse:	River - Below a Dam - Downstream side of Lower Monumental Dam in the Snake Ice Harbor Pool, flow will depend on dam release.
Resources at Risk:	Fish Ladder(s), Salmon Concentrations



Recommended Equipment

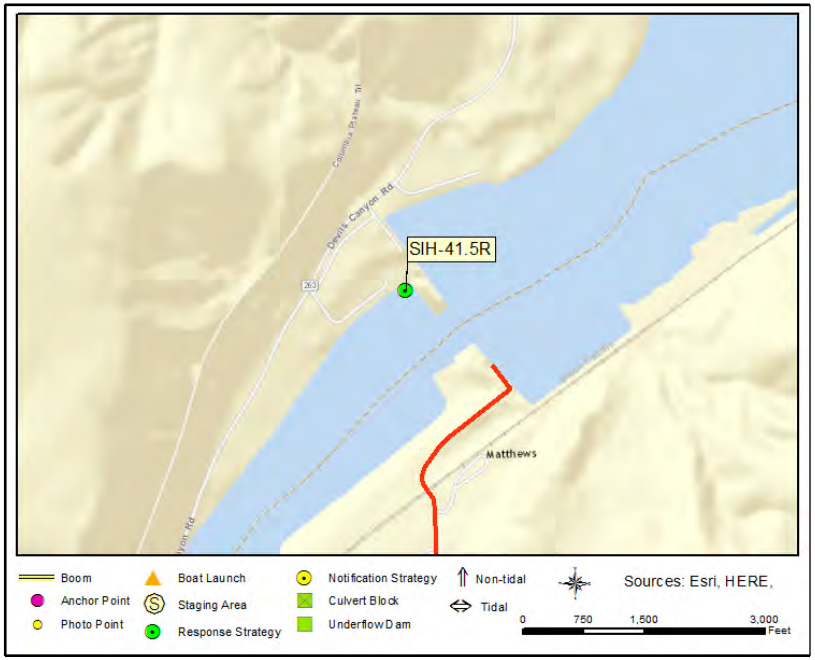
2	Each	Anchoring System(s) - (anchor, lines, floats)
100	Feet	Boom - B2 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
200	Feet	Line - 1/2" poly line
1	Each	Line throwing gun(s) or device(s)

Recommended Personnel

2	Laborer
1	Supervisor

Lower Monumental Dam N Fish Ladder SIH-41.5R

SIH-41.5R Photo: View of the N shore fishladder intake, site of SIH-41.5R exclusion strategy



Site Contact

USACE Lower Monumental Dam Control Room
Emergency Contact :

Prescott, WA 99348
509-282-3218 ext. 231

Nearest Address

16920 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.75 miles)
13. Finish at Lower Monumental Dam security gate, 16920 Lower Monumental Rd, 99348

APPENDIX 4B

Notification Strategy 2-Pagers

NOTIFICATION STRATEGIES – LIST

SIH-9.7-N.
2SLOMO-41.55-N

Ice Harbor Lock & Dam Notification SIH-9.7-N

Position - Location:	46° 14.933', -118° 52.778'	46° 14' 56.0", -118° 52' 46.7"	46.24888, -118.87963	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 the Ice Harbor pool include: SIH-9.75R and SIH-9.75L exclusion strategies to protect the fish ladders on the upstream side of the dam, and SIH-9.8R, a collection strategy for the E end of the lock; strategies on the downstream side of the dam, in the McNary pool, include: MSN-9.5R, a collection strategy at the W end of the lock.

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

Watercourse: River - Above a Dam - McNary Pool (on the Snake River)

Resources at Risk: Lock and Dam

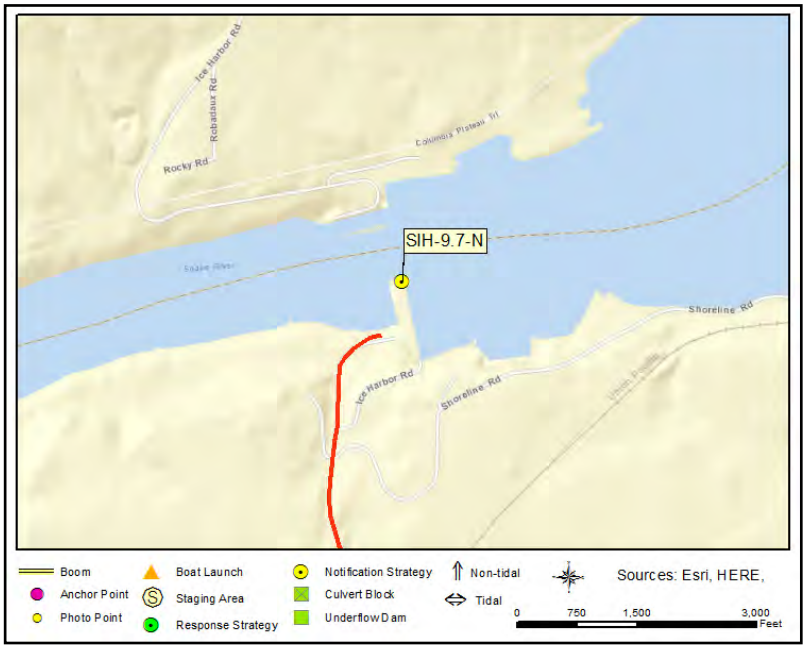
Communication Process and Action:

Call Ice Harbor Lock & Dam Control Room Operator (24/7) 509-543-3231

<<Go Back

Ice Harbor Lock & Dam Notification SIH-9.7-N

SIH-9.7-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

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Lower Monumental Lock and Dam Notification SLOMO-41.55-N

Position - Location:	46° 33.776', -118° 32.340'	46° 33' 46.6", -118° 32' 20.4"	46.56294, -118.53900	Prescott

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 on the upstream side of the dam will be included in the SLOMO-GRP. On the downstream side of the dam is a collection strategy, SIH-41.4L, at the end of the lock, and two exclusion strategies for the fish ladders SIH-41.5R and SIH-41.5L - all three are listed in the SIH-GRP.

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 - Snake River Lower Monumental Pool (SLOMO)

Resources at Risk: Downstream Resources, Fish Ladder(s), Lock and Dam

Communication Process and Action:

Primary contact: Lower Monumental Lock and Dam Control Room Operator 24/7 at 509-282-3218 Ext. 231
Secondary contact: Operations Project Manager, Kimberly Oldham, (w) 509-282-7215, (c) 509-876-6273
Kimberley.c.Oldham@usace.army.mil

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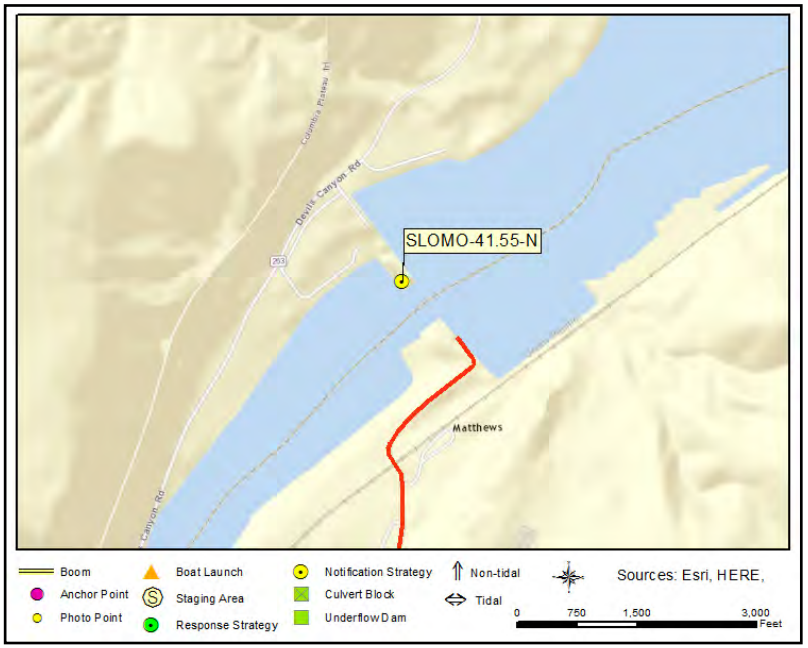
Lower Monumental Lock and Dam Notification SLOMO-41.55-N

SLOMO-41.55-N Photo: View of the Lower Monumental Lock and Dam from down river in the Snake Ice Harbor Pool



Site Contact

USACE Lower Monumental Dam Control Room
Emergency Contact :

Prescott, WA 99348
509-282-3218 ext. 231

Nearest Address

16920 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.75 miles)
13. Finish at Lower Monumental Dam security gate, 16920 Lower Monumental Rd, 99348

APPENDIX 4C

Staging Area 2-Pagers

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STAGING AREAS - LIST

SA-SIH-9.9R
-SA-SIH-11.22L
-SA-SIH-12.9R
-SA-SIH-18.45L
-SA-SIH-26.1R
-SA-SIH-30.4L
-SA-SIH-38.45R
-SA-SIH-40.45L
-SA-SLOMO-41.75R

Ice Harbor North Shore Recreation Area boat launch SA-SIH-9.9R

Staging Area

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

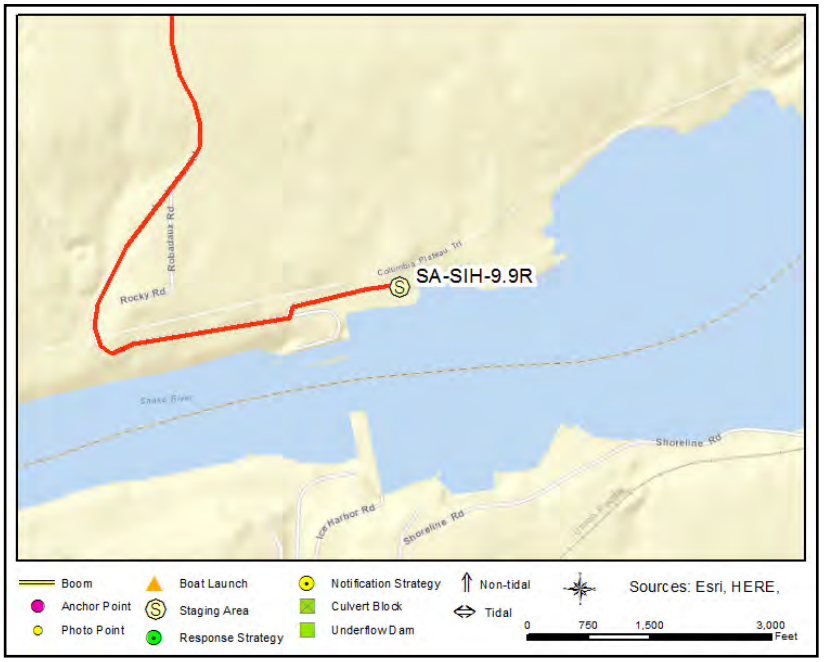
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 One floating dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps, 7 degree grade
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		1 Paved 200 x 260 =52,000 sq ft of parking
Lot Cover (Primary)	Asphalt	Ashalt, lined
Parking - Car	Marked	12 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, SIH-10.2L, SIH-9.8R, SIH-10.0R

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 : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1240 Ice Harbor Rd
Pasco, WA 99301

Driving Directions

1. Starting from Pasco, WA 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)

Charbonneau Marina SA-SIH-11.22L

Staging Area

46° 15.402', -118° 50.803'	46° 15' 24.1", -118° 50' 48.2"	46.25670, -118.84671	Burbank

Comments: Paved lighted double ramp with most facilities

GRP Response Strategies Served:

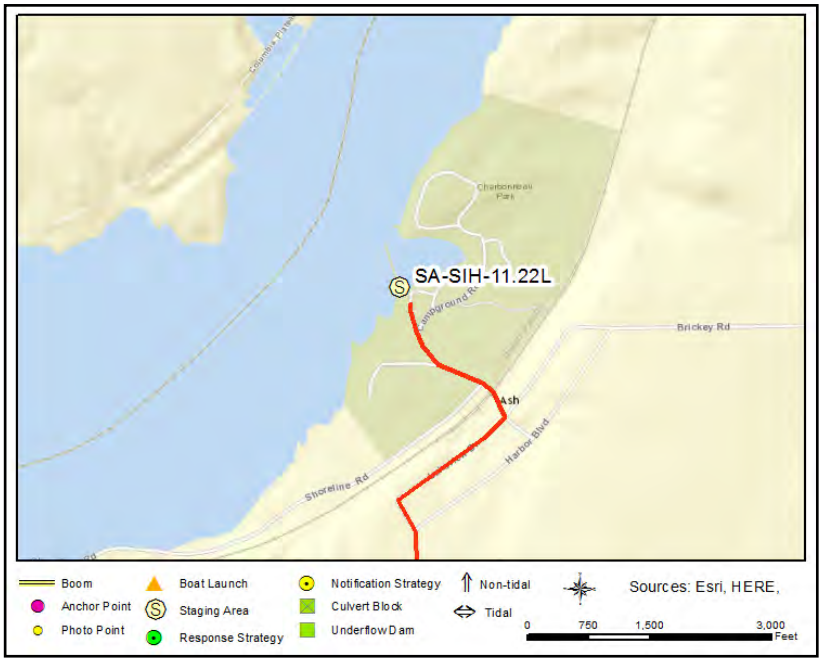
SIH-11.5L, SIH-11.1L, SIH-11.0L, SIH-11.55R, SIH-11.25L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 floating docks
Boat Ramp(s)	Asphalt	2 Paved ramps 7 degree grade
Cell Phone Coverage	Yes	
Covered Spaces	Yes	2 Pavilion in park, store by boat launch
Estimated Lot Size		75000 2 paved lots 75000 sq ft total
Fuel	Yes	Seasonal fuel avaiable at Marina
Lot Cover (Primary)	Asphalt	
Moorage - Trans, Open	Less than 20 Feet	Private marina
Parking - Car	Marked	60 paved lined parking
Parking - Trailer	Marked	30 paved lined trailer parking
Power	Yes	
Restroom	Restroom - Flush	2 Open seasonally
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	May only be available seasonally
Water (potable)	Yes	

Charbonneau Marina SA-SIH-11.22L

SA-SIH-11.22L Photo: Charbonneau Marina boat launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

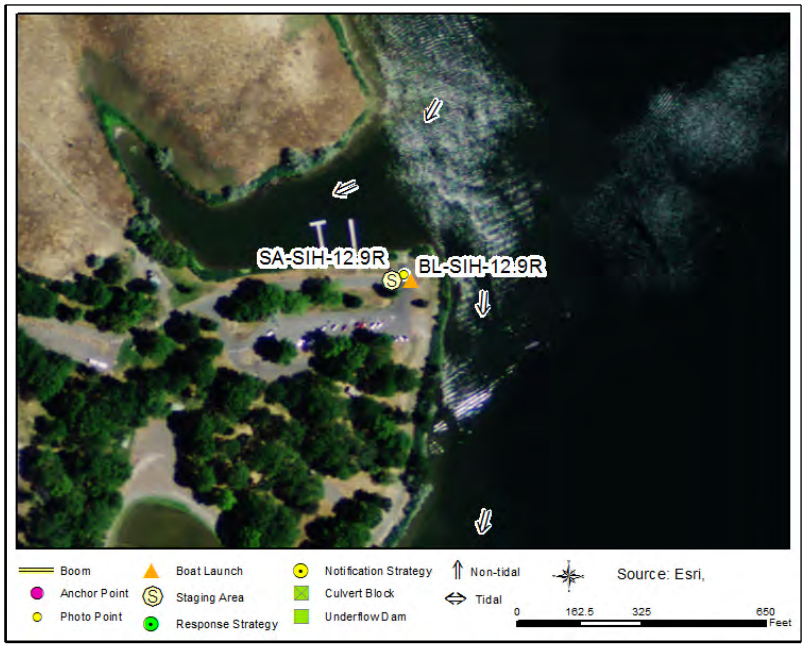
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at 642 Campground Rd, 99323, on the left

Levey Park Boat Launch SA-SIH-12.9R

Staging Area

46° 16.743', -118° 50.045'	46° 16' 44.6", -118° 50' 2.7"	46.27905, -118.83409	Pasco

Comments: Paved staging area



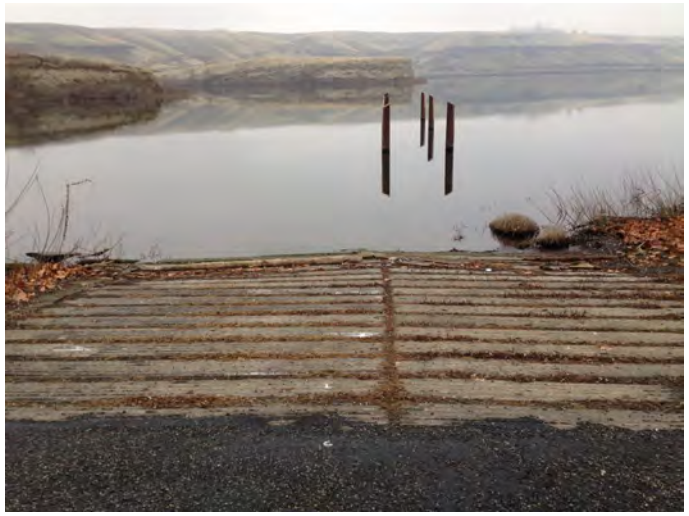
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Floating dock
Boat Ramp(s)	Concrete, Plank	1 Single ramp, 6 degree grade
Cell Phone Coverage	Yes	
Covered Spaces	Yes	1 Pavilion
Estimated Lot Size		75000 75,000 sq ft
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	100
Parking - Trailer	Marked	20
Power	No	Lighted Parking Lot
Restroom	Restroom - Vault	2
Waste Disposal	Trash Receptacle	dumpster and cans
Water (potable)	No	

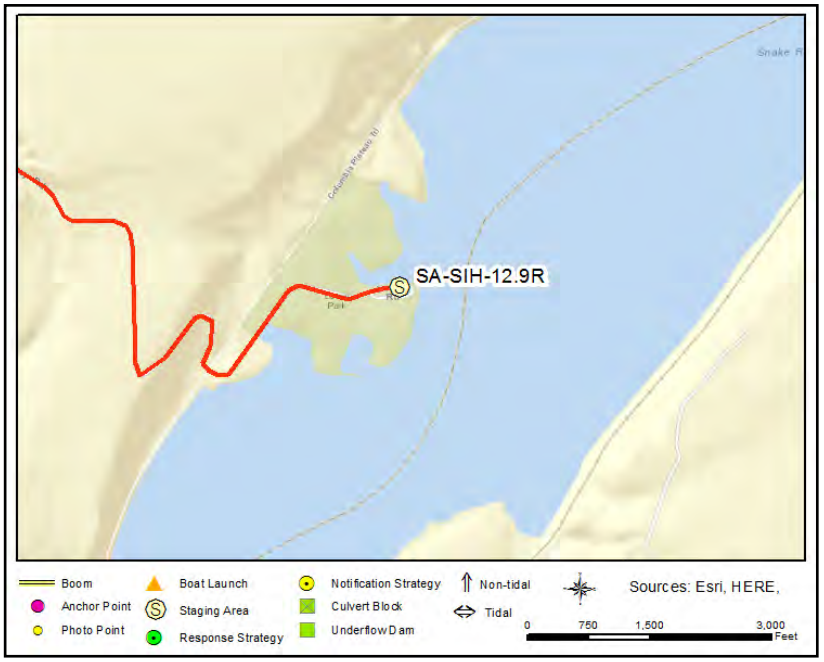
GRP Response Strategies Served:

SIH-14.1R, SIH-14.5R, SIH-12.65L, SIH-15.65L, SIH-12.9R, SIH-12.5R, SIH-13.1R, SIH-12.5L, SIH-14.3R, SIH-16.1R, SIH-12.89R, SIH-14.65R, SIH-12.4R, SIH-13.2R

Levey Park Boat Launch SA-SIH-12.9R



SA-SIH-12.9R Photo: Levey Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Finish at 1701 Levey Rd, 99301, on the left

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Fishhook Park Boat Launch SA-SIH-18.45L

Staging Area

	46° 19.021', -118° 46.034'	46° 19' 1.3", -118° 46' 2.1"	46.31702, -118.76724	Prescott

Comments: Seasonal, paved, lighted, staging area (bring bolt cutters in off-season)

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Long floating docks
Boat Ramp(s)	Concrete, Plank	2 Double ramp 8 degree grade
Cell Phone Coverage	Yes	Spotty - Verizon is best
Covered Spaces	Yes	Pavilion
Estimated Lot Size		3 115,000 sq ft of paved parking total
Parking - Car	Marked	3 lots with marked spaces for ~100 cars
Parking - Trailer	Marked	3 lots with ~ 80 spaces
Power	Yes	Lighted and outlets
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	Seasonal water inside/outside restrooms

GRP Response Strategies Served:

SIH-22.65L, SIH-18.5L , SIH-17.0L, SIH-17.85R, SIH-18.51L, SIH-18.8R, SIH-23.25R, SIH-22.7R, SIH-23.1R, SIH-23.4R, SIH-17.1R

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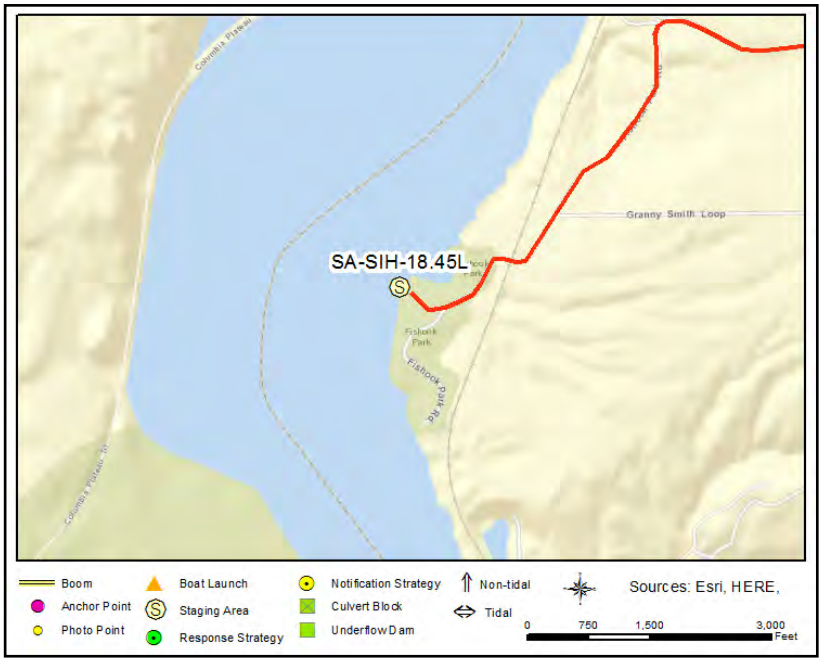
Fishhook Park Boat Launch SA-SIH-18.45L

SA-SIH-18.45L Photo: Fishhook Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Snake River Junction SA-SIH-26.1R

Staging Area

46° 23.360', -118° 40.825'	46° 23' 21.6", -118° 40' 49.5"	46.38933, -118.68041	Pasco

Comments: Gravel staging area, bathrooms available at Columbia Plateau Trail 600 ft away

Location Information

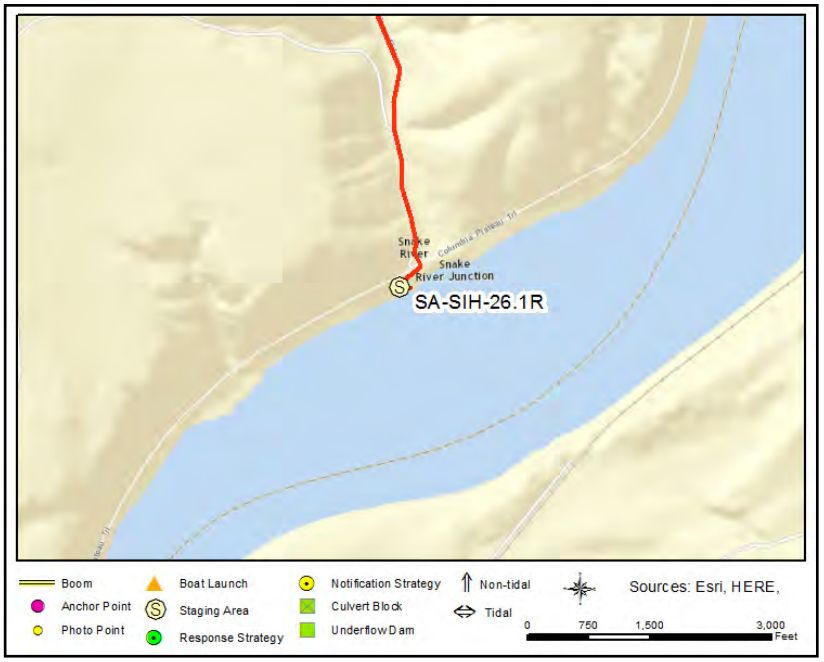
Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	1 Single primitive launch for <20' boat
Covered Spaces	Yes	1 State lot has a pavilion
Lot Cover (Primary)	Dirt/Gravel	3000 sq ft at launch with paved lot near
Parking - Car	Marked	12 12 marked spaces at State Park lot above
Parking - Trailer	Gravel	4 Room for 4 truck/trailers at launch site
Restroom	Restroom - Vault	2 State parking area has vault toilet
User Fee	No	However there is a fee at State lot
Waste Disposal	Trash Receptacle	State lot above launch has trash cans

GRP Response Strategies Served:

SIH-24.75L, SIH-25.5L, SIH-27.1R, SIH-26.5L

Snake River Junction SA-SIH-26.1R

SA-SIH-26.1R Photo: Snake River Junction Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd, past the state parking area at the Columbia Plateau Trail to the end of the road (0.4 miles)
8. Finish at 3198 Pederson Rd, 99301, on the left

Walk Pit HMU Boat Launch SA-SIH-30.4L

Staging Area

3° 38.459', 18° 57.740'	3° 38' 27.5", 18° 57' 44.4"	3.64098, 18.96233	Prescott

Comments: Gravel staging area

Location Information

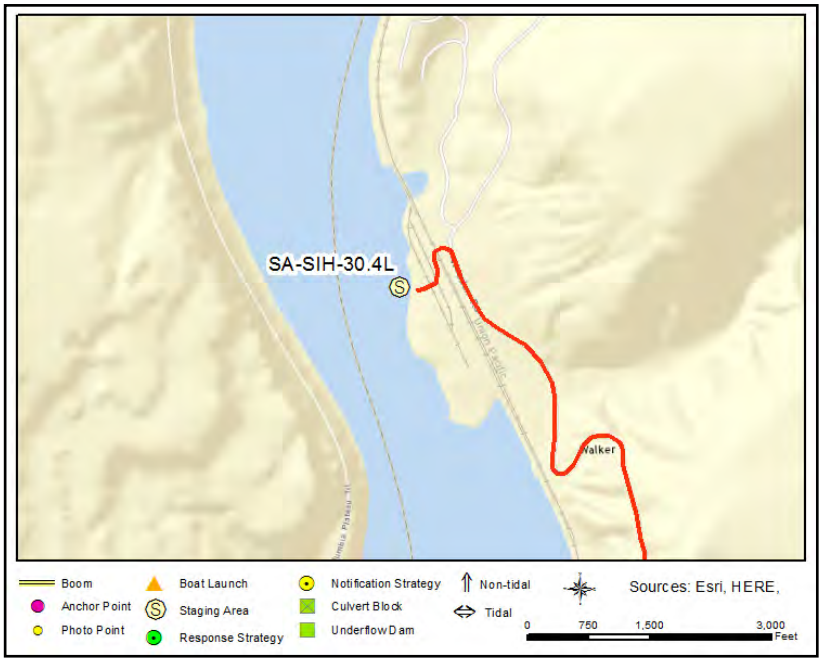
Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	1 Primitive ramp ok for <20' boat
Cell Phone Coverage	No	Cell phone coverage is very spotty here
Estimated Lot Size		7000 with extra parking available
Lot Cover (Primary)	Dirt/Gravel	7000 sq ft of lot + additional parking
Restroom	None	
Waste Disposal	None	
Water (potable)	No	

GRP Response Strategies Served:

SIH-30.25L, SIH-30.7L, SIH-32.15R

Walk Pit HMU Boat Launch SA-SIH-30.4L

SA-SIH-30.4L Photo: Walker Pit HMU Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Walker Pit Road
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right

Windust Park Boat Launch SA-SIH-38.45R

Staging Area

46° 31.987', -118° 34.827'	46° 31' 59.2", -118° 34' 49.6"	46.53311, -118.58045	Pasco

Comments: Paved, marked, well lit staging area with facilities (locked gate off season)

Location Information

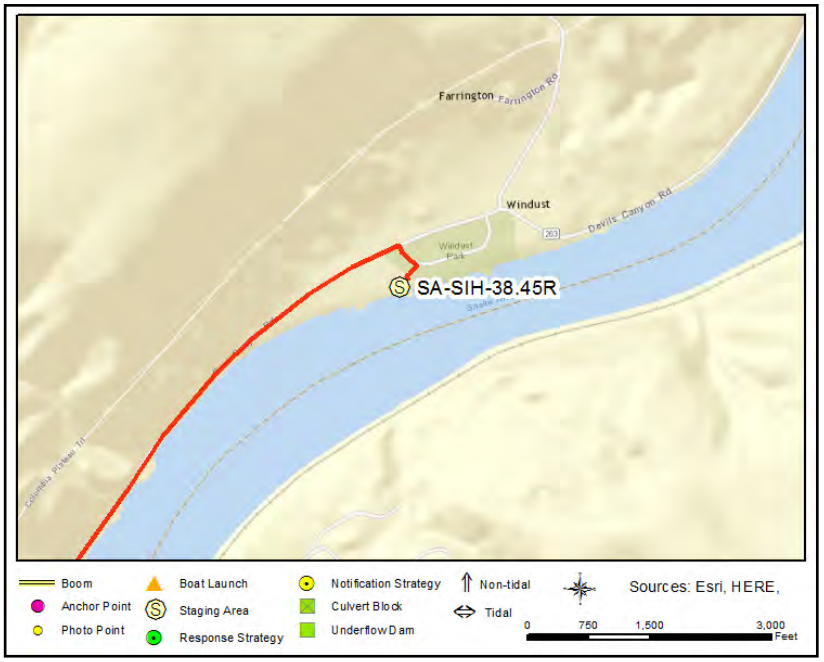
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Mooring dock and handling dock
Boat Ramp(s)	Concrete, Plank	2 Once concrete and one gravel ramp
Covered Spaces	Yes	Pavilion in camping area
Estimated Lot Size		25000
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	60
Parking - Trailer	Marked	14
Power	Yes	In the main park
Restroom	Restroom - Flush	Seasonal porta potty when park is closed
Waste Disposal	Dump Station	Dump station, dumpster, trash cans
Water (potable)	Yes	

GRP Response Strategies Served:

SIH-39.3L, SIH-36.0R, SIH-39.2R, SIH-38.6R, SIH-34.75R

Windust Park Boat Launch SA-SIH-38.45R

SA-SIH-38.45R Photo: Windust Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5252 Burr Canyon Road
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Finish at Windust Park 5252 Burr Canyon Road, 99301, on the right

Matthews Boat Launch SA-SIH-40.45L

Staging Area

46° 32.945', -118° 33.070'	46° 32' 56.7", -118° 33' 4.2"	46.54909, -118.55117	Prescott

Comments: Paved lighted staging area

Location Information

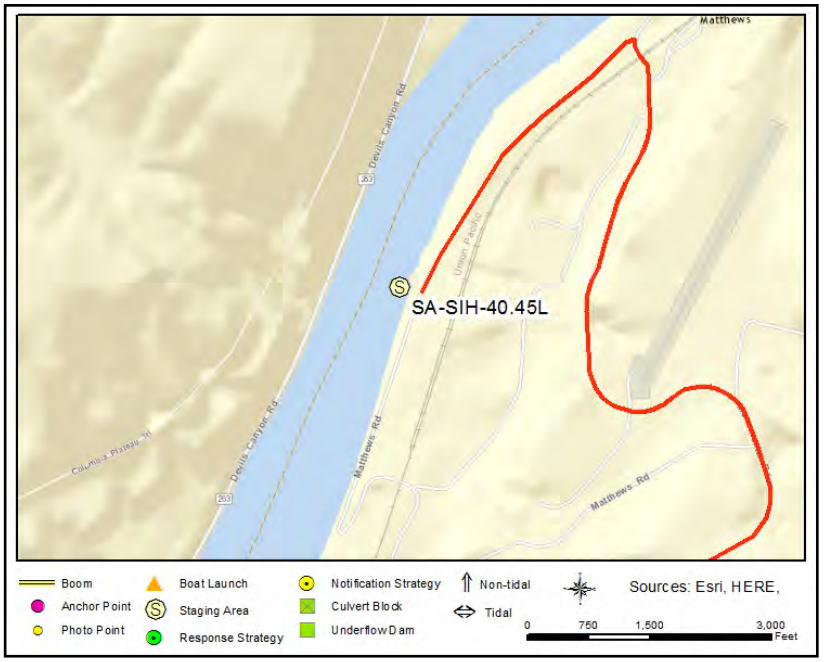
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Handling dock
Boat Ramp(s)	Concrete, Plank	1 Single ramp 9 degree grade, solar light
Estimated Lot Size		44000 feet
Parking - Trailer	Marked	12 marked spaces for boat trailers
Restroom	Restroom - Vault	1

GRP Response Strategies Served:

SIH-40.45L

Matthews Boat Launch SA-SIH-40.45L

SA-SIH-40.45L Photo: Matthews Boat Launch, just downstream of the Lower Monumental Dam



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

16721 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.9 miles), go across the railroad tracks and take the first left
13. Drive an additional 1.25 miles and finish at Matthews Boat Launch 16721 Lower Monumental Rd, 99348, on the right

Devil's Bench Boat Launch SA-SLOMO-41.75R

Staging Area

46° 34.027', -118° 32.196'	46° 34' 1.6", -118° 32' 11.8"	46.56711, -118.53660	Kahlotus

Comments: Paved, lighted, staging area just upstream of the Lower Monumental Dam

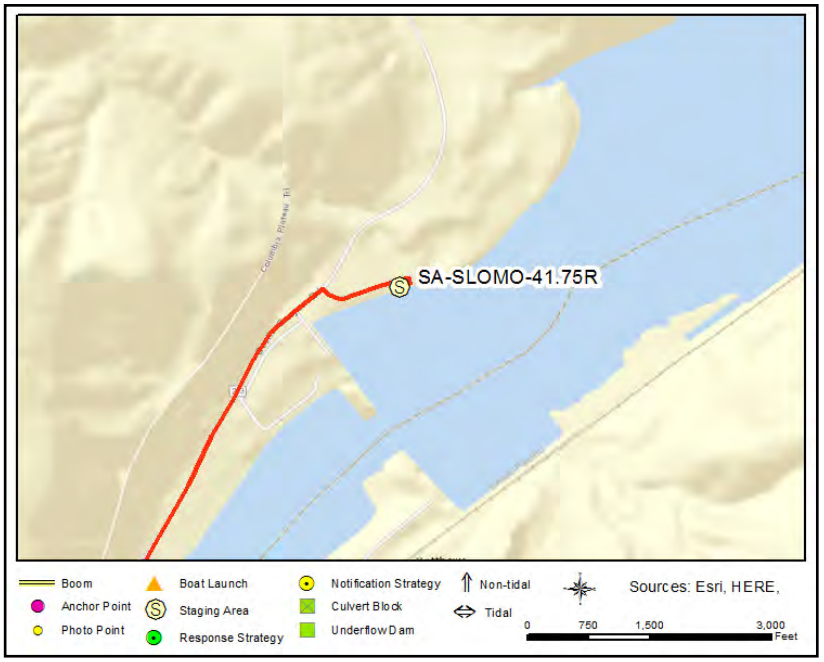
GRP Response Strategies Served:

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Handling dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps 8 degree grade lights
Cell Phone Coverage	No	
Estimated Lot Size		25000 25000 sq ft paved lot with 12 marked
Lot Cover (Primary)	Asphalt	
Parking - Car	Not Marked	
Parking - Trailer	Marked	10 10 marked spaces and additional parking
Power	No	
Restroom	Restroom - Vault	2
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Devil's Bench Boat Launch SA-SLOMO-41.75R

SA-SLOMO-41.75R Photo: Devil's Bench Boat Launch, just above the Lower Monumental Dam



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

900 Devils Canyon Rd
Kahlotus, WA 99335

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Continue on WA-263 (Burr Canyon Rd) (4 miles) to the first right immediately past the Lower Monumental Dam
8. Finish at Devil's Bench Boat Launch, 900 Devils Canyon Rd, 99335, on the right

APPENDIX 4D

Boat Launch 2-Pagers

BOAT LAUNCHES – LIST

BL-SIH-9.9R
-BL-SIH-11.22L
-BL-SIH-12.9R
BL-SIH-18.45L
BL-SIH-26.1R
-BL-SIH-30.4L
BL-SIH-38.45R
-BL-SIH-40.45L
BL-SLOMO-41.75R

Ice Harbor North Shore Recreation Area boat launch BL-SIH-9.9R

Boat Launch 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

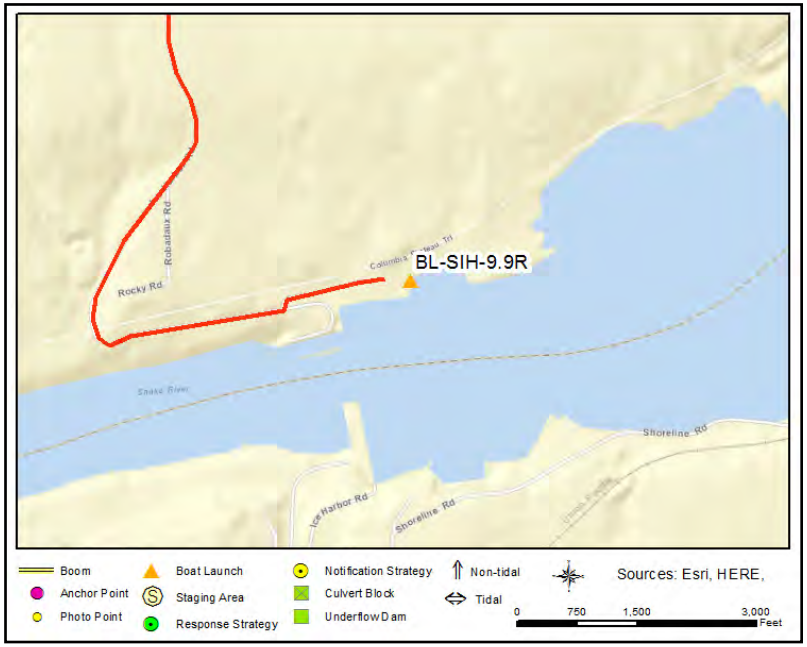
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 One floating dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps, 7 degree grade
Boathouse	No	
Cell Phone Coverage	Yes	
Estimated Lot Size		1 Paved 200 x 260 =52,000 sq ft of parking
Lot Cover (Primary)	Asphalt	Ashalt, lined
Parking - Car	Marked	12 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, SIH-10.2L, SIH-9.8R, SIH-10.0R

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 : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1240 Ice Harbor Rd
Pasco, WA 99301

Driving Directions

1. Starting from Pasco, WA 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)

Charbonneau Marina BL-SIH-11.22L

Boat Launch Location

46° 15.402', -118° 50.803'	46° 15' 24.1", -118° 50' 48.2"	46.25670, -118.84671	Burbank

Comments: Paved lighted double ramp with most facilities

GRP Response Strategies Served:

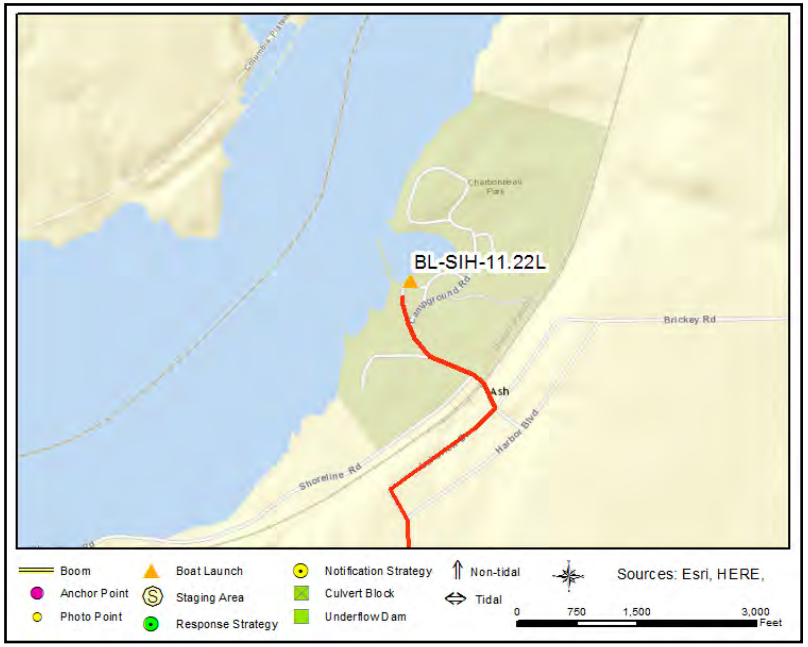
SIH-11.5L, SIH-11.1L, SIH-11.0L, SIH-11.55R, SIH-11.25L

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 floating docks
Boat Ramp(s)	Asphalt	2 Paved ramps 7 degree grade
Cell Phone Coverage	Yes	
Covered Spaces	Yes	2 Pavilion in park, store by boat launch
Estimated Lot Size		75000 2 paved lots 75000 sq ft total
Fuel	Yes	Seasonal fuel avaiable at Marina
Lot Cover (Primary)	Asphalt	
Moorage - Trans, Open	Less than 20 Feet	Private marina
Parking - Car	Marked	60 paved lined parking
Parking - Trailer	Marked	30 paved lined trailer parking
Power	Yes	
Restroom	Restroom - Flush	2 Open seasonally
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	May only be available seasonally
Water (potable)	Yes	

Charbonneau Marina BL-SIH-11.22L

SA-SIH-11.22L Photo: Charbonneau Marina boat launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

642 Campground Rd
Burbank, WA 99323

Driving Directions

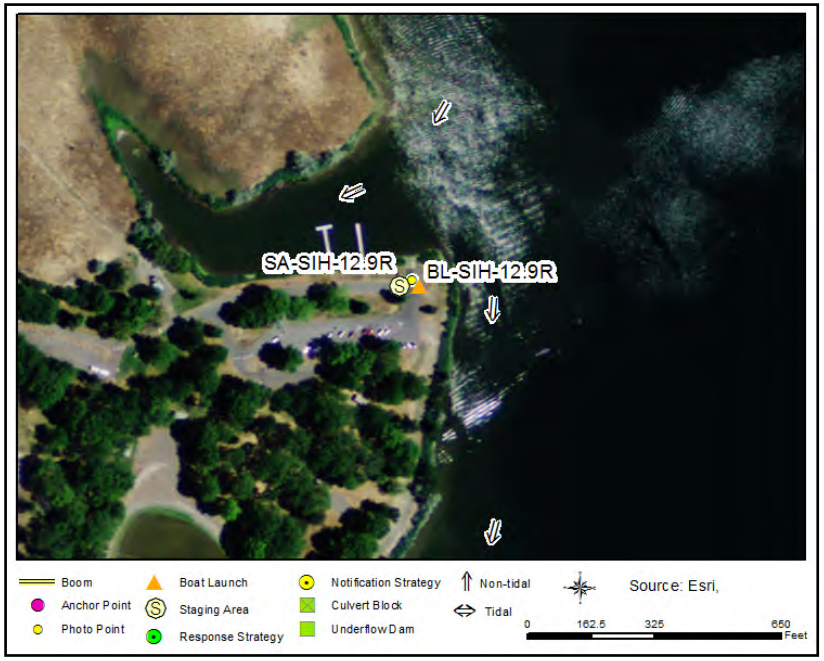
1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (8.42 miles)
8. Turn left on Sun Harbor Dr (1.27 miles)
9. Turn right on Lakeview Dr (0.32 miles)
10. Turn left on Charbonneau Dr (0.21 miles)
11. Continue on Campground Rd (0.18 miles)
12. Finish at 642 Campground Rd, 99323, on the left

Levey Park Boat Launch BL-SIH-12.9R

Boat Launch Location

46° 16.743', -118° 50.045'	46° 16' 44.6", -118° 50' 2.7"	46.27905, -118.83409	Pasco

Comments: Paved single ramp 7 degree grade



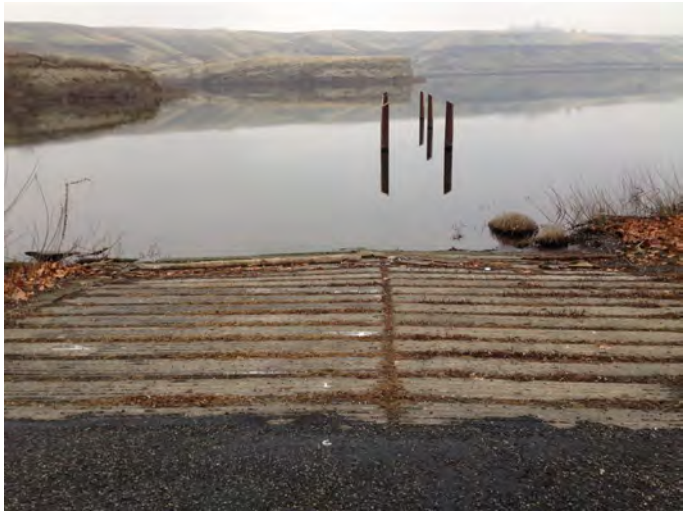
Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Floating dock
Boat Ramp(s)	Concrete, Plank	1 Single ramp, 6 degree grade
Cell Phone Coverage	Yes	
Covered Spaces	Yes	1 Pavilion
Estimated Lot Size		75000 75,000 sq ft
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	100
Parking - Trailer	Marked	20
Power	No	Lighted Parking Lot
Restroom	Restroom - Vault	2
Waste Disposal	Trash Receptacle	dumpster and cans
Water (potable)	No	

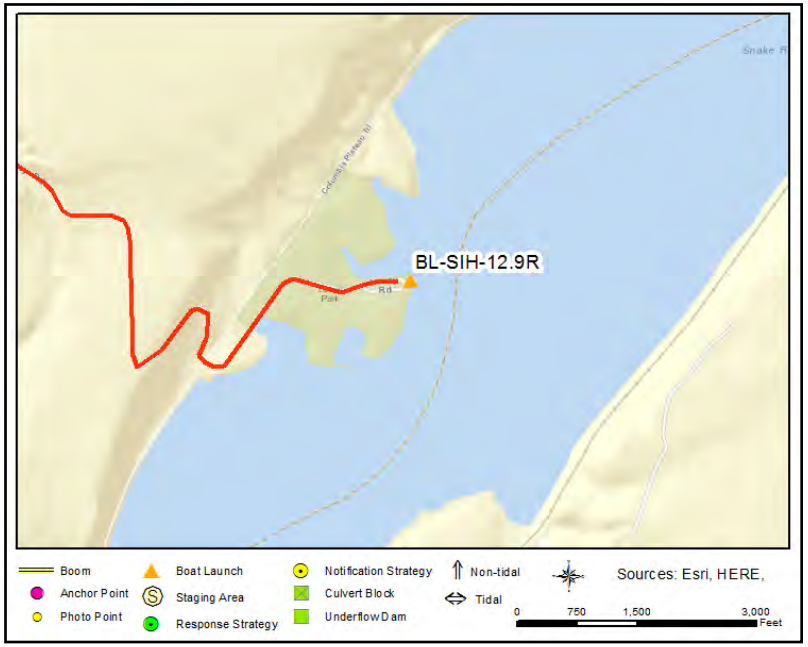
GRP Response Strategies Served:

SIH-14.1R, SIH-14.5R, SIH-12.65L, SIH-15.65L, SIH-12.9R, SIH-12.5R, SIH-13.1R, SIH-12.5L, SIH-14.3R, SIH-16.1R, SIH-12.89R, SIH-14.65R, SIH-12.4R, SIH-13.2R

Levey Park Boat Launch BL-SIH-12.9R



SA-SIH-12.9R Photo: Levey Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

1701 Levey Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (10.35 miles)
6. Turn right on Levey Rd (1.38 miles)
7. Finish at 1701 Levey Rd, 99301, on the left

<<Go Back

Fishhook Park Boat Launch BL-SIH-18.45L

Boat Launch Location

46° 19.021', -118° 46.034'	46° 19' 1.3", -118° 46' 2.1"	46.31702, -118.76724	Prescott

Comments: Seasonal, paved, lighted double boat ramps with 8 degree grade (bring bolt cutters in off-season)

Location Information

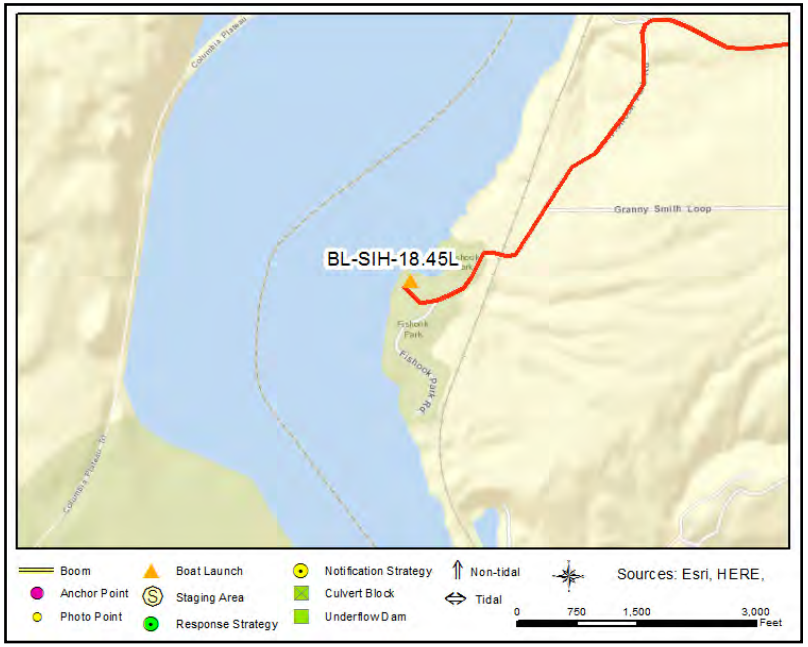
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Long floating docks
Boat Ramp(s)	Concrete, Plank	2 Double ramp 8 degree grade
Cell Phone Coverage	Yes	Spotty - Verizon is best
Covered Spaces	Yes	Pavilion
Estimated Lot Size		3 115,000 sq ft of paved parking total
Parking - Car	Marked	3 lots with marked spaces for ~100 cars
Parking - Trailer	Marked	3 lots with ~ 80 spaces
Power	Yes	Lighted and outlets
Waste Disposal	Trash Receptacle	Dumpster and cans
Water (potable)	Yes	Seasonal water inside/outside restrooms

GRP Response Strategies Served:

SIH-22.65L, SIH-18.5L , SIH-17.0L, SIH-17.85R, SIH-18.51L, SIH-18.8R, SIH-23.25R, SIH-22.7R, SIH-23.1R, SIH-23.4R, SIH-17.1R

Fishhook Park Boat Launch BL-SIH-18.45L

SA-SIH-18.45L Photo: Fishhook Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3170 Fishhook Park Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (15.97 miles)
8. Turn left on Fishook Park Rd (3.5 miles)
9. Finish at 3170 Fishook Park Rd, 99348, on the right

Snake River Junction BL-SIH-26.1R

Boat Launch Location

46° 23.360', -118° 40.825'	46° 23' 21.6", -118° 40' 49.5"	46.38933, -118.68041	Pasco

Comments: Single primitive boat launch

Location Information

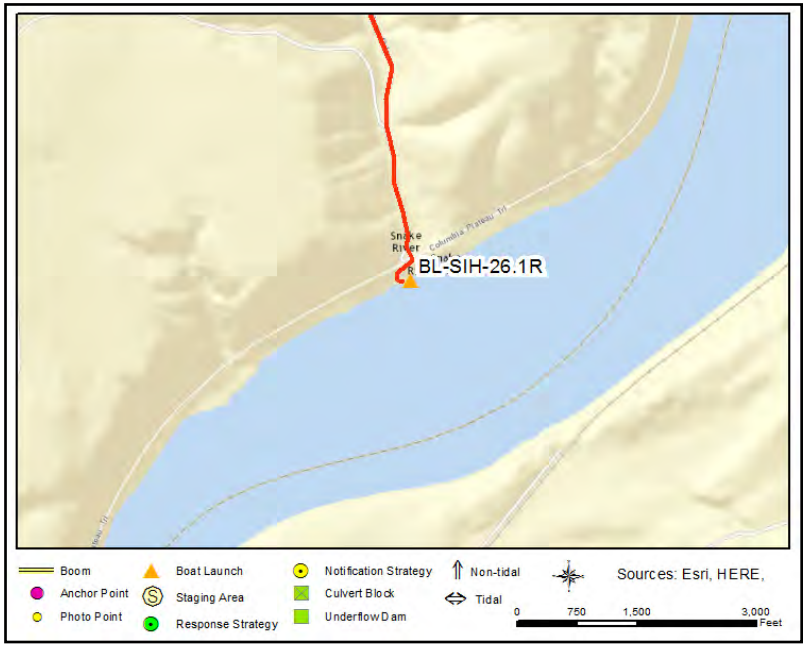
Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	1 Single primitive launch for <20' boat
Covered Spaces	Yes	1 State lot has a pavilion
Lot Cover (Primary)	Dirt/Gravel	3000 sq ft at launch with paved lot near
Parking - Car	Marked	12 12 marked spaces at State Park lot above
Parking - Trailer	Gravel	4 Room for 4 truck/trailers at launch site
Restroom	Restroom - Vault	2 State parking area has vault toilet
User Fee	No	However there is a fee at State lot
Waste Disposal	Trash Receptacle	State lot above launch has trash cans

GRP Response Strategies Served:

SIH-24.75L, SIH-25.5L, SIH-27.1R, SIH-26.5L

Snake River Junction BL-SIH-26.1R

SA-SIH-26.1R Photo: Snake River Junction Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

3198 Pederson Rd
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (23.8 miles)
6. Bear right on Snake River Rd (4.83 miles)
7. Turn right on Pederson Rd, past the state parking area at the Columbia Plateau Trail to the end of the road (0.4 miles)
8. Finish at 3198 Pederson Rd, 99301, on the left

<<Go Back

Walk Pit HMU Boat Launch BL-SIH-30.4L

Boat Launch Location

3° 38.459', 18° 57.740'	3° 38' 27.5", 18° 57' 44.4"	3.64098, 18.96233	Prescott

Comments: Primitive gravel launch ok for medium to small boats and small vac truck

Location Information

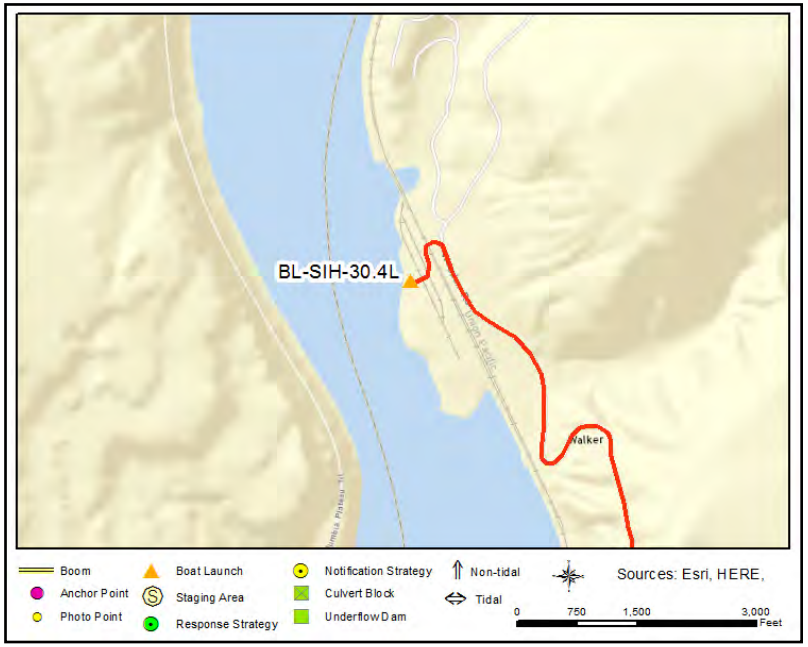
Asset	Type/Status	Amount/Number
Boat Ramp(s)	Gravel	1 Primitive ramp ok for <20' boat
Cell Phone Coverage	No	Cell phone coverage is very spotty here
Estimated Lot Size		7000 with extra parking available
Lot Cover (Primary)	Dirt/Gravel	7000 sq ft of lot + additional parking
Restroom	None	
Waste Disposal	None	
Water (potable)	No	

GRP Response Strategies Served:

SIH-30.25L, SIH-30.7L, SIH-30.6L, SIH-32.15R, SIH-30.5L

Walk Pit HMU Boat Launch BL-SIH-30.4L

SA-SIH-30.4L Photo: Walker Pit HMU Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

Walker Pit Road
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (20.96 miles)
8. Turn left on Eureka North Rd (6.61 miles)
9. Turn left on Sheffler Rd (1.99 miles)
10. Turn right on Simmons Rd (0.91 miles)
11. Bear left on Walker Pit Int (Walter Pit Int) (0.09 miles)
12. Bear left on Wooden Rd (Walker Pit Rd) (2.2 miles) until you can turn left to go over the railroad tracks.
13. Continue another .15 miles, and finish at the Walker Pit HMU boat launch on the right

Windust Park Boat Launch BL-SIH-38.45R

Boat Launch Location

46° 31.987', -118° 34.827'	46° 31' 59.2", -118° 34' 49.6"	46.53311, -118.58045	Pasco

Comments: Paved double ramp (may be closed off season)

Location Information

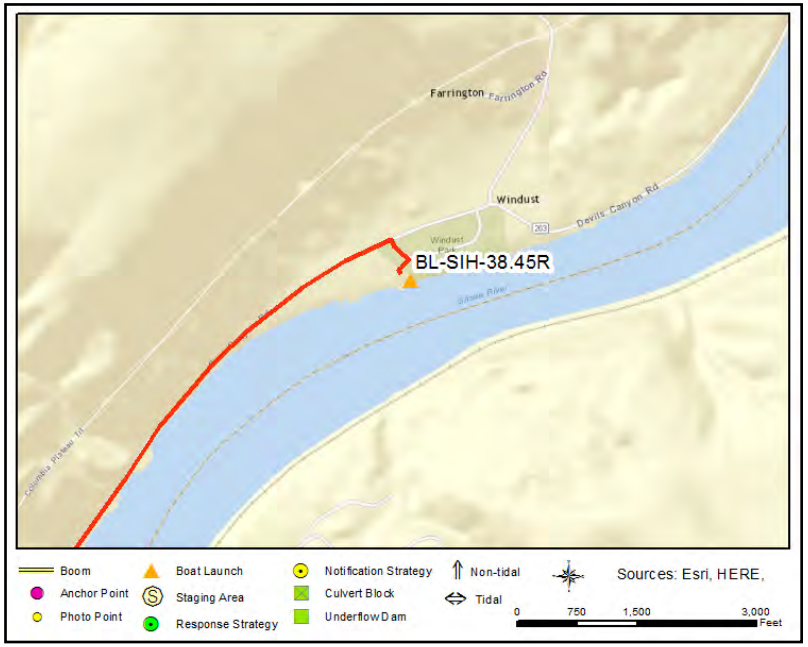
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	2 Mooring dock and handling dock
Boat Ramp(s)	Concrete, Plank	2 Once concrete and one gravel ramp
Covered Spaces	Yes	Pavilion in camping area
Estimated Lot Size		25000
Lot Cover (Primary)	Asphalt	
Parking - Car	Marked	60
Parking - Trailer	Marked	14
Power	Yes	In the main park
Restroom	Restroom - Flush	Seasonal porta potty when park is closed
Waste Disposal	Dump Station	Dump station, dumpster, trash cans
Water (potable)	Yes	

GRP Response Strategies Served:

SIH-39.3L, SIH-36.0R, SIH-39.2R, SIH-38.6R, SIH-37.77R, SIH-34.75R

Windust Park Boat Launch BL-SIH-38.45R

SA-SIH-38.45R Photo: Windust Park Boat Launch



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

5252 Burr Canyon Road
Pasco, WA 99301

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Finish at Windust Park 5252 Burr Canyon Road, 99301, on the right

Matthews Boat Launch BL-SIH-40.45L

Boat Launch Location

46° 32.945', -118° 33.070'	46° 32' 56.7", -118° 33' 4.2"	46.54909, -118.55117	Prescott

Comments: Paved single ramp 9 degree grade

Location Information

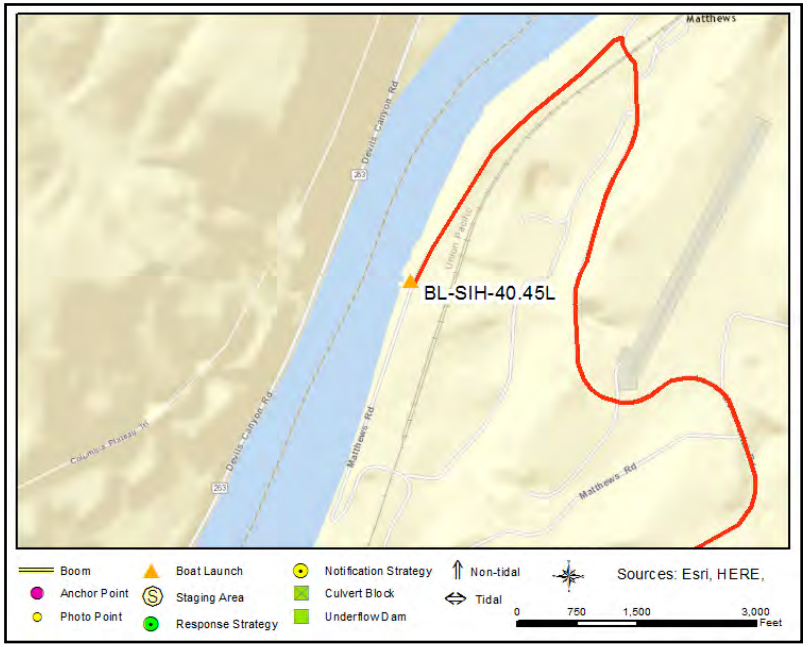
Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Handling dock
Boat Ramp(s)	Concrete, Plank	1 Single ramp 9 degree grade, solar light
Estimated Lot Size		44000 feet
Parking - Trailer	Marked	12 marked spaces for boat trailers
Restroom	Restroom - Vault	1

GRP Response Strategies Served:

SIH-40.45L, SIH-41.4L

Matthews Boat Launch BL-SIH-40.45L

SA-SIH-40.45L Photo: Matthews Boat Launch, just downstream of the Lower Monumental Dam



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

16721 Lower Monumental Rd
Prescott, WA 99348

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (4.39 miles)
3. Bear right onto ramp to WA-124 toward Burbank / Waitsburg (0.16 miles)
4. Turn right toward WA-124 / Waitsburg (0.24 miles)
5. Continue on WA-124 (0.03 miles)
6. Bear right toward Waitsburg (0.08 miles)
7. Bear right on WA-124 (Ice Harbor Dr) (27.32 miles)
8. Bear right onto ramp toward Lyons Ferry Ramp (0.11 miles)
9. Turn left on Harvey Shaw Rd (0.02 miles)
10. Continue on Lyons Ferry Rd (9.37 miles)
11. Make sharp left on Sheffler Rd (0.61 miles)
12. Turn right on Lower Monumental Rd (16.9 miles), go across the railroad tracks and take the first left
13. Drive an additional 1.25 miles and finish at Matthews Boat Launch 16721 Lower Monumental Rd, 99348, on the right

Devil's Bench Boat Launch BL-SLOMO-41.75R

Boat Launch Location

46° 34.027', -118° 32.196'	46° 34' 1.6", -118° 32' 11.8"	46.56711, -118.53660	Kahlotus

Comments: Two ramps 8 degree grade, handling dock, lights

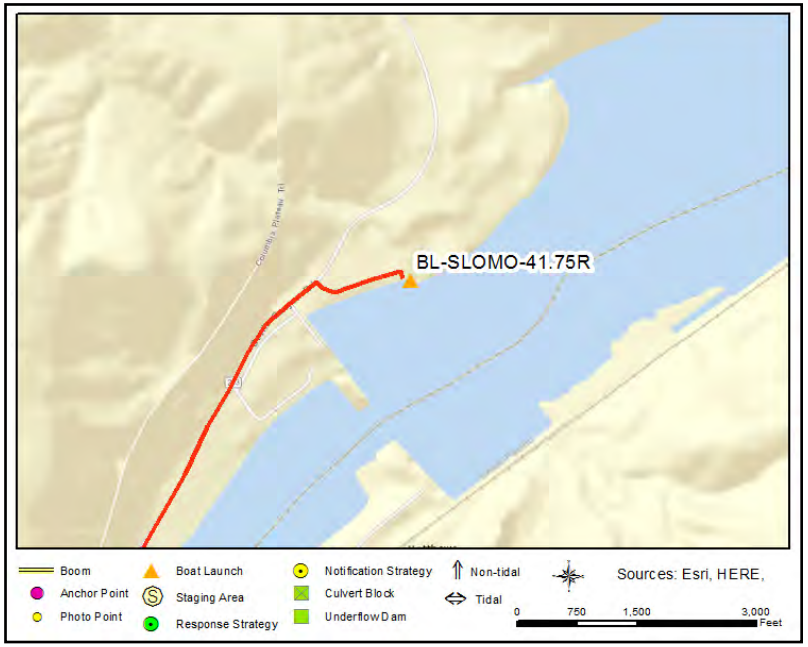
GRP Response Strategies Served:

Location Information

Asset	Type/Status	Amount/Number
Boat Dock(s)	Yes	1 Handling dock
Boat Ramp(s)	Concrete, Solid	2 Two concrete ramps 8 degree grade lights
Cell Phone Coverage	No	
Estimated Lot Size		25000 25000 sq ft paved lot with 12 marked
Lot Cover (Primary)	Asphalt	
Parking - Car	Not Marked	
Parking - Trailer	Marked	10 10 marked spaces and additional parking
Power	No	
Restroom	Restroom - Vault	2
Waste Disposal	Trash Receptacle	
Water (potable)	No	

Devil's Bench Boat Launch BL-SLOMO-41.75R

SA-SLOMO-41.75R Photo: Devil's Bench Boat Launch, just above the Lower Monumental Dam



Site Contact

USACE Ice Harbor pool
Primary Contact : Tri-Rivers Natural Resources Management Office

Ice Harbor Dam, WA
509-547-2048

Nearest Address

900 Devils Canyon Rd
Kahlotus, WA 99335

Driving Directions

1. Start at Pasco, WA
2. Go on US-12 E (I-182 E) (1.17 miles)
3. Take ramp on the right toward Kahlotus (0.44 miles)
4. Turn right on E Lewis St (0.27 miles)
5. Continue on Pasco-Kahlotus Rd (Pasco Kahlotus Rd) toward Kahlotus (29.54 miles)
6. Turn right on Burr Canyon Rd (5 miles)
7. Continue on WA-263 (Burr Canyon Rd) (4 miles) to the first right immediately past the Lower Monumental Dam
8. Finish at Devil's Bench Boat Launch, 900 Devils Canyon Rd, 99335, on the right

CHAPTER 5

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CHAPTER 6

Resources at Risk

6.1 CHAPTER INTRODUCTION

This chapter provides a summary of natural, cultural, and economic resources at risk in the planning 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 Snake River basin includes a wide variety of aquatic, riparian, and upland habitats. These varied habitats support a complex diversity of wildlife species, including various salmonid species, 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 basin or, in numerous cases, seasonally migrate outside the basin. Many wildlife species found in this area 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],
- Burrowing owl [SC],
- Ferruginous Hawk [ST]
- Loggerhead shrike [SC],

- Yellow-billed cuckoo [FT/SC],

Mammals:

- Gray wolf [FE/SE],
- Washington ground squirrel [FC/SC (WA)/SE (OR)],

Fish:

- Bull trout [FT/SC],
- Chinook salmon [FT/SC],
- Leopard Dace [SC],
- Mountain Sucker [SC],
- Pacific lamprey [FCo],
- River lamprey [FCo/SC],
- Sockeye [FE/SC],
- Steelhead [FT/SC],
- Umatilla Dace [SC],

Amphibian and Reptile:

- Sagebrush lizard [SC],

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 include areas along the main stem of the Snake River. All wetland types support a diverse array of bird, insect, fish, and wildlife species.
- **Islands** provide important nesting habitat for a variety of bird species, as well as habitat for a variety of mammals. Gravel bars provide spawning habitat for Chinook salmon.
- **Stream mouths** are concentration areas for anadromous fish and are feeding areas for a variety of birds including American white pelican [SE].
- **Riparian vegetation is** heavily used by a variety of wildlife and may also improve nearshore fish habitat.
- **Human-made structures** such as pilings and rock jetties may be used as roosting or nesting areas for a variety of birds.

6.2.1b – Fish and Shellfish:

- Freshwater mussels (California floater [SC]), have been reported to exist within this general area although no documented occurrence data was found for this particular reach.
- Salmonids (including Chinook [FT/SC, sockeye [FE/SC], cutthroat trout, steelhead [FT/SC], and bull trout [FT/SC]) are present in the river system throughout the year. Juvenile salmonids use backwaters, nearshore areas, and protected bays as rearing and foraging area prior to migration into the ocean. Returning adult salmonids support significant tribal, commercial and recreational fisheries.
- In addition to salmonids, several other species of ***freshwater fish*** (including bass, crappie, catfish, suckers, and white sturgeon) exist within this reach of the Snake River. These species all contribute to recreational fisheries and provide important contributions to stream ecology.

6.2.1c – Wildlife:

- **Bald eagles [SS] and great blue herons** are nesting residents and may be found year-round throughout the region.
- **Ferruginous hawks [ST]** and **burrowing owls [SC**] nest in the region as well as Swainson's hawks and prairie falcons.
- **American white pelicans [SE]** are known to occur in small groups near the mouth of the Snake River during spring and fall migrations and may also be present along the river itself.
- **Migratory and wintering waterfowl and shorebirds –** Large concentrations occur throughout this entire reach of the Snake River particularly fall through spring. Hundreds to

thousands of geese, and dabbling ducks may occupy this region during this period. Both resident and migratory waterfowl heavily utilize the islands, backwaters, wetlands and adjacent uplands of the region from fall through spring. The islands in this region also provide nesting habitat for resident waterfowl.

- **Resident and migratory songbirds** heavily utilize riparian habitats year-round and are susceptible to oiling if riparian vegetation and shorelines become contaminated.

- **Mammals** common to the reach include deer and elk, bats, and various semi-aquatic species such as muskrat, beaver, river otter, etc. Semi-aquatic mammals are largely dependent on riverine areas, ponds, tributaries, and riparian forests for den sites and foraging areas.

6.2.2 Specific Geographic Areas of Concern

Snake River, Ice Harbor Pool, Lake Sacajawea (~RM 9.7-41.5).

In an effort to improve habitat, the US Army Corps of Engineers has established numerous Habitat Management Units (HMUs) along the Snake River. The size and complexity of these HMUs varies, but many of them include irrigation, tree and shrub plantings, food plots, nesting and brooding cover, brush piles, and nesting structures that attract wildlife. Other significant wildlife areas, in addition to those habitats provided by HMUs, include shorelines with natural riparian vegetation, islands, wetlands, stream and river mouths (both free-flowing and impounded), and shallow backwater areas – especially adjacent to natural shorelines. Public parks, private lands, and recreational areas surround the river. Specific areas of concern are listed below and depicted on the map in Figure 6.1. The number preceding the area name in the list below relates to the numbered area on the map.

1. **Charbonneau USACE, Habitat Management Unit (~RM 12, sout**h**)**: Approximately 100 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentrations area. Shrub-steppe habitat.
2. **Levey Park (~RM 13, north)**: Approximately 50 acres, public day-use and fishing area administered by the US Army Corp of Engineers. Boat launch. Waterfowl concentration area. Shrub-steppe habitat.
3. **Big Flat HMU (~RM 15, north)**: Approximately 920 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, primitive camping sites, vault toilet, bird watching and wildlife viewing, one-lane boat ramp (into Dalton Lake only). Waterfowl concentration area. Ring-necked pheasant present. Wetland habitat.
4. **Fishhook HMU (~RM 18, south)**: Approximately 217 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentration area. Ring-necked pheasant present. Wetland habitat.

5. **Lake Emma (~RM 19)**: Year-round recreational fishing area created by railroad fill. Lake ~45 acres and adjacent to the river main stem. Waterfowl concentration area.
6. **Lost Island HMU (~RM 22-24, north)**: Approximately 162 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentration area. Ring-necked pheasant and mule deer present. Wetland habitat.
7. **Hollebeke HMU (~RM 25, south)**: Approximately 247 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentration area. Ferruginous hawk, prairie falcon, Swainson's hawk, and ring-necked pheasant present. Wetland and shrub-steppe habitats.
8. **Snake River Jct. HMU (~RM 26, north)**: Approximately 25 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentration area. Ferruginous hawk, prairie falcon, Swainson's hawk, and ring-necked pheasant present. Wetland habitat.
9. **Walker Pit HMU (~RM 30, south)**: Approximately 90 acres, public day-use area administered by the US Army Corp of Engineers. Fishing, hiking, hunting, bird watching and wildlife viewing. Waterfowl concentration area. Ferruginous hawk, prairie falcon, Swainson's hawk and ring-necked pheasant present. Wetland habitat.
10. **Windust Park (~RM 39, north)**: Approximately 54 acres, public day use and camping area administered by the US Army Corp of Engineers. Fishing, camping, bird watching and wildlife viewing. Waterfowl concentration area. Mule deer presence. Wetland habitat.

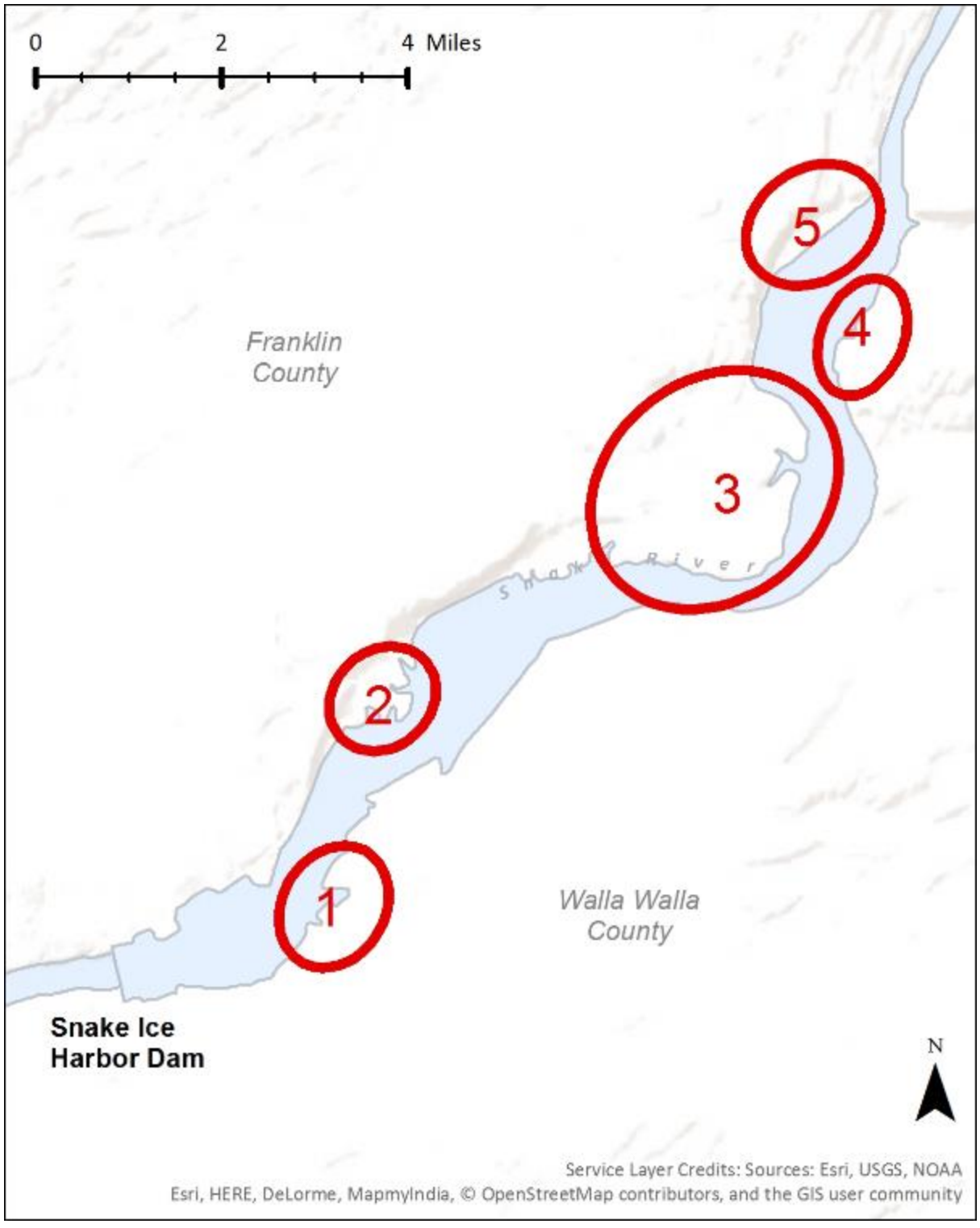

Figure 6-1: Snake River, Ice Harbor Pool South (~RM 9.7-20.0)

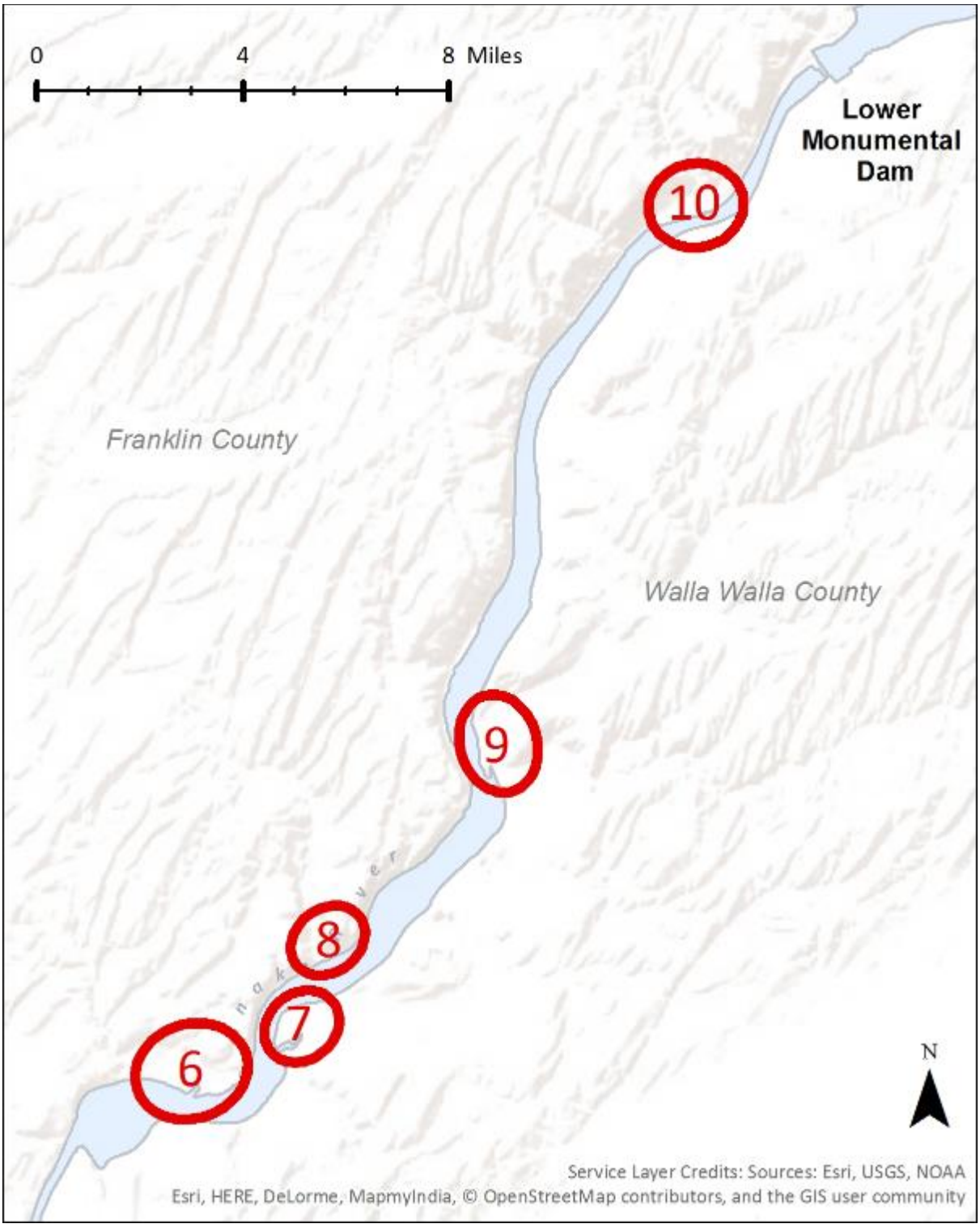

Figure 6-2. Snake River, Ice Harbor Pool North (~RM 20.0-41.5).

6.3 CULTURAL RESOURCES AT RISK - SUMMARY

Culturally significant resources are present within the Snake 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 US Army Corps of Engineers. 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 US Army Corps of Engineers, through normal trustee notification processes when significant oil spills, or smaller spills above reportable thresholds, occur on the Snake 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 US Army Corps of Engineers should be consulted before disturbing any soil or sediment during a response action. WDAHP, the US Army Corps of Engineers, 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.

Contact	Phone	Email
Washington Department of Archaeology and Historic Preservation	(360) 586-306	Rob.Whitlam@dahp.wa.gov
US Army Corps of Engineers, Walla Walla District Office, Supervisory Archaeologist	(509) 527-7274	Alice.K.Roberts@usace.army.mil
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 6A of this chapter provides a list of economic resources for this planning 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 reducing disturbances that could result in injury to wildlife during an oil spill. By keeping a safe distance or altitude from identified sensitive areas, pilots can lessen the risk of aircraft/bird collisions, prevent the accidental hazing of wildlife into oiled areas, and avoid causing the 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 Hazing Group within the 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 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. ss 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).

APPENDIX 6A

List of Economic Resources

Category	Name	Location/Address	Lat	Long	Contact	Phone	Email
A - 1 Drinking Water Intakes							
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	Lower Monumental Lock & Dam	16920 Lower Monumental Rd, Prescott, WA 99348	46.56294	-118.539	Emergency Control Room	509-282-3218 ext. 231	
B1 - Industrial Intakes							
B2 - Agricultural Irrigation Intakes	11.55	Water Intake across the river from Charbonneau Park	46.2675	-118.854459			
B2 - Agricultural Irrigation Intakes	12.6L	Water Intake across the river from Levey Park	46.271147	-118.828			
B2 - Agricultural Irrigation Intakes	15.0	Water Intake at Big Flat Habitat Management Unit	46.293363	-118.798			
B2 - Agricultural Irrigation Intakes	16.7	Water Intake	46.299123	-118.763			

Category	Name	Location/Address	Lat	Long	Contact	Phone	Email
B2 - Agricultural Irrigation Intakes	19.0	Water Intake at Lake Emma Recreation Area	46.331884	-118.767			
B2 - Agricultural Irrigation Intakes	19.3	Water Intake by Gravel Pit	46.329554	-118.755			
B2 - Agricultural Irrigation Intakes	20.15	Page Rd Water Intake	46.342086	-118.759			
B2 - Agricultural Irrigation Intakes	23.3	USACE Water Intake, East Shore of Lost Island Recreation Area	46.3667	-118.702			
B4 - Marinas	Charbonneau Marina		46.256484	-118.846632	US Army Corp of Engineers		
C2 - Public Recreation Areas	Big Flat HMU				US Army Corp of Engineers	541-922-2268	
C2 - Public Recreation Areas	Fishhook HMU				US Army Corp of Engineers	541-922-2268	
C2 - Public Recreation Areas	Lost Island HMU				US Army Corp of Engineers		

Category	Name	Location/Address	Lat	Long	Contact	Phone	Email
C2 - Public Recreation Areas	Hollebeke HUM				US Army Corp of Engineers	509-547-2048	
C2 - Public Recreation Areas	Snake River Junction HMU				US Army Corp of Engineers		
C2 - Public Recreation Areas	Walker Pit HMU				US Army Corp of Engineers		
C4 - Parks & Beaches	Levey Park		46.279	-118.834023	US Army Corp of Engineers		
C4 - Parks & Beaches	Charbonneau Park		46.256484	-118.846632	US Army Corp of Engineers		
C4 - Parks & Beaches	Windust Park				US Army Corp of Engineers		
C4 - Parks & Beaches	Columbia Plateau Trail				Washington State Parks and Recreation Commission	509-545-2361	