



# Lake Washington Geographic Response Plan (LKWA GRP)



# **Lake Washington**

## Geographic Response Plan

(LK-WA GRP)

*August 2014*

# Spill Response Contact Sheet

## Required Notifications for Oil Spills & Hazardous Substance Releases

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

### - Other Contact Numbers -

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

U.S. Coast Guard	
<b>Sector Puget Sound</b>	
- Emergency	<b>(206) 217-6001*</b>
- Watchstander	<b>(206) 217-6002*</b>
- Incident Management Division	(206) 217-6214
- Port & Waterways Safety	(206) 217-6042
<b>13th Coast Guard District</b>	(800) 982-8813
<b>National Strike Force Coordination Center</b>	(252) 331-6000
- Pacific Strike Team	(415) 883-3311

National Oceanic Atmospheric Administration	
<b>Scientific Support Coordinator</b>	(206) 526-6829
<b>Weather</b>	(206) 526-6087

Other Federal Agencies	
<b>U.S. Army Corps of Engineers (Seattle)</b>	(206) 764-3406
- Hiram M. Chittenden Locks (Ballard)	(206) 764-3464
<b>U.S. Fish &amp; Wildlife Service (pager)</b>	<b>(360) 534-9313*</b>
<b>U.S. Department of Interior</b>	(503) 326-2489
<b>U.S. Navy Region Northwest</b>	(360) 315-5410

Pipeline Companies, & Railroads	
<b>BP Olympic Pipeline</b>	(425) 235-7736

Response Contractors (OSRO & PRC)	
<b>NRC Environmental Services / NRC</b>	<b>(800) 337-7455*</b>
<b>Marine Spill Response Corporation</b>	<b>(425) 252-1300*</b>
<b>Global Diving and Salvage</b>	<b>(206) 623-0621*</b>

\* Contact Numbers staffed 24-hour/day

Washington State	
<b>Dept of Ecology</b>	
- Headquarters (Lacey)	(360) 407-6000
- NW Regional Office (Bellevue)	(425) 649-7000
- Bellingham	(360) 715-5200
- SW Regional Office (Lacey)	(360) 407-6300
<b>Dept of Fish and Wildlife</b>	(360) 902-2200
- Emergency HPA Assistance	<b>(360) 902-2537*</b>
- Marine Office (La Conner, WA)	(360) 466-4245
<b>Dept of Health (Drinking Water)</b>	(800) 521-0323
- After normal business hours	(877) 481-4901
<b>Dept Archaeology &amp; Historic Preservation</b>	(360) 586-3065
<b>Dept of Transportation</b>	(360) 705-7000
<b>Washington Parks &amp; Recreation</b>	(360) 902-8544
<b>Washington State Patrol - District 2</b>	<b>(425) 401-7788</b>

Tribal Contacts	
<b>Muckleshoot Indian Tribe</b>	(360) 586-3080
<b>Samish Indian Nation</b>	(360) 293-6404
<b>Snoqualmie Tribe</b>	(425) 888-6551
<b>Squaxin Island Tribe</b>	(360) 432-3809
<b>Suquamish Tribe</b>	(360) 394-8459
<b>Tulalip Tribes</b>	(360) 651-4000

Local Government	
<b>City of Bellevue</b>	<b>(425) 452-7840*</b>
<b>City of Kenmore</b>	(425) 398-8900
<b>City of Kirkland</b>	(425) 587-3900
<b>City of Medina</b>	(425) 233-6414
<b>City of Mercer Island</b>	(206) 275-7905
<b>City of Mercer Island Parks &amp; Recreation</b>	(206) 236-3545
<b>City of Renton</b>	(425) 430-6400
<b>King County Emergency Management</b>	(206) 296-3830
<b>King County Metro</b>	(206) 553-3000
<b>King County Roads</b>	(206) 296-8100
<b>King County Sheriff</b>	<b>(206) 296-4155</b>
<b>Seattle (City - Customer Service)</b>	(206) 684-2489
<b>Seattle Fire Department</b>	<b>(206) 386-1400</b>
<b>Seattle Parks</b>	(206) 684-4075
<b>Seattle PUD</b>	<b>(206) 386-1800*</b>

**Before you print this document:**

Chapter 4 with appendices (Adobe pages 21 - 164) and Appendix 6A (Adobe pages 179 – 184) of this document are provided in “landscape” page orientation; all other chapters and appendices are oriented in “portrait.” The appendices in Chapter 4 (Adobe pages 67 - 164) have been designed for duplex printing (front & back side of paper), “open to top” configuration.

# Lake Washington Geographic Response Plan

## Purpose and Use of this Plan

This Geographic Response Plan constitutes the federal and state on-scene coordinators' orders during the initial phase of an oil spill response in the Lake Washington area. It's meant to aid the response community during the initial phase of an oil spill incident; from the time a spill occurs until a Unified Command is established. The plan prioritizes 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.

**Response Strategy Selection:** The bulk of this plan is contained in Chapter 4. It provides information on GRP response strategies and the order they should be implemented based on potential oil spill origin points and their nearness to sensitive resources. Area and sector maps and information on staging areas and boat launch locations are also provided in the chapter. After a spill occurs, the response strategies provided in Chapter 4 should be implemented as soon as possible. Unless circumstances unique to a particular spill situation dictate otherwise, the tables in Section 4.3 of the chapter should be used to determine strategy deployment priorities. The movement of oil on water and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting strategy implementation priorities.

**Control and Containment of an Oil Spill at the Source is a Higher Priority than the Implementation of GRP Response Strategies:** If in the responder's best judgment control and containment of an oil spill at the source is not feasible, or 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 take precedence until a Unified Command is formed. It's important to note that spill response priorities, beyond those described in this plan, should rely on aerial observations and spill trajectory information. A booming strategy listed as a high priority in Section 4.3 would not necessarily be implemented if spill trajectory information 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 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, Chapter 7000.

**Resources at Risk:** Chapter 6 of this plan outlines sensitive resources at risk in the area that could be injured if impacted by oil. The implementation of certain strategies may be delayed if flight restrictions are associated with a particular resource until the required trustee consultation has been provided. Information in the chapter regarding flight restrictions should be followed before moving to implement any strategy requiring the use of aircraft.

**Information in Other Chapters of the Plan:** Chapter 1 provides an introduction to the plan and explains the GRP development process. Chapter 2 describes the area/site, physical features, hydrology, climate & winds, and oil spill risks. Chapters 3 (Response Options and Considerations), Chapter 5 (Shoreline Countermeasures), and Chapter 7 (Logistics) haven't been developed for Lake Washington. Therefore, they are noted as "reserved" in this plan.

Chapter 1	Introduction
Chapter 2	Site Description
Chapter 3	Reserved
Chapter 4	Response Strategies and Priorities
Chapter 5	Reserved
Chapter 6	Resources at Risk
Chapter 7	Reserved
Appendix A	Protection Techniques
Appendix B	GRP Contributors
Appendix C	GRP Comments, Corrections, Suggestions

**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.

**Terminology and Definitions:** This Geographic Response Plan is considered part of the Northwest Area Contingency Plan (NWACP), just revised and distributed separately. 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. The NWACP is available on-line at <http://www.rrt10nwac.com/NWACP/Default.aspx>.



# Table of Contents

	<u>Page</u>	<u>Adobe Page</u>
<u>Chapter 1</u> – Introduction	1-1	9
<u>Chapter 2</u> – Site Description	2-1	11
<u>Chapter 3</u> – (Reserved)	3-1	19
<u>Chapter 4</u> – Oil Spill Response Strategies & Priorities	4-1	21
<i>Appendix 4A – Response Strategy Information (2-Pagers)</i>	<i>4A-1</i>	<i>67</i>
<i>Appendix 4B – Notification Strategy Information (2-Pagers)</i>	<i>4B-1</i>	<i>129</i>
<i>Appendix 4C – Staging Area Information (2-Pagers)</i>	<i>4C-1</i>	<i>131</i>
<i>Appendix 4D – Boat Launch Locations (2-Pagers)</i>	<i>4D-1</i>	<i>147</i>
<u>Chapter 5</u> – (Reserved)	5-1	165
<u>Chapter 6</u> – Resources at Risk	6-1	167
Appendix 6A - Economic Resources at Risk	6A-1	179
<u>Chapter 7</u> – (Reserved)	7-1	185
<u>Appendix A</u> – Protection Techniques	A-1	187
<u>Appendix B</u> – GRP Contributors	B-1	197
<u>Appendix C</u> – GRP Comments, Corrections, Suggestions	C-1	199

# Lake Washington Geographic Response Plan

## Chapter 1 – Introduction

This Geographic Response Plan serves as the federal and state on-scene-coordinators' orders during the initial phase of an oil spill response in the Lake Washington area. This plan has been approved by the U.S. Environmental Protection Agency (Region 10) and Washington State Department of Ecology. 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 us at [GRPs@ecy.wa.gov](mailto:GRPs@ecy.wa.gov) or submitted by mail using the forms and information provided in Appendix "C" of this document.

Geographic Response Plans (GRPs) have been developed for the marine and inland waters of Washington, Oregon, and Idaho. They are prepared through the efforts and in cooperation with Washington Department of Ecology, Oregon Department of Environmental Quality, Idaho State Emergency Response Commission, U.S. Coast Guard, Environmental Protection Agency, other state and federal agencies, tribal and local governments, response organizations, and emergency responders. GRPs are developed through workshops and meetings with federal, state, and local oil spill emergency response experts, response contractors, tribal representatives, industry, local governments, environmental and conservation organizations, ports, and pilots. Participants identify resources that may be at risk of injury from spills, develop oil spill response strategies to minimize injury to those resources, and provide information needed to support logistics during a spill response.

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. An updated (draft) plan is produced after site visits are completed. Comments on the draft plan are provided by trustee agencies, stakeholders, and the public. A final version of the GRP is produced and published. A responsiveness summary is also published that addresses all public comments received during the GRP update process.

This plan has been developed for the waters of Lake Washington and tributary streams, creeks, and rivers that flow into the lake. It encompasses an area of approximately 34 square miles and is bordered by the cities of Seattle to the west, Bellevue and Kirkland to the east, Kenmore to the north, and Renton to the south. The plan fully resides within the limits of King County. The planning area includes Andrews Bay, Fairweather Bay, Juanita Bay, Meydenbauer Bay, Moss Bay, Pontiac Bay, Union Bay, Wolf Bay, Yarrow Bay, Cozy Cove, and shoreline areas of Mercer Island. Downstream portions of Coal Creek, Juanita Creek, Kelsey Creek, Lyon Creek, May Creek, McAleer Creek, Ravenna Creek, Taylor Creek, Thornton Creek, Yesler Creek, and the Cedar and Sammamish Rivers are also included within this planning area.

An area site description and information on physical features, hydrology, river conditions, winds, climate, and risk are included in Chapter 2 (Site Description) of this document. Oil spill response strategy descriptions, response priorities, and area and sector maps are located in Chapter 4 (Response Strategies and Priorities). Information on natural, cultural, and economic resources at risk of injury from oil spills are in Chapter 6 (Resources at Risk), with a list of economic resources in Appendix 6a. Chapters 3 (Response Options and Considerations), Chapter 5 (Shoreline Countermeasures), and Chapter 7 (Logistics) haven't been developed for Lake Washington. Therefore, they are noted as "reserved" in this plan.

# Lake Washington Geographic Response Plan

## Chapter 2 – Site Description

### 2.1- Chapter Introduction

This chapter provides a description of the area's physical features, hydrology, climate and winds, and includes an overview of oil spill risks in the Lake Washington area. The area covered by this plan includes Lake Washington, lower portions of the Cedar and Sammamish Rivers, and downstream areas of Coal Creek, Juanita Creek, Kelsey Creek, Lyon Creek, May Creek, McAleer Creek, Ravenna Creek, Taylor Creek, Thornton Creek, and Yesler Creek. Lake Washington includes Andrews Bay, Fairweather Bay, Juanita Bay, Meydenbauer Bay, Moss Bay, Pontiac Bay, Union Bay, Wolf Bay, Yarrow Bay, Cozy Cove, and shoreline areas of Mercer Island.

The Lake Washington Geographic Response Plan (LKWA-GRP) encompasses an area of approximately 34 square miles and is bordered by the cities of Seattle (Montlake Bridge) to the west, Bellevue and Kirkland to the east, Kenmore to the north, and Renton to the south. The plan fully resides within the limits of King County. LKWA-GRP is bordered by the Central Puget Sound Geographic Response Plan to the west, and falls within the boundary of Water Resource Inventory Area 8 (WRIA-8, Cedar-Sammamish Watershed).

### 2.2 - Physical Features

Lake Washington is a long, narrow, finger-shaped lake that's approximately 22 miles long (north to south) and less than 2 miles wide near the middle (east to west). The lake has a surface area of about 34 square miles, and an average depth of 108ft. The deepest part of the lake is reported to be 214ft. The water level in Lake Washington is regulated by the Hiram M. Chittenden Locks in Ballard (Seattle). Water levels in the lake vary within a couple of feet seasonally, but usually measure 16ft above mean sea level (Puget Sound) and 21ft above mean

lower tide. The lake connects to Puget Sound (to the west) by way of the Lake Washington Ship Canal and the Chittenden Locks.

The basin of Lake Washington is a deep glacial trough with steeply sloping sides, carved out by the last continental glacier that moved through the area during the late Pleistocene era. Water and sediment accumulated in the lake as the glacier melted, and continues to accumulate today. The lake is surrounded by other north-south-oriented features that attest to the direction of ice flow; such as small inverted spoon shaped hills and larger hills. The modern shoreline of the lake is characterized by a 10-foot-high bench, embayments, gentle and steep slopes, and several peninsulas.

Lake Washington is the largest of the three major lakes in King County, and the second largest natural lake in the State of Washington. Most of the area around the lake is highly developed and urban in nature. Two major influent streams feed the lake; the Cedar River on the south end near Renton, and the Sammamish River on the north side near Kenmore. The upper part of the Cedar River is the source for much of the drinking water for the greater Seattle area and includes the Chester Morse Lake which serves as a water storage reservoir. Mercer Island lies in the southern half of the lake and is separated from the southeastern shore by a relatively narrow and shallow channel.

Three floating bridges and two girder bridges carry vehicle traffic across Lake Washington today. The Evergreen Point Floating Bridge (SR-520) connects Seattle's Montlake neighborhood with Medina (located northwest of Bellevue). The Interstate 90 corridor across the lake uses two floating bridges to connect Seattle's Mount Baker neighborhood with Mercer Island; the Lacey V. Murrow Memorial Bridge carries east bound I-90 traffic to the island and the Homer M. Hadley Memorial Bridge carries west bound I-90 traffic from the island to Seattle. The East Channel Bridge (girder bridges) allows east and westbound I-90 traffic to flow between Mercer Island and Bellevue.

### **2.3 – Hydrology**

Lake Washington has two major influent streams; the Cedar and Sammamish Rivers. The Cedar River at the southern end of the lake contributes about 57 percent of the annual runoff while the Sammamish River on the north end contributes about 27 percent. Total annual flow is approximately 41 percent of the lake volume. Residence time is about 2.4 years. Lake Washington drains westward through Lake Union and the Ship Canal to Shilshole Bay in Puget Sound via the Chittenden Locks in Ballard. Lake Washington's water level elevation varies by

season, but is typically about 16ft above mean sea level (Puget Sound) and 21ft above mean lower tide.

Tributaries to Lake Washington are essential contributors to its hydrologic budget. Rainfall plays a key role as well. About a quarter of the annual rainfall seeps or soaks into ground water and moves underground toward lakes and streams, or runs off land surfaces to lakes and streams. Lake Washington is located in [Water Resource Inventory Area 8](#) (WRIA-8, Cedar-Sammamish). Notable tributaries or sub-basins that drain to Lake Washington include:

- Bear Creek
- Cedar River
- Coal Creek
- Juanita Creek
- Kelsey Creek
- Lyon Creek
- May Creek
- McAleer Creek
- North Creek
- Ravenna Creek
- Sammamish River
- Swamp Creek
- Taylor Creek
- Thornton Creek
- Yesler Creek

Lake Stratification: Lake Washington undergoes annual stratification, with a strong thermocline developing about 39ft below the surface. As summer progresses, the temperature and density difference between water at the surface and bottom becomes more distinct. Three water layers are formed; upper, middle, and bottom water layers. The upper layer (epilimnion) is characterized by warmer, less dense water. It's the zone of light penetration where the most biological growth occurs. The middle layer (metalimnion or thermocline) is a narrow band of water that's colder than water in the upper layer but warmer than the lower waters beneath it. The middle layer helps prevent the mixing of upper and lower water layers. The bottom layer (hypolimnion) holds the coldest water. Plant material either decays or sinks to the bottom and accumulates in this "stagnant" lower water layer.

During the winter the lake temperature remains above 39°F and substantial vertical mixing by wind action and convective overturn assures isothermal conditions. As ice melts in the Spring, surface waters warm, then sink, and finally mix with deeper water. During summer the density of the water changes as its temperature changes. The water is most dense at 39°F, while above

and below that temperature the water expands and becomes less dense. During the Fall, surface waters cool until they are as dense as the bottom waters and wind action mixes the lake so water temperature from surface to bottom are nearly the same.

Lake Washington Ship Canal and the Hiram M. Chittenden Locks: The ship canal is operated primarily as a navigation facility connecting Puget Sound with Lake Union and Lake Washington via the Hiram M. Chittenden Locks. Under normal operations, surface waters in the canal are typically maintained at 20ft to 22ft above sea-level (Puget Sound, mean lower tide). The minimum elevation is maintained during the winter months to allow for annual maintenance on dock and wall structures, minimize wave and erosion damage during winter storms, and provide storage volume for high water inflow. Storage volume is also used to augment Lake Washington Ship Canal inflows for use in operating the Chittenden Locks, the saltwater return system, the smolt passage flume and the fish ladder facility at the locks. The Chittenden Locks and spillway dam regulate the elevation of Salmon Bay, Lake Union, Lake Washington and the Lake Washington Ship Canal. The locks and associated facilities serve three purposes:

- To maintain the water level of (fresh water) Lake Washington and Lake Union at 20 to 22 feet above sea level (Puget Sound).
- To prevent the mixing of sea water from Puget Sound with the fresh water of the lakes (saltwater intrusion).
- Move boats to and from the water level of the lakes to the water level of Puget Sound.

The Chittenden Locks sit in the middle of Salmon Bay and are part of Seattle's Lake Washington Ship Canal. They include a smaller 30ft x 150ft lock and a larger 80ft x 825ft lock. The Chittenden complex also includes a 235ft spillway with six gates to assist water-level control. A fish ladder is integrated into the locks for migration of anadromous fish (most notably salmon).

Lake Washington Characteristics:

Drainage Area (including Mercer Island):	357,760 Acres (559 Miles <sup>2</sup> )
Lake Area:	21,500 Acres
Lake Volume:	2,350,000 Acre-ft
Mean Depth:	108ft
Maximum Depth:	214ft
Flushing Rate:	0.43 per year
Depth of Epilimnion:	39ft
Epilimnion-Hypolimnion Ratio:	0.387
Length:	22 miles

Main Inflows:	Cedar River (57%), Sammamish River (27%)
Main Outlet:	Ship Canal to Puget Sound
Typical Period of Stratification:	Late March to Early November
Trophic State:	Mesotrophic

## 2.4 - Climate & Winds

Seattle's climate is usually described as oceanic or temperate marine; winters are typically mild and wet while summers are usually warm and dry. Temperature extremes are moderated by the adjacent Puget Sound, greater Pacific Ocean, and Lake Washington. The region is largely denied pacific storms by the Olympic Mountains and cold arctic air by the Cascade Range. Despite being on the margin of the rain shadow of the Olympic Mountains, the Seattle area has a reputation for frequent rain. Records show that Seattle is usually cloudy more than 200-days per year, and partly cloudy more than 90-days annually.

The area receives approximately 37.41 inches of rain a year and statistics show that the city is becoming wetter; the current annual rainfall average reflects an increase of 0.4 inches. Seattle experiences moderate to heavy rain during the months of November, December, and January. The city receives roughly half of its annual rainfall (by volume) during these three months. In late fall to early winter, atmospheric rivers known as "Pineapple Express" systems, strong frontal systems, and Pacific storms are common. Light rain and drizzle are the predominant forms of precipitation during the remainder of the year; for instance, on average, less than 1.6 inches of rain falls in July and August combined.

Winds in the area are variable with the western portion of the lake being affected by marine winds from Puget Sound. Wind speeds often vary by season, with the highest winds generally occurring from November through January. Wind gusts can occasionally reach 50 mph or greater.

Seattle occasionally experiences extraordinary weather events. One such event occurred in December 2007 when sustained hurricane-force winds and widespread heavy rainfall associated with a strong "Pineapple Express" event occurred in the greater Puget Sound area and the western parts of Washington and Oregon. Precipitation totals exceeded 13.8 inches in some areas with winds reaching 130 mph along coastal Oregon. It was the second wettest weather event in Seattle's recorded history with 5.1 inches of rain falling on the city in a 24-hour period.

## 2.5 - Tides and Currents

Lake Washington is not impacted by tides, and no information on current flow in the lake is available (seasonal current flows or otherwise).

## 2.6 - Risk Assessment

Lake Washington is plentiful in natural, cultural, and economic resources, all at risk of injury from oil spills. Potential risks to sensitive resources in the area include, but aren't limited to, oil pipelines, road transportation, vessel traffic, and aircraft. This section briefly discusses these risks in the Lake Washington GRP area.

Oil Pipelines: The Olympic Pipeline (OPL) poses an oil spill risk to Lake Washington. It transports thousands of gallons of refined petroleum products each year; mainly diesel and gasoline. The pipeline runs south from Seattle, around the southern end of the lake near Renton, north along the eastern side of the lake through Eastgate, and continues north through Kenmore and points beyond. The OPL crosses several rivers and tributary streams that directly or indirectly drain into Lake Washington, including the Cedar River, Honey Dew Creek, May Creek, Richards Creek, and the Sammamish River.

Road Transportation: Vehicle traffic on bridges or roadways over or near Lake Washington pose an oil spill risk. Commercial trucks can contain hundreds to thousands of gallons of fuel and oil, and almost any kind of hazardous material or waste. An accident involving a fully loaded tank truck on one of the lake bridges could result in a substantial oil spill. Smaller vehicle accidents pose a similar risk, commensurate to the volume of fuel and oil they carry. Spills from vehicles onto roadways along shore could cause fuel or oil to flow into the lake from harden surfaces or through storm water systems that drain directly or indirectly into Lake Washington.

Vessel Traffic: Incidents involving the grounding, sinking, collision or allision of commercial and recreational vessels on Lake Washington pose an oil spill risk. Potential exists for vessels on the lake to collide with each other or sink after hitting fixed structures (e.g. docks or bridges). Oil spill risks also include boat refueling and bilge/waste water pumping. Private and public marinas and docks on Lake Washington that refuel boats or recover waste products from them, or locations where boats are launched and recovered from the lake, might be considered potential spill source

locations.

Aircraft: Lake Washington is home to Kenmore Air Harbor, a passenger seaplane service located at the north end of the lake in Kenmore. Renton's Municipal Airport located near the south end of the lake includes Boeing's Renton Ramp, Will Rogers Wiley Post Memorial Seaplane Base, Northwest Seaplanes, and Pro-Flight Aviation. Although oil spill risks to Lake Washington from these facilities are relatively small, it's important to consider the potential for aircraft failures resulting in fuel releases to water. Float planes landing or flying over the lake might also pose an oil spill risk.

## 2.7 – References

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<http://green.kingcounty.gov/lakes/LakeWashington.aspx>

Municipal Research and Services Center of Washington. (2008). Water Resource Inventory Area (WRIA) Activities by County. Retrieved from

<http://www.mrsc.org/subjects/environment/esa/esa-what2.aspx>

Salmon Conservation and Restoration, Lake Washington/Cedar/Sammamish Watershed:  
See WRIA 8 Chinook Recovery Plan.

<http://www.govlink.org/watersheds/8/planning/chinook-conservation-plan.aspx>

Snohomish County Planning & Development Services. (2006). Summary of Shoreline Ecological Functions and Conditions in Snohomish County. Retrieved from

[http://www.co.snohomish.wa.us/documents/Departments/PDS/Code\\_Development/ShorelineInventoryFINAL.pdf](http://www.co.snohomish.wa.us/documents/Departments/PDS/Code_Development/ShorelineInventoryFINAL.pdf)

US Army Corps of Engineers Seattle District Water Management Section, Reservoir Control Center. Lake Washington Basin, Lake Washington Summary Hydrograph: <http://www.nwd-wc.usace.army.mil/nws/hh/basins/lwscsh.html>

Washington State Department of Ecology Lake Characteristics:

<http://www.ecy.wa.gov/programs/wq/plants/lakes/characteristics.html>

Washington Department of Ecology, Water Resources Program. (2012). Water Availability in your Watershed/WRIA. [http://www.ecy.wa.gov/programs/wr/rights/wrpenapp\\_avail.html](http://www.ecy.wa.gov/programs/wr/rights/wrpenapp_avail.html)

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# **Lake Washington GRP**

## **Geographic Response Plan**

### **Chapter 3 – (Reserved)**

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Washington State Department of Ecology

**NORTHWEST AREA COMMITTEE**

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**LAKE WASHINGTON  
GEOGRAPHIC RESPONSE PLAN**

**(LKWA GRP)**

**CHAPTER 4**

***Response Strategies & Priorities***

August 2014

**Before you print this document:**

This chapter and its appendices are provided in “landscape” page orientation. The detailed 2-page information sheets for response strategies, notification strategies, staging areas, and boat launch locations in appendices 4A through 4D (Adobe pages 67 – 164) have been designed for duplex printing (front and back side of paper), “open to top” configuration.

## TABLE OF CONTENTS

	<u>Page</u>	<u>Adobe Page</u>
4.1 – Chapter Introduction	4-2	24
4.2 – Area Maps	4-8	30
4.3 – Priority Tables (Strategy & Response Priorities)	4-14	36
4.4 –Sector Maps (Strategy Locations)	4-21	43
4.5 – Matrices		
<i>4.5a – Response Strategy Matrices</i>	4-25	47
<i>4.5b – Notification Strategy Matrices</i>	4-38	60
<i>4.5c – Staging Area Matrices</i>	4-39	61
<i>4.5d – Boat Launch Location Matrices</i>	4-42	64
Appendix 4A – Response Strategy Details (2-Pagers)	4A-1	67
Appendix 4B – Notification Strategy Details (2-Pagers)	4B-1	129
Appendix 4C – Staging Area Details (2-Pagers)	4C-1	131
Appendix 4D – Boat Launch Location Details (2-Pagers)	4D-1	147

## 4.1 - Chapter Introduction

This chapter provides information on GRP response strategies and the order (priority) they should be implemented based on potential spill origin points, and the proximity of sensitive resources to them. Area maps, sector maps, and information on staging areas and boat launch locations are also provided in this chapter. During a spill incident, GRP response strategies should be implemented as soon as possible. Unless circumstances unique to a particular spill situation dictate otherwise, the priority tables in Section 4.3 should be used to decide the order that GRP strategies are deployed. The downstream movement of oil and the time it takes to mobilize response resources to deploy GRP strategies must always be considered when setting implementation priorities. Information on resources at risk, sensitive areas, and flight restrictions can be found in Chapter 6 of this plan. Information on protection techniques can be found in Appendix A. Information on shoreline countermeasures can be found in the Northwest Area Shoreline Countermeasures Manual (NWACP Section 9420). The Northwest Area Contingency Plan (NWACP) is available online at <http://www.rrt10nwac.com/NWACP/Default.aspx>.

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

### 4.1.1 – On-site Considerations:

#### Before Deploying a GRP Strategy: (Questions to Ask)

- Are conditions safe? Response managers and responders must first determine if efforts to implement a response strategy would pose an undue risk to worker safety or the public, based on conditions present during the time of the emergency. No strategy should be implemented if doing so would threaten public safety or present an unreasonable risk to the safety of responders.

- Has initial control and containment been sufficiently achieved? Source control and containment of the spill at or near the source of a spill are always higher priorities than the deployment of GRP response strategies, especially when concurrent response activities are not possible.
- How far downstream or out into the lake or marine environment is the spilled oil likely to travel before response personnel will be ready and able to deploy GRP response strategies?
- Are permits required? Consult the Northwest Area Contingency Plan Permit Summary Table ([NWACP Section 9401](#)) for information specific to your location and circumstance. In Washington State, an Emergency Hydraulic Project Approval (HPA) permit is required if implementation of a response strategy would reduce, interrupt, or divert the flow of water in a stream, creek, or river. This includes but is not limited to the installation of culvert blocks and underflow dams. To obtain an Emergency HPA contact the WDFW Oil Spill Team at 360-534-8233 (24-hour pager). WDFW Oil Spill Team won't be able to provide HPAs for restoration activities associated with an oil spill or for non-oil spill related activities. Non-oil spill HPAs may be requested through the WDFW regional offices or at 360-902-2537.
- Will equipment or vehicles need to be staged on or near a roadway? If so, traffic control may be required. Contact the Washington State Patrol or local county, municipality, or tribal police for assistance. At minimum, [Washington Department of Transportation \(WADOT\) guidelines](#) for work zone traffic control should be followed when working on or near a roadway.
  - Bellevue Police: (425) 452-6917
  - Kenmore Police (Dispatch): (206) 296-3311
  - King County Roads: (206) 296-8100
  - King County Sherriff: (206) 296-4155
  - City of Kirkland Hotline: (425) 587-3900
  - Lake Forest Park Police: (206) 364-8216
  - Renton Police: (425) 235-2121
  - Seattle Police: (206) 625-5011
  - Washington State Patrol (District 2): (425) 401-7788

During Strategy Implementation: (Things to Remember)

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

After Strategy Implementation: (Things to Understand)

- Oil containment boom should be maintained and periodically monitored to ensure its effectiveness. Changes in river or current speed will likely require modifications to boom deflection angles (see Table 4-1). Depending on conditions, some booming strategies may require around-the-clock tending.
- Although designed for implementation during the initial phase of an oil spill, GRP strategies may continue to be deployed and implemented throughout the entire lifespan of a response, as determined appropriate and necessary by the Incident Commander or Unified Command.

Water Speed and Boom Deflection Angle:

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

**Table 4.1 – Water Speed Drift Measurement Table**

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

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

**4.1.2 - Historical River Streamflow Ranges:**

Gage/stream-flow data from U.S. Geological Survey (USGS) was used to determine the mean monthly stream discharge for rivers and streams in the Lake Washington area. Stream discharge is recorded in cubic feet per second (cfs); velocities in miles per hour (mph) or nautical miles per hour (knots) are not available. Table 4.1 provides information that can be used to calculate 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 Appendix A of this plan. Information on USGS river gage readings can be found online at <http://maps.waterdata.usgs.gov/mapper/index.html>.

	<i>Monthly average flow in Cubic Feet per Second (cfs)</i>	
	<b>Cedar River</b> at Renton - USGS 12119000 <i>(data from 1945 to 2012)</i>	<b>Sammamish River</b> near Woodinville – USGS 12125200 <i>(data from 1965 to 2005)</i>
<b>Jan</b>	1130	609
<b>Feb</b>	1030	542
<b>Mar</b>	873	470
<b>Apr</b>	796	356
<b>May</b>	721	235
<b>Jun</b>	640	183
<b>Jul</b>	301	109
<b>Aug</b>	191	72
<b>Sep</b>	228	86
<b>Oct</b>	364	121
<b>Nov</b>	770	308
<b>Dec</b>	1040	567

**Table 4.2 - Historic stream flow for significant rivers near Lake Washington**

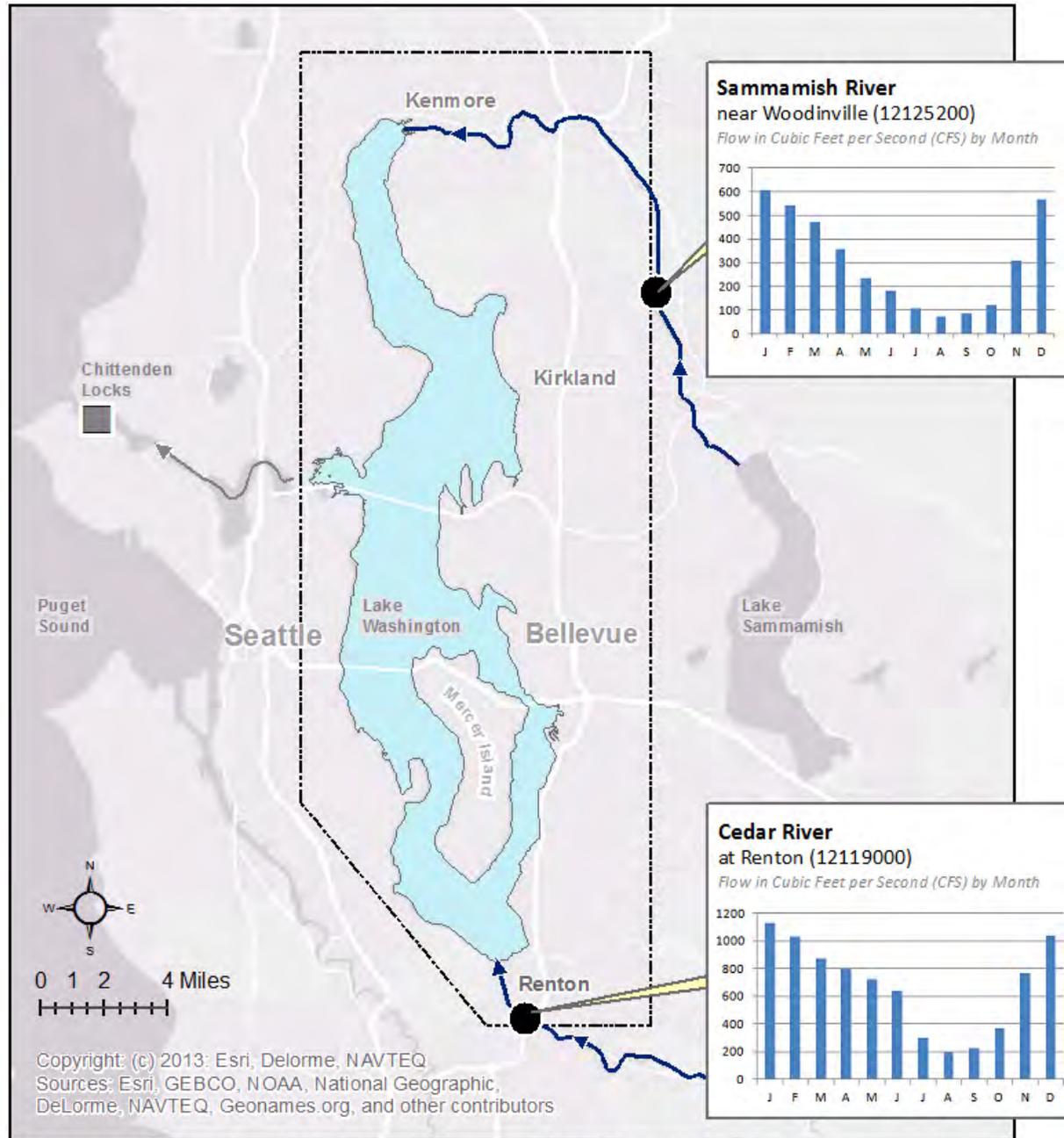


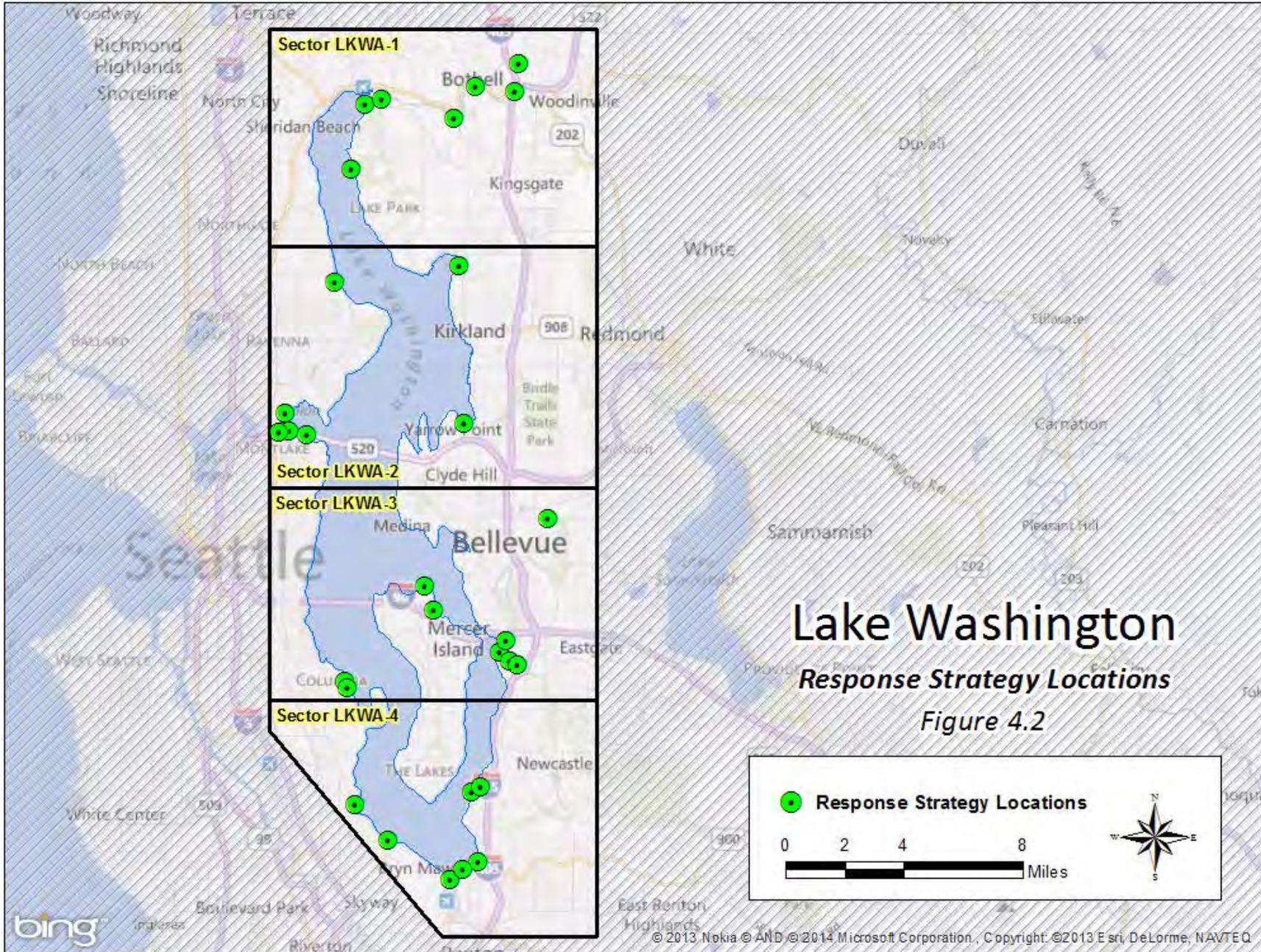
Figure 4.1: USGS Mean Monthly Discharge Measurements for Cedar and Sammamish Rivers

## 4.2 – Area Overview Maps

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

The following area maps are provided for reference:

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



# Lake Washington

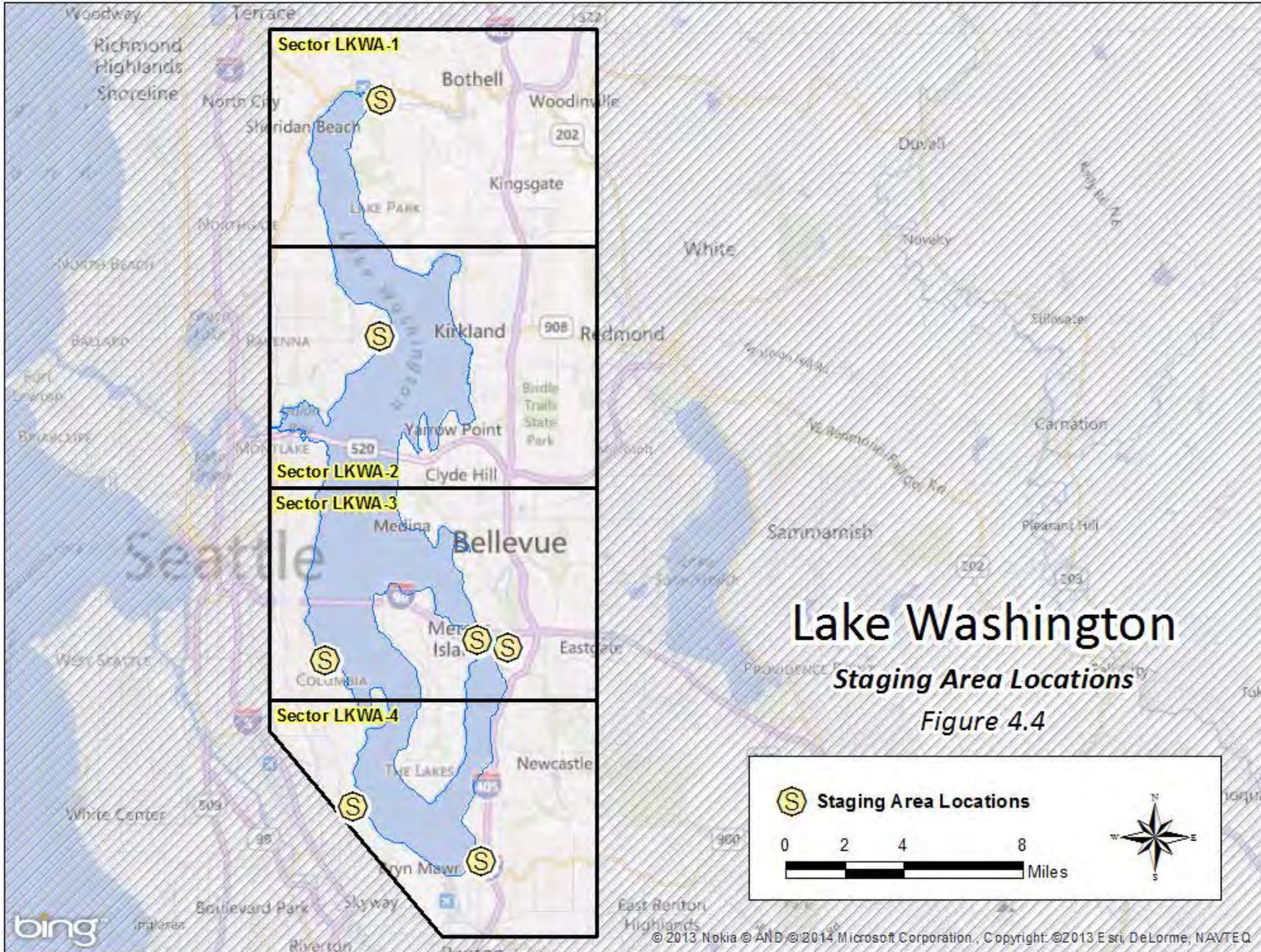
## Response Strategy Locations

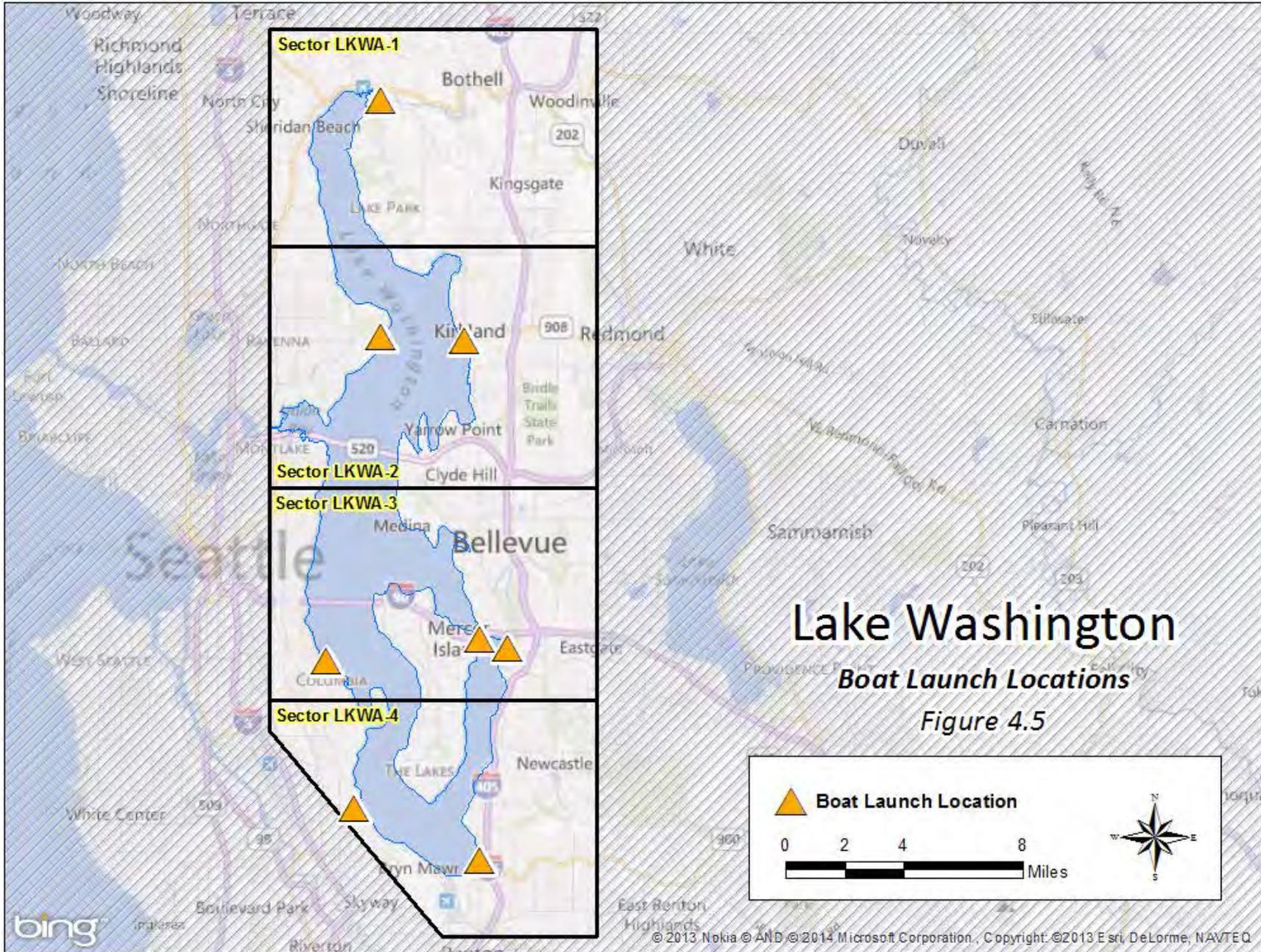
Figure 4.2

# **Figure 4.3**

**(Notification Strategy Locations)**

**No Notification Strategies Currently  
Exist for the LKWA-GRP Area**

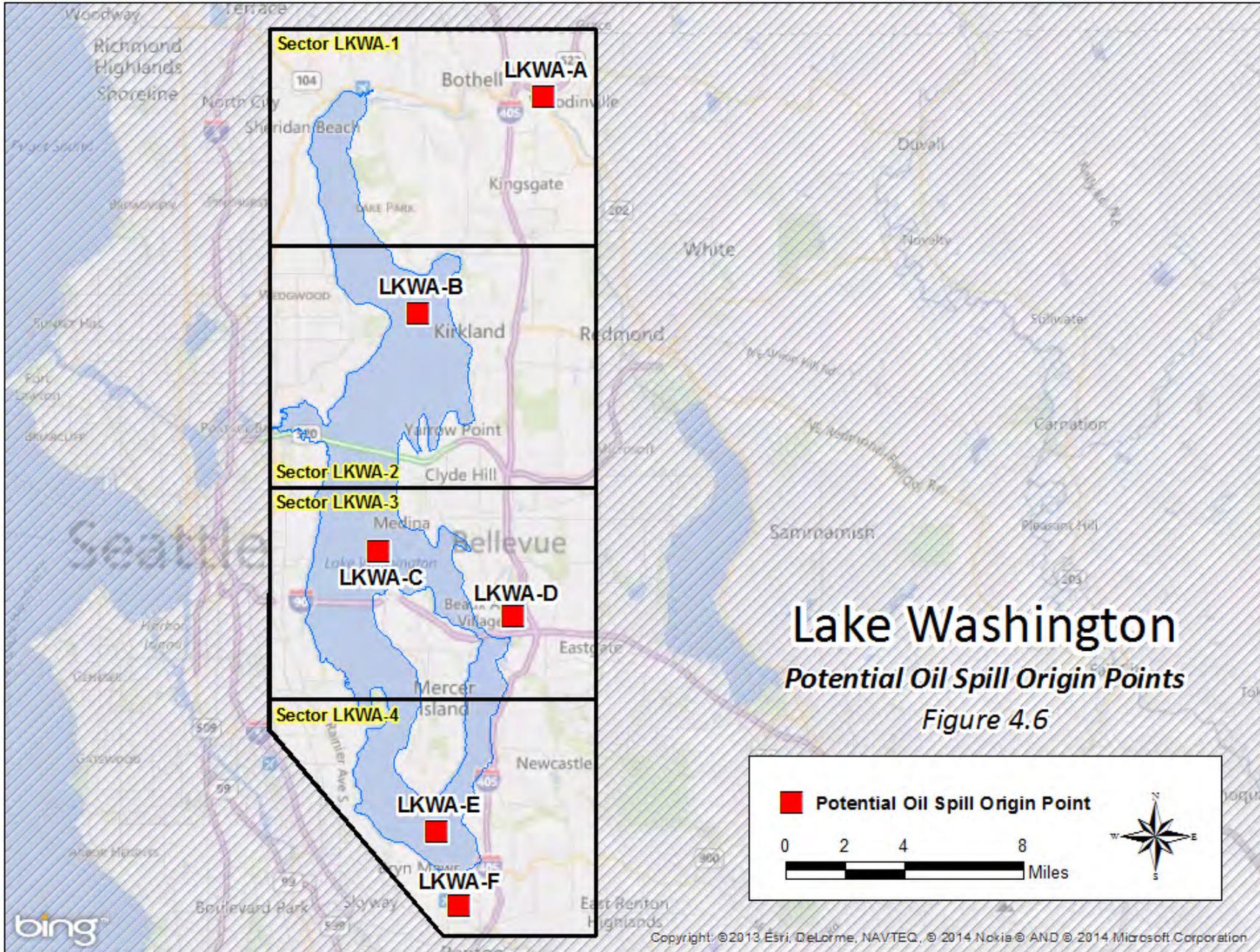




# Lake Washington

## Boat Launch Locations

Figure 4.5



### 4.3 – Strategy & Response Priorities:

**4.3.1 - General Response Priorities:** The following list provides the order of response priorities after an oil spill into the Lake Washington area.

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

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

***“Source control and containment is always a higher priority than the implementation of GRP strategies”***

**Table 4.3**

<b>"LKWA-A" (Sammamish River)</b>				
<b>Priority</b>	<b>Strategy Number</b>	<b>Sector Map</b>	<b>Strategy Matrix</b>	<b>Strategy Details</b>
1	SAMMR-0.6	4-21	4-34	4A-49
2	SAMMR-2.3	4-21	4-35	4A-51
3	SAMMR-3.4	4-21	4-35	4A-53
4	SAMMR-4.5	4-21	4-36	4A-55
5	SAMMR-0.0	4-21	4-34	4A-47
6	LKWA-4.3	4-21	4-27	4A-13

**Table 4.4**

<b>"LKWA-B" (Lake Washington - North)</b>									
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
<b>N - Winds from the NORTH</b>					<b>S - Winds from the SOUTH</b>				
1	LKWA-17.2	4-22	4-28	4A-17	1	LKWA-11.0	4-22	4-27	4A-15
2	LKWA-68.6	4-22	4-31	4A-29	2	THOR-0.0	4-22	4-36	4A-57
3	LKWA-70.7	4-22	4-31	4A-31	3	LKWA-4.3	4-21	4-27	4A-13
4	LKWA-71.1	4-22	4-31	4A-33	4	SAMMR-0.0	4-21	4-34	4A-47
5	MRCRI-1.6	4-23	4-33	4A-41	<b>SE - Winds from the SOUTHEAST</b>				
6	MRCRI-2.4	4-23	4-33	4A-43	1	THOR-0.0	4-22	4-36	4A-57
<b>NW - Winds from the NORTHWEST</b>					2	LKWA-4.3	4-21	4-27	4A-13
1	LKWA-17.2	4-22	4-28	4A-17	3	SAMMR-0.0	4-21	4-34	4A-47
<b>W - Winds from the WEST</b>					<b>E - Winds from the EAST</b>				
1	LKWA-11.0	4-22	4-27	4A-15	1	THOR-0.0	4-22	4-36	4A-57
2	LKWA-17.2	4-22	4-28	4A-17	2	LKWA-68.6	4-22	4-31	4A-29
<b>SW - Winds from the SOUTHWEST</b>					3	LKWA-70.7	4-22	4-31	4A-31
1	LKWA-11.0	4-22	4-27	4A-15	4	LKWA-71.1	4-22	4-31	4A-33
--	--	--	--	--	<b>NE - Winds from the NORTHEAST</b>				
--	--	--	--	--	1	LKWA-68.6	4-22	4-31	4A-29
--	--	--	--	--	2	LKWA-70.7	4-22	4-31	4A-31
--	--	--	--	--	3	LKWA-71.1	4-22	4-31	4A-33
--	--	--	--	--	4	LKWA-59.3a	4-23	4-30	4A-25
--	--	--	--	--	5	LKWA-59.3b	4-23	4-30	4A-27

**Table 4.5**

<b>"LKWA-C" (Lake Washington - Central)</b>									
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
<b>N - Winds from the NORTH</b>					<b>S - Winds from the SOUTH</b>				
1	MRCRI-1.6	4-23	4-33	4A-41	1	LKWA-73.4	4-22	4-32	4A-35
2	MRCRI-2.4	4-23	4-33	4A-43	2	LKWA-68.6	4-22	4-31	4A-29
3	LKWA-59.3a	4-23	4-30	4A-25	3	LKWA-70.7	4-22	4-31	4A-31
4	LKWA-59.3b	4-23	4-30	4A-27	4	LKWA-71.1	4-22	4-31	4A-33
5	TYLRC-0.0	4-24	4-36	4A-59	5	LKWA-11.0	4-22	4-27	4A-15
6	LKWA-51.2	4-24	4-29	4A-23	<b>SE - Winds from the SOUTHEAST</b>				
<b>NW - Winds from the NORTHWEST</b>					1	LKWA-73.4	4-22	4-32	4A-35
1	MRCRI-1.6	4-23	4-33	4A-41	2	LKWA-68.6	4-22	4-31	4A-29
2	MRCRI-2.4	4-23	4-33	4A-43	3	LKWA-70.7	4-22	4-31	4A-31
3	LKWA-35.4	4-23	4-28	4A-19	4	LKWA-71.1	4-22	4-31	4A-33
4	COALC-0.0	4-23	4-25	4A-5	<b>E - Winds from the EAST</b>				
5	MAYC-0.0	4-24	4-32	4A-37	1	LKWA-59.3a	4-23	4-30	4A-25
<b>W - Winds from the WEST</b>					2	LKWA-59.3b	4-23	4-30	4A-27
1	MRCRI-1.6	4-23	4-33	4A-41	3	LKWA-68.6	4-22	4-31	4A-29
2	MRCRI-2.4	4-23	4-33	4A-43	4	LKWA-70.7	4-22	4-31	4A-31
3	LKWA-35.4	4-23	4-28	4A-19	5	LKWA-71.1	4-22	4-31	4A-33
4	COALC-0.0	4-23	4-25	4A-5	<b>NE - Winds from the NORTHEAST</b>				
<b>SW - Winds from the SOUTHWEST</b>					1	LKWA-59.3a	4-23	4-30	4A-25
1	LKWA-17.2	4-22	4-28	4A-17	2	LKWA-59.3b	4-23	4-30	4A-27
2	LKWA-11.0	4-22	4-27	4A-15	--	--	--	--	--

**Table 4.6**

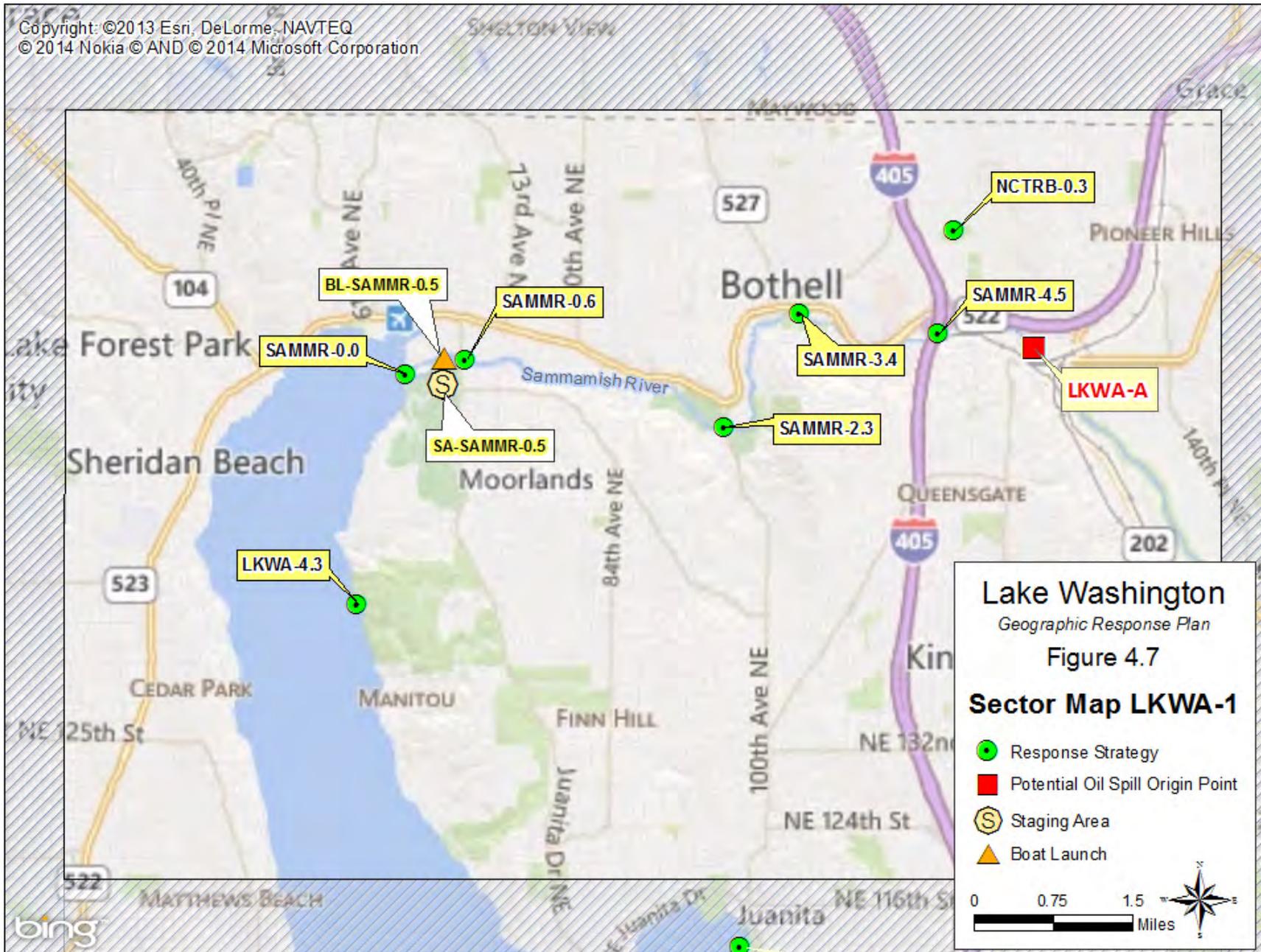
<b>"LKWA-D" (Lake Washington - Mercer Slough Upstream)</b>				
<b>Priority</b>	<b>Strategy Number</b>	<b>Sector Map</b>	<b>Strategy Matrix</b>	<b>Strategy Details</b>
1	LKWA-35.4	4-23	4-28	4A-19
2	COALC-0.0	4-23	4-25	4A-5
3	MRCRI-1.6	4-23	4-33	4A-41
4	MRCRI-2.4	4-23	4-33	4A-43
5	MAYC-0.0	4-24	4-32	4A-37

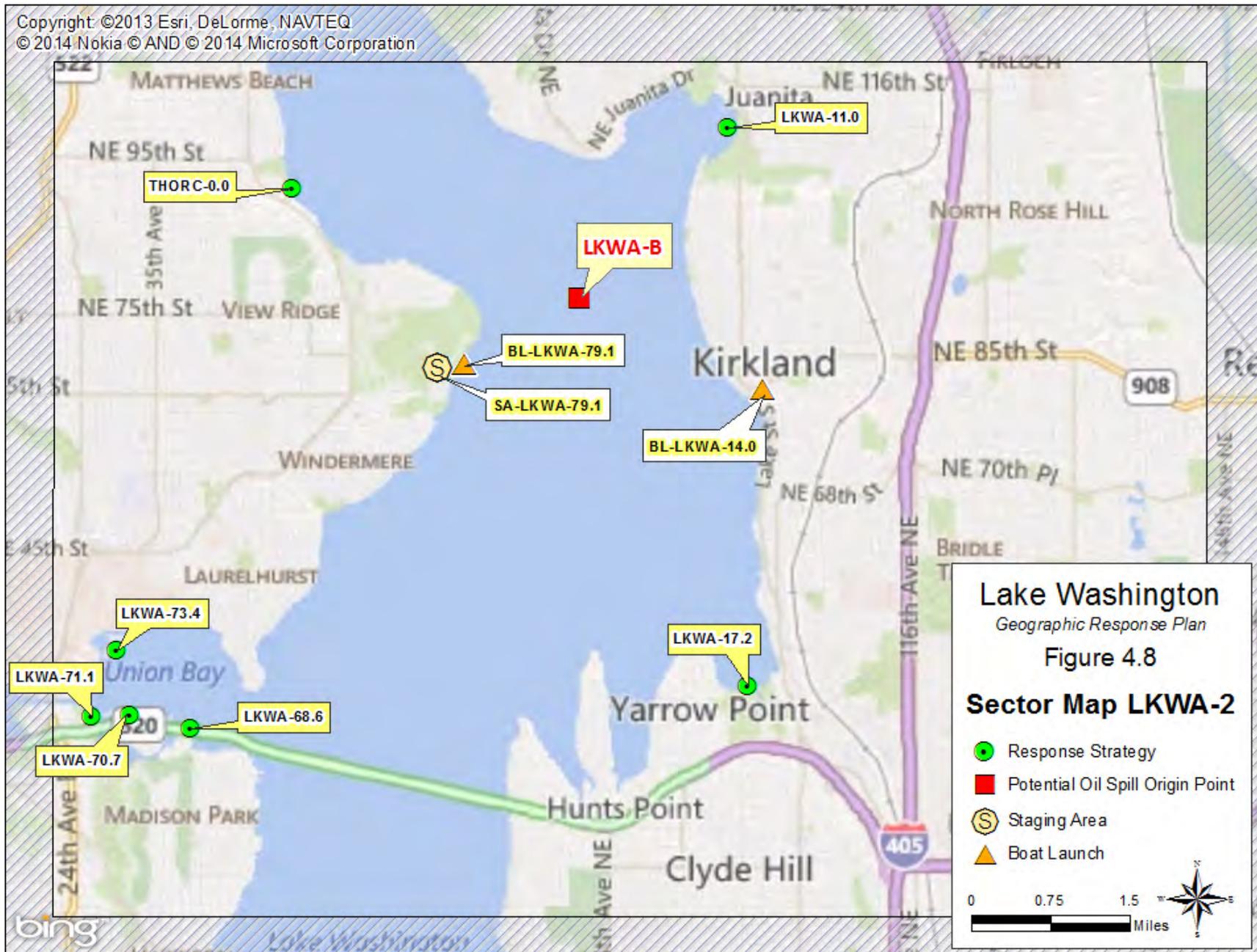
**Table 4.7**

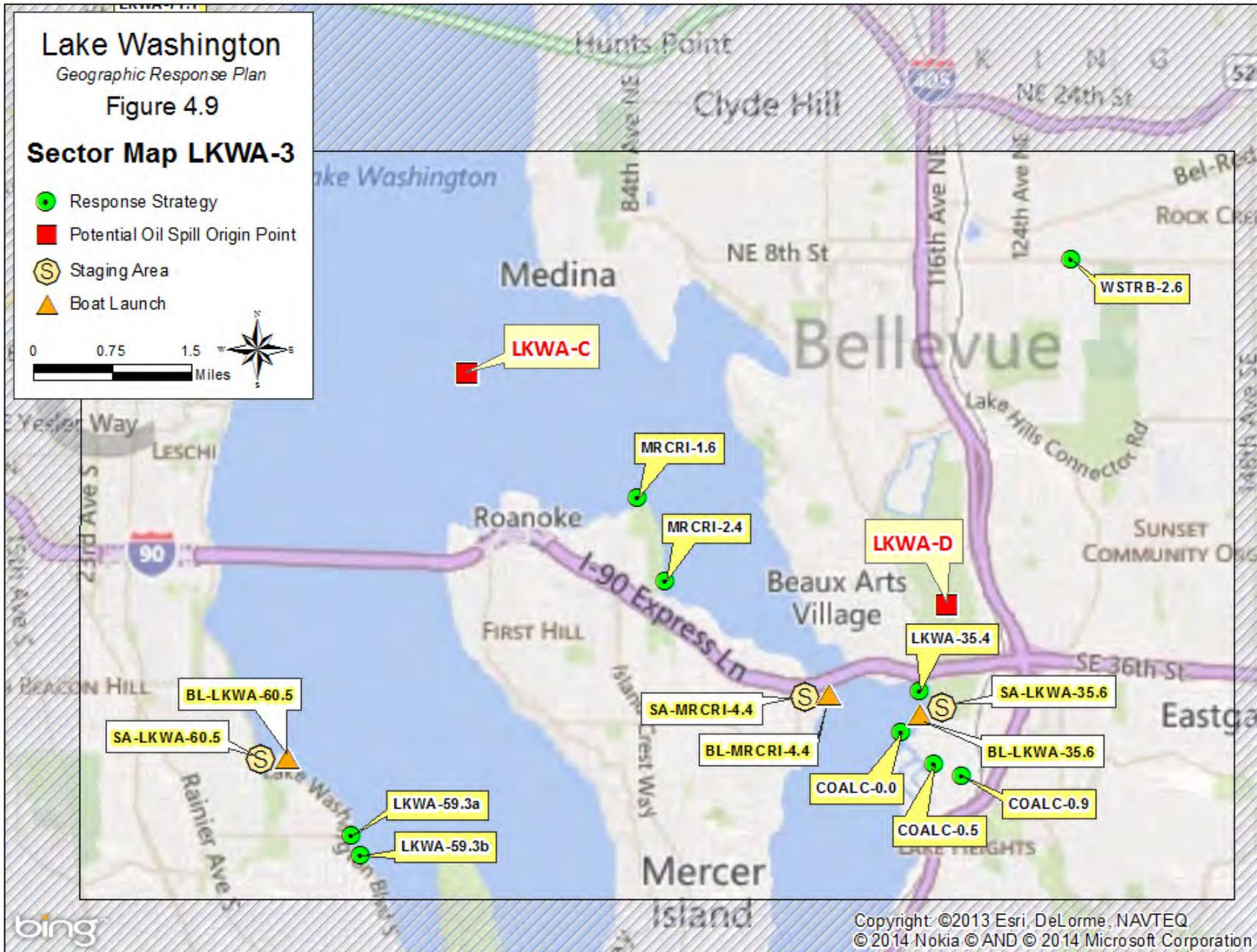
<b>"LKWA-E" (Lake Washington - South)</b>									
Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details	Priority	Strategy Number	Sector Map	Strategy Matrix	Strategy Details
<b>N - Winds from the NORTH</b>					<b>S - Winds from the SOUTH</b>				
1	LKWA-46.1	4-24	4-29	4A-21	1	MAYC-0.0	4-24	4-32	4A-37
2	JHNSC--0.0	4-24	4-27	4A-11	2	COALC-0.0	4-23	4-25	4A-5
3	CEDRR-0.1	4-24	4-25	4A-3	3	LKWA-35.4	4-23	4-28	4A-19
<b>NW - Winds from the NORTHWEST</b>					<b>SE - Winds from the SOUTHEAST</b>				
1	LKWA-46.1	4-24	4-29	4A-21	1	LKWA-51.2	4-24	4-29	4A-23
2	JHNSC-0.0	4-24	4-27	4A-11	2	TYLRC-0.0	4-24	4-36	4A-59
3	CEDRR-0.1	4-24	4-25	4A-3	<b>E - Winds from the EAST</b>				
<b>W - Winds from the WEST</b>					1	TYLRC-0.0	4-24	4-36	4A-59
1	JHNSC--0.0	4-24	4-27	4A-11	2	LKWA-51.2	4-24	4-29	4A-23
2	LKWA-46.1	4-24	4-29	4A-21	<b>NE - Winds from the NORTHEAST</b>				
3	MAYC-0.0	4-24	4-32	4A-37	1	TYLRC-0.0	4-24	4-36	4A-59
<b>SW - Winds from the SOUTHWEST</b>					2	CEDRR-0.1	4-24	4-25	4A-3
1	MAYC-0.0	4-24	4-32	4A-37	3	LKWA-46.1	4-24	4-29	4A-21
2	COALC-0.0	4-24	4-25	4A-5	4	JHNSC-0.0	4-24	4-27	4A-11
3	LKWA-35.4	4-23	4-28	4A-19	--	--	--	--	--

**Table 4.8**

<b>"LKWA-F" (Cedar River)</b>				
<b>Priority</b>	<b>Strategy Number</b>	<b>Sector Map</b>	<b>Strategy Matrix</b>	<b>Strategy Details</b>
1	CEDRR-0.1	4-24	4-25	4A-3
2	LKWA-46.1	4-24	4-29	4A-21
3	JHNSC-0.0	4-24	4-27	4A-11
4	TYLRC-0.0	4-24	4-36	4A-59









## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>CEDRR-0.1</b>	Renton Cedar River Trail Nishiwaki Lane near Boeing N47.49926 W122.21548	Collection	600ft	Yes	On-Site:  Stage equipment and vac truck or skimmer storage at NW corner of parking area (Cedar River Trail).	General Fish & Wildlife Resources; Freshwater Wildlife	Gate to area closes at dusk, contact Renton Police Department for access assistance; call (425) 430-7500. Notify Renton Parks; call (425) 430-6600. Inform Renton Municipal Airport of boom deployment adjacent to their property; call (425) 430-7471.	4-24	4A-3
<b>COALC-0.0</b>	Bellevue Coal Creek near Newport YC N47.57372 W122.19144	Exclusion	800ft	Yes	Off-Site:  Stage in parking area at SE 40th Street Boat Launch (SA-LKWA-35.6 & BL-LKWA-35.6)	General Fish & Wildlife Resources; Freshwater Wildlife	Private property on both sides of mouth; if available, coordinate with property owners directly. Notify Newport Yacht Club if securing boom to dock at Point B; call (425) 747-3291. Use workboat appropriate for shallow and muddy bottom near shore.	4-23	4A-5

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
COALC-0.5	Bellevue Coal Creek Glacier Key near Skagit Key N47.57079 W122.18695	Collection	100ft	No	On-Site: Stage on south side of roadway at Glacier Key. Follow WADOT work zone traffic control guidelines.	General Fish & Wildlife Resources; Freshwater Wildlife	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Bellevue Police via NORCOM at (425) 577-5656.	4-23	4A-7
COALC-0.9	Bellevue Coal Creek Skagit Key N47.56961 W122.18306	Collection	100ft	No	On-Site: Stage on south side of roadway at Glacier Key. Follow WADOT work zone traffic control guidelines.	General Fish & Wildlife Resources; Freshwater Wildlife	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Bellevue Police via NORCOM at (425) 577-5656.	4-23	4A-9

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>JHNSC-0.0</b>	Renton Johns Creek Gene Coulon Park N47.50511 W122.20232	Exclusion, Collection	250ft	Yes	On-Site:  Stage in Parking Area (SA-LKWA-45.5); Boat Launch Available (BL-LKWA-45.5)	General Fish & Wildlife Resources; Freshwater Wildlife	Gates to park close at dusk. Notify Renton Fire Department (via Valley Dispatch); call (425) 235-2121 or 911. Notify Renton Parks; call (425) 430-6600. Obstructed access to creek mouth from lake; hand-launch boat fm south dock.	4-24	4A-11
<b>LKWA-4.3</b>	Kenmore Saint Edward Park N47.73193 W122.26393	Exclusion	4400ft	Yes	Off-Site:  Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife	This is an old lumber yard site. The bottom has many submerged obstructions. Due to the size and exposed location of this strategy, constant maintenance/tending will likely be required for it to remain effective.	4-21	4A-13
<b>LKWA-11.0</b>	Kirkland Juanita Bay Park Forbes Crk Wetland N47.70148 W122.21488	Exclusion	2500ft	Yes	Off-Site:  Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands	Notify City of Kirkland; call (425) 587-3900. Due to the size of this strategy constant maintenance/tending will likely be required for it to remain effective.	4-22	4A-15

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LKWA-17.2	Kirkland Yarrow Bay Wetland N47.64874 W122.20882	Exclusion	1600ft	Yes	Off-Site: Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands	Notify City of Kirkland; call (425) 587-3900. May be able to stage boom on-site near Point A (Vilaggio on Yarrow Bay); call (425) 827-4603. Due to the size and exposed location of this strategy, constant maintenance/tending will likely be required.	4-22	4A-17
LKWA-35.4	Bellevue Mercer Slough Lakeside of Mouth N47.57751 W122.18889	Exclusion	1200ft	Yes	Off-Site: Stage in parking area at SE 40th Street Boat Launch (SA-LKWA-35.6 & BL-LKWA-35.6)	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands	Notify Bellevue Parks of Strategy Impelentation; call (425) 452-6885. Notify Newport Yacht Basin; call (206) 267- 2535. Limited access by foot underneath I-90 bridge at north end of strategy near Point A.	4-23	4A-19

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LKWA-46.1	Renton South Lake Washington Restoration Area near Boeing N47.50269 W122.20931	Exclusion	1800ft	Yes	Off-Site:  Stage in boat launch parking area at Gene Coulon Park (SA-LKWA- 45.5 & BL-LKWA-45.5)	General Fish & Wildlife Resources; Freshwater Wildlife; Restoration Area	Notify DNR Aquatics; call (206) 799-2949. Inform Boeing (Renton Facility); call (206) 655- 8800. Notify Renton Fire Department (via Valley Dispatch); call (425) 235-2121. Due to the size and exposed location, constant tending of strategy will likely be required.	4-24	4A-21
LKWA-51.2	Seattle Beer Sheva Park Lower Mapes Creek N47.52394 W122.26193	Exclusion	450ft	Yes	On-Site:  Stage in parking area at Atlantic City Boat Ramp (SA-LKWA-51.0 & BL- LKWA-51.0)	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands; Sensitive Habitat	Notify Seattle Parks; call (206) 982-4583 (pager). Outfall for Lower Mapes Creek is located north of the boat launch towards north end of the cove, hidden by tall grass and overhanging trees. Coordinate use of dock at Points B & C with property owner.	4-24	4A-23

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LKWA-59.3a	Seattle Lakewood Marina North End of Marina N47.65419 W122.26714	Exclusion	350ft	Yes	Off-Site:  Stage in boat launch parking area at Stan Sayres Memorial Park (SA-LKWA-60.5 & BL-LKWA-60.5)	General Fish & Wildlife Resources; Freshwater Wildlife	Notify Seattle Parks; call (206) 982-4583 (pager). Notify staff at Lakewood marina; call 206-722-3887. Single lane wood bridge to marina's island restricts on-site access by vehicle.	4-23	4A-25
LKWA-59.3b	Seattle Lakewood Marina South End of Marina N47.56234 W122.26597	Exclusion	800ft	Yes	Off-Site:  Stage in boat launch parking area at Stan Sayres Memorial Park (SA-LKWA-60.5 & BL-LKWA-60.5)	General Fish & Wildlife Resources; Freshwater Wildlife	Notify Seattle Parks; call (206) 982-4583 (pager). Notify staff at Lakewood marina; call 206-722-3887. Strategy deployment will block marina entrance. Single lane wood bridge to marina's island restricts on-site access by vehicle.	4-23	4A-27

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
LKWA-68.6	Seattle Union Bay East Arboretum N47.64491 W122.28549	Exclusion	3000ft	Yes	Off-Site: Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat	Notify Canterbury Shores Condominiums (Points A & B); call (206) 323-3129. Notify UW Botanic Gardens; call (206) 543-8616. Notify Seattle Parks; call (206) 982-4583 (pager). Due to size, constant maintenance/tending of strategy will likely be required.	4-22	4A-29
LKWA-70.7	Seattle Union Bay Arboretum WF Trail N47.64609 W122.29396	Exclusion	300ft	Yes	Off-Site: Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat	Notify UW Botanic Gardens of strategy deployment; (206) 543- 8616 or (206) 543- 8800. Notify Seattle Parks; call (206) 982- 4583 (pager).	4-22	4A-31
LKWA-71.1	Seattle Union Bay Arboretum WF Trail N47.646 W122.29913	Exclusion	200ft	Yes	Off-Site: Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat	Notify UW Botanic Gardens of strategy deployment; (206) 543- 8616 or (206) 543- 8800. Notify Seattle Parks; call (206) 982- 4583 (pager).	4-22	4A-33

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>LKWA-73.4</b>	Seattle Union Bay Natural Area UW Campus N47.65206 W122.29565	Exclusion	4200	Yes	Off-Site: Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat	Notify University of Washington Police; call (206) 685-8973. Inform UW Botanic Gardens; call (206) 543-8616. Due to the size of this strategy, constant maintenance/tending will likely be required for it to remain effective.	4-22	4A-35
<b>MAYC-0.0</b>	Renton Barbee Mill May Creek N47.52796 W122.20522	Exclusion	450ft	Yes	Off-Site: Stage in boat launch parking area at Gene Coulon Park (SA-LKWA- 45.5 & BL-LKWA-45.5)	General Fish & Wildlife Resources, Freshwaer Wildlife	Winds from the south can push lake water up into May Creek. Area along creek right was toxics cleanup site.	4-24	4A-37
<b>MAYC-0.4</b>	Renton May Creek N47.52989 W122.20099	Collection	100ft	No	On-Site: Stage on north side of roadway off Lake Washington Blvd N. Follow WADOT work zone traffic control guidelines.	General Fish & Wildlife Resources, Freshwaer Wildlife	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Renton Police at (425) 430-7500.	4-24	4A-39

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>MRCRI-1.6</b>	Mercer Island Luther Burbank Park N47.59544 W122.22785	Exclusion	1600	Yes	Off-Site: Use Mercer Island Boat Launch for Staging (SA-MRCRI-4.4 & BL-MRCRI-4.4)	General Fish & Wildlife Resources; Freshwater Wildlife	Notify Mercer Island Police & Marine Patrol; call (425) 577-5656 & (206) 275-7953. Notify Mercer Island Parks; call (206) 275-7609. Park Gate is closed 10pm - 6am; coordinate with MI Parks for access to shoreline areas within park (key card may be needed).	4-23	4A-41
<b>MRCRI-2.4</b>	Mercer Island Luther Burbank Park N47.58764 W122.22393	Exclusion	1000	Yes	Off-Site: Use Mercer Island Boat Launch for Staging (SA-MRCRI-4.4 & BL-MRCRI-4.4)	General Fish & Wildlife Resources; Freshwater Wildlife	Notify Mercer Island Police & Marine Patrol; call (425) 577-5656 & (206) 275-7953. Notify Mercer Island Parks; call (206) 275-7609. Park Gate is closed 10pm - 6am; coordinate with MI Parks for access to shoreline areas within park (key card may be needed).	4-23	4A-43

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>NCTRB-0.3</b>	Bothell North Creek Sports Field N47.76639 W122.18217	Collection	70ft	No	On-Site: North Creek Sports Field - Field 1 Parking Area	General Fish & Wildlife Resources; Freshwater Wildlife	Stage in SE corner of parking lot at North Creek Corporate Center (lot immediately north of Field 1); inform local security or property manager. Notify Bothell Parks; call (425) 486-7430. Stream flow variable; adjust strategy as for needed conditions.	4-21	4A-45
<b>SAMMR-0.0</b>	Kenmore Sammamish River (Mouth) N47.75310 W122.25736	Exclusion	1000ft	Yes	Off-Site: Use WDFW River Access Point for Staging Area & Boat Launch (SA- SAMMR-0.5 & BL- SAMMR-0.5)	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat	Inglewood community on south side of river is private property; must seek permission from property owners to access river by land.	4-21	4A-47
<b>SAMMR-0.6</b>	Kenmore 68th Avenue NE Sammamish River N47.75442 W122.24915	Exclusion, Collection	750ft	Yes	On-Site: WDFW River Access Point on SW side of bridge; Staging Area & Boat Launch (SA- SAMMR-0.5 & BL- SAMMR-0.5)	General Fish & Wildlife Resources; Freshwater Wildlife; Wetland	Collection Point at/near Point C; Vac Truck or Skimmer & Storage Needed. Notify WDFW; call (425) 775-1311. Notify City of Kenmore (non- emergency dispatch); call (206) 296-3311. Wetland area is located on northeast side of 68th Avenue Bridge.	4-21	4A-49

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>SAMMR-2.3</b>	Bothell 96th Avenue NE Sammamish River Wayne Golf Course N47.74823 W122.21342	Collection	300ft	Yes	On-Site:  Parking area at Wayne Golf Course or riverside of tee area for 18th hole; coordinate with property owner/manager.	General Fish & Wildlife Resources; Freshwater Wildlife	Private Property: coordinate activities with property owner/manager; call (425) 486-4714 or (425) 485-6237. May be able to stage Vac Truck on bridge; follow WADOT traffic guidelines.	4-21	4A-51
<b>SAMMR-3.4</b>	Bothell 102nd Avenue NE Sammamish R. Park N47.75877 W122.20337	Collection	200ft	Yes	On-Site:  Stage in parking area at Sammamish River Park (west of 102nd Avenue NE on south side of bridge - river left).	General Fish & Wildlife Resources; Freshwater Wildlife	Notify City of Bothell Parks & Recreation; call (425) 486-7430. Notify King County Parks Duty Officer; call (206) 296-8100. Contact Fluke Metal Products for access to river right upstream of bridge (Point B); call (425) 485-9666.	4-21	4A-53

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
<b>SAMMR-4.5</b>	Bothell I-405/Hwy522 Sammamish River N47.75635 W122.18654	Collection	300ft	Yes	On-Site:  Stage equipment on Sammamish River Trail; access via gate at west end of NE 178th Street (Woodinville).	General Fish & Wildlife Resources; Freshwater Wildlife	Notify King County Parks Duty Officer and Woodinville Parks – trail access help can be provided; call (206) 296-8100 and (260) 510-3700. Notify Bothell Parks; call (425) 486-7430. Trail can support pickups but not heavy trucks. Reroute pedestrian/bicycle traffic.	4-21	4A-55
<b>THORC-0.0</b>	Seattle Mathews Beach Park N47.69476 W122.27162	Exclusion	200ft	Yes	Off-Site:  Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	General Fish & Wildlife Resources; Freshwater Wildlife	Fluctuating sand/silt bar near mouth of creek; water depth may vary. Site accessible by foot through Mathews Beach Park. Notify Seattle Parks; call (206) 982-4583 (pager).	4-22	4A-57
<b>TYLRC-0.0</b>	Seattle Lakeridge Park N47.51231 W122.24625	Exclusion	400ft	Yes	Off-Site:  Use Beer Sheva Park for Staging Area & Boat Launch (SA-LKWA-51.0 & BL-LKWA-51.0)	General Fish & Wildlife Resources; Freshwater Wildlife	Must coordinate use of private docks at Points A & B and Points D & E with property owners.	4-24	4A-59

## Lake Washington Geographic Response Plan

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
WSTRB-2.6	Bellevue near Kelsey Crk Park N47.61743 W122.16812	Underflow Dam	Sorbent	No	On-Site: Stage one pulloff/trail on north side of NE 8th Street, ~200ft west of 130th Avenue NE.	General Fish & Wildlife Resources; Freshwater Wildlife	Key is needed to access creek and pond area; contact City of Bellevue Utilities at (425) 452-6932 for assistnace.WDFW Emergency HPA Permit required to implement stratgy; call (360) 534-8233 (24hr pager).	4-23	4A-61

Strategy Number	Location Waterway	Strategy Type	Resources at Risk	Implementation	Comments	Sector Map (Page#)	Strategy Details (Page#)
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No Notification Strategies Currently Exist for Lake Washington

## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
SA-LKWA-35.6	SE 40th Street Boat Launch - Staging Area	N47.57502 W122.1888	3911 Lake Washington Blvd SE Bellevue, WA 98006	City of Bellevue Parks & Community Services 450 110th Avenue NE, P.O. Box 90012 Bellevue, WA 98009 (425) 452-6885	COALC-0.0 LKWA-35.4	Boat Ramp (2 Lanes) Ramp Type: Concrete 1 Boat Dock Restrooms Available Parking: 65 Spaces 35,000 sqft Lot Cover: Asphalt User Fee: \$11 to \$13/day	4-23	4C-3
SA-LKWA-45.5	Gene Coulon Memorial Beach Park - Staging Area	N47.5052 W122.20156	1201 Lake Washington Blvd N Renton, WA 98057	City of Renton - Parks Division 1055 S. Grady Way Renton, WA 98057 (425) 430-6600 or (425) 235-2121	JHNSC-0.0 LKWA-46.1 MAYC-0.0	Boat Ramp (8 Lanes) Ramp Type: Concrete 4 Boat Docks Restrooms Power & Water Car Parking: 60+ Spaces Trailer Parking: 100+ 280,000+ sqft Lot Cover: Asphalt User Fee: \$10 to \$20/day	4-24	4C-5
SA-LKWA-51.0	Beer Sheva Park - Staging Area (Atlantic City Boat Ramp)	N47.52317 W122.26368	9017 Seward Park Ave S Seattle, WA 98118	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615-0387 Afterhours Pager: (206) 982-4583	LKWA-51.2 TYLRC-0.0	Boat Ramp (6 Lanes) Ramp Type: Concrete 2 Boat Docks Car Parking: 15 Spaces Trailer Parking: 32 Spaces 89,000 sqft Lot Cover: Asphalt User Fee: Unknown	4-24	4C-7

## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
SA-LKWA-60.5	Stan Sayres Memorial Park - Staging Area	N47.5711 W122.27719	3800 Lake Washington Blvd S Seattle, WA 98118	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615- 0387 Afterhours Pager: (206) 982-4583	LKWA-59.3a LKWA-59.3b	Boat Ramp (4 Lanes) Ramp Type: Concrete 2 Boat Docks Portable Toilets Car Parking: 60 Spaces Trailer Parking: 30 Spaces 62,000 sqft Lot Cover: Asphalt User Fee: \$12/day	4-23	4C-9
SA-LKWA-79.1	Warren G. Magnuson Park - Staging Area	N47.67687 W122.25063	7400 Sand Point Way NE Seattle, WA	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615- 0387 Afterhours Pager: (206) 982-4583	LKWA-4.3 LKWA-11.0 LKWA-17.2 LKWA-68.6 LKWA-70.7 LKWA-71.1 LKWA-73.4 THORC-0.0	Boat Ramp (4 Lanes) Ramp Type: Concrete 3 Boat Docks Toilets Available Power Available Car Parking: 70 Spaces Trailer Parking: 50 Spaces 200,000 sqft Lot Cover: Asphalt User Fee: \$12/day	4-22	4C-11
SA-MRCRI-4.4	Mercer Island Boat Launch - Staging Area	N47.57774 W122.20323	3600 East Mercer Way (Frontage Road) Mercer Island, WA 98040	City of Mercer Island Parks & Recreation 2040 84th Ave SE Mercer Island, WA 98040 (206) 275-7609, miparks@mercergov.org	MRCRI-1.6 MRCRI-2.4	Boat Ramp - Concrete (1) Boat Dock (1) Portable Toilets (2) Trailer Parking (60 Spaces) 40,000sqft (asphalt) Covered Space under I-90 User Fee: \$11	4-23	4C-13

## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
<b>SA-SAMMR-0.5</b>	Sammamish River - Staging Area (WDFW Water Access)	N47.75408 W122.25045	17181 Juanita Drive NE Kenmore, WA 98028	WDFW Region 4 16018 Mill Creek Blvd Mill Creek, WA 98012-1296 Ph: (425) 775-1311	SAMMR-0.0 SAMMR-0.6 SAMMR-2.3 SAMMR-3.4	Boat Ramp - Concrete (1) Restrooms (1) No Dock No Power No Water Parking (Unmarked) 37,000sqft (dirt/gravel) No Covered Spaces Discovery Pass Required	4-21	4C-15

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## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
<b>BL-LKWA-14.0</b>	Kirkland Marina Park - Boat Launch	N47.67565 W122.20956	46 Lakeshore Plaza Drive Kirkland, WA 98033	City of Kirkland 505 Market Street Kirkland, WA 98033 (425) 587-3900	No Information	Boat Ramp (1 Lane) Ramp Type: Concrete 1 Boat Dock Parking: 100+ Spaces 7,000 sqft Lot Cover: Asphalt User Fee: Access Card Req'd	4-22	4D-3
<b>BL-LKWA-35.6</b>	SE 40th Street - Boat Launch	N47.57500 W122.18885	3911 Lake Washington Blvd SE Bellevue, WA 98006	City of Bellevue Parks & Community Services 450 110th Avenue NE, P.O. Box 90012 Bellevue, WA 98009 (425) 452-6885	COALC-0.0 LKWA-35.4	Boat Ramp (2 Lanes) Ramp Type: Concrete 1 Boat Dock Restrooms Available Parking: 65 Spaces 35,000 sqft Lot Cover: Asphalt User Fee: \$11 to \$13/day	4-23	4D-5
<b>BL-LKWA-45.5</b>	Gene Coulon Memorial Beach Park - Boat Launch	N47.50548 W122.20211	1201 Lake Washington Blvd N Renton, WA 98057	City of Renton - Parks Division 1055 S. Grady Way Renton, WA 98057 (425) 430-6600 or (425) 235-2121	JHNSC-0.0 LKWA-46.1 MAYC-0.0	Boat Ramp (8 Lanes) Ramp Type: Concrete 4 Boat Docks Restrooms Power & Water Car Parking: 60+ Spaces Trailer Parking: 100+ 280,000+ sqft Lot Cover: Asphalt User Fee: \$10 to \$20/day	4-24	4D-7

## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
<b>BL-LKWA-51.0</b>	Beer Sheva Park - Atlantic City Boat Ramp	N47.52281 W122.2632	9017 Seward Park Ave S Seattle, WA 98118	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615-0387 Afterhours Pager: (206) 982-4583	LKWA-51.2 TYLRC-0.0	Boat Ramp (6 Lanes) Ramp Type: Concrete 2 Boat Docks Car Parking: 15 Spaces Trailer Parking: 32 Spaces 89,000 sqft Lot Cover: Asphalt User Fee: \$12/day	4-24	4D-9
<b>BL-LKWA-60.5</b>	Stan Sayres Memorial Park - Boat Launch	N47.57117 W122.27681	3800 Lake Washington Blvd S Seattle, WA 98118	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615-0387 Afterhours Pager: (206) 982-4583	LKWA-59.3a LKWA-59.3b	Boat Ramp (4 Lanes) Ramp Type: Concrete 2 Boat Docks Portable Toilets Car Parking: 60 Spaces Trailer Parking: 30 Spaces 62,000 sqft Lot Cover: Asphalt User Fee: \$12/day	4-23	4D-11
<b>BL-LKWA-79.1</b>	Warren G. Magnuson Park - Boat Launch	N47.67687 W122.25009	7400 Sand Point Way NE Seattle, WA	Seattle Parks and Recreation 100 Dexter Ave N Seattle, WA 98109 Boat Ramp Supervisor: (206) 684-7249 Park Rangers: (206) 615-0387 Afterhours Pager: (206) 982-4583	LKWA-4.3 LKWA-11.0 LKWA-17.2 LKWA-68.6 LKWA-70.7 LKWA-71.1 LKWA-73.4 THORC-0.0	Boat Ramp (4 Lanes) Ramp Type: Concrete 3 Boat Docks Toilets Available Power Available Car Parking: 70 Spaces Trailer Parking: 50 Spaces 200,000 sqft Lot Cover: Asphalt User Fee: \$12/day	4-22	4D-13

## Lake Washington Geographic Response Plan

Site Number	Name	Position	Nearest Address	Contact	Strategies Served	Comments	Sector Map (Page#)	Site Details (Page#)
<b>BL-MRCRI-4.4</b>	Mercer Island - Boat Launch	N47.5779 W122.20203	3600 East Mercer Way (Frontage Road) Mercer Island, WA 98040	City of Mercer Island Parks & Recreation 2040 84th Ave SE Mercer Island, WA 98040 (206) 275-7609, miparks@mercergov.org	MRCRI-1.6 MRCRI-2.4	Boat Ramp - Concrete (1) Boat Dock (1) Portable Toilets (2) Trailer Parking (60 Spaces) 40,000sqft (asphalt) Covered Space under I-90 User Fee: \$11/day	4-23	4D-15
<b>BL-SAMMR-0.5</b>	Sammamish River - Boat Launch (WDFW Water Access)	N47.75437 W122.25057	17181 Juanita Drive NE Kenmore, WA 98028	WDFW Region 4 16018 Mill Creek Blvd Mill Creek, WA 98012-1296 Ph: (425) 775-1311	SAMMR-0.0 SAMMR-0.6 SAMMR-2.3 SAMMR-3.4	Boat Ramp - Concrete (1) Restrooms (1) No Dock No Power No Water Parking (Unmarked) 37,000sqft (dirt/gravel) No Covered Spaces Discovery Pass Required	4-21	4D-17

# **Appendix 4A**

## **Response Strategy 2-Pagers**

**Response Strategies – List**

<b>CEDRR-0.1</b>	<b>LKWA-35.4</b>	<b>LKWA-73.4</b>	<b>SAMMR-0.6</b>
<b>COALC-0.0</b>	<b>LKWA-46.1</b>	<b>MAYC-0.0</b>	<b>SAMMR-2.3</b>
<b>COALC-0.5</b>	<b>LKWA-51.2</b>	<b>MAYC-0.4</b>	<b>SAMMR-3.4</b>
<b>COALC-0.9</b>	<b>LKWA-59.3a</b>	<b>MRCRI-1.6</b>	<b>SAMMR-4.5</b>
<b>JHNSC-0.0</b>	<b>LKWA-59.3b</b>	<b>MRCRI-2.4</b>	<b>THORC-0.0</b>
<b>LKWA-4.3</b>	<b>LKWA-68.6</b>	<b>NCTRB-0.3</b>	<b>TYLRC-0.0</b>
<b>LKWA-11.0</b>	<b>LKWA-70.7</b>	<b>SAMMR-0.0</b>	<b>WSTRB-2.6</b>
<b>LKWA-17.2</b>	<b>LKWA-71.1</b>		

# Cedar River (River Mouth at North End of Cedar River Trail)

CEDRR-0.1

<b>Position - Location:</b>	47.49926	-122.21548	Renton (King County)
<b>Strategy Objective:</b>	Collection	Collect oil moving downstream on Cedar River	
<b>Implementation:</b>	From boat ramp on river right off Nishiwaki Lane, use small workboat to tow end of 600ft section of boom across to river left (west side of river) and secure to bank near Point A (N47.49831, W122.21542), along property line for Renton Municipal Airport. Guide boom downstream and across to river right, securing it to shore near Point B (N47.49986, W122.21541). Form a collection pocket at Point B, as needed for vac truck or skimmer collection. Use anchors or line systems to keep boom secure in river. Adjust boom angles as needed for conditions. River debris likely during medium and high flow conditions; adjust strategy as needed.		
<b>Staging Area:</b>	On-Site:	Stage equipment and vac truck or skimmer storage at NW corner of parking area (Cedar River Trail).	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Heavy Vegetation; Floating Logs and Debris		
<b>Field Notes:</b>	Gate to area closes at dusk, contact Renton Police Department for access assistance; call (425) 430-7500. Notify Renton Parks; call (425) 430-6600. Inform Renton Municipal Airport of boom deployment adjacent to their property; call (425) 430-7471.		
<b>Watercourse:</b>	River - Cedar River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

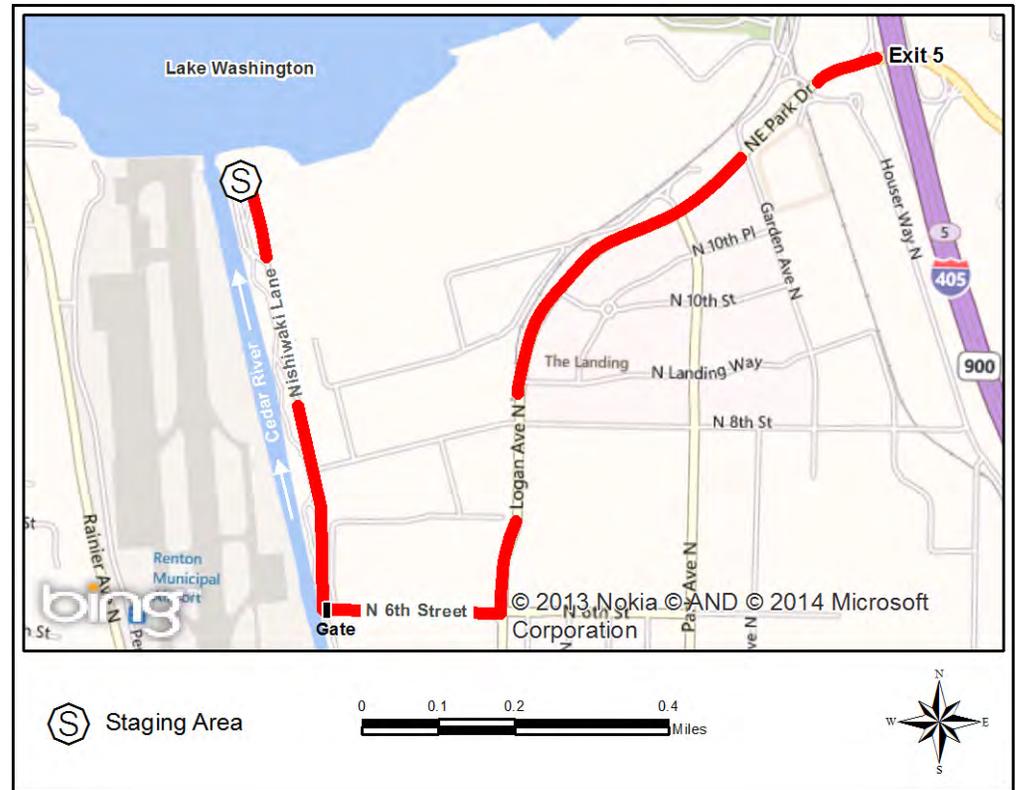
600	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Workboat(s) - Small (power restrictions apply)
6	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
500	Feet	Line - 3/8" poly line
2	Each	Heaving Line(s)
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

## Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo CEDRR-0.1: On river right looking downstream towards bridge and mouth of Cedar River.



### SiteContact

City of Renton - Police  
(425) 430-7500

### NearestAddress

982 Nishiwaki Lane  
Renton, WA 98057

### DrivingDirections

From Interstate-405

1. Take Exit 5 and head west on NE Park Drive (becomes Logan Avenue N).
2. After ~1.1 miles, turn right onto N 6th Street.
3. After 0.2 miles continue straight (through gate) onto Nishiwaki Lane (which curves to right immediately after the gate).
4. Stay on Nishiwaki Lane for 0.6 mile, until you reach the north end parking area adjacent to the Cedar River. Stage equipment in parking area near river. Boat launch (small) located ~500ft to the south.

NOTE: If gate to Nishiwaki Lane is closed (after-hours), contact Renton Fire Department via Valley Dispatch at (425) 235-2121 or 911. Request FD assistance in gaining access to Cedar River Trail at Nishiwaki Lane.

# Coal Creek (Mouth)

COALC-0.0

<b>Position - Location:</b>	47.57372	-122.19144	Bellevue (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil in Coal Creek out of Lake Washington, or oil in lake out of Coal Creek	
<b>Implementation:</b>	From SE 40th Street boat ramp (BL-LKWA-35.6), tow 800ft boom around to south side of Newport Yacht Club. Secure boom end to shore north of creek near Point A (N47.57367, W122.19037). Tow boom out and around creek mouth; secure remaining boom end to shore near Point D (N47.57355, W122.19141). Pull tension on boom at point ~200ft from Point D, anchoring boom in place near Point C (N47.57387, W122.19219). Secure boom to SW corner of dock at Newport Yacht club near Point B (~300ft from Point A). Use anchor posts to secure boom to shore. Use additional anchors or lines to keep boom secure in lake. Adjust as conditions require.		
<b>Staging Area:</b>	Off-Site:	Stage in parking area at SE 40th Street Boat Launch (SA-LKWA-35.6 & BL-LKWA-35.6)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Shallow Water; Mud/Muddy Bottom & Creek Banks, Heavy Brush Near Shore		
<b>Field Notes:</b>	Private property on both sides of mouth; if available, coordinate with property owners directly. Notify Newport Yacht Club if securing boom to dock at Point B; call (425) 747-3291. Use workboat appropriate for shallow and muddy bottom near shore.		
<b>Watercourse:</b>	Creek - Coal Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

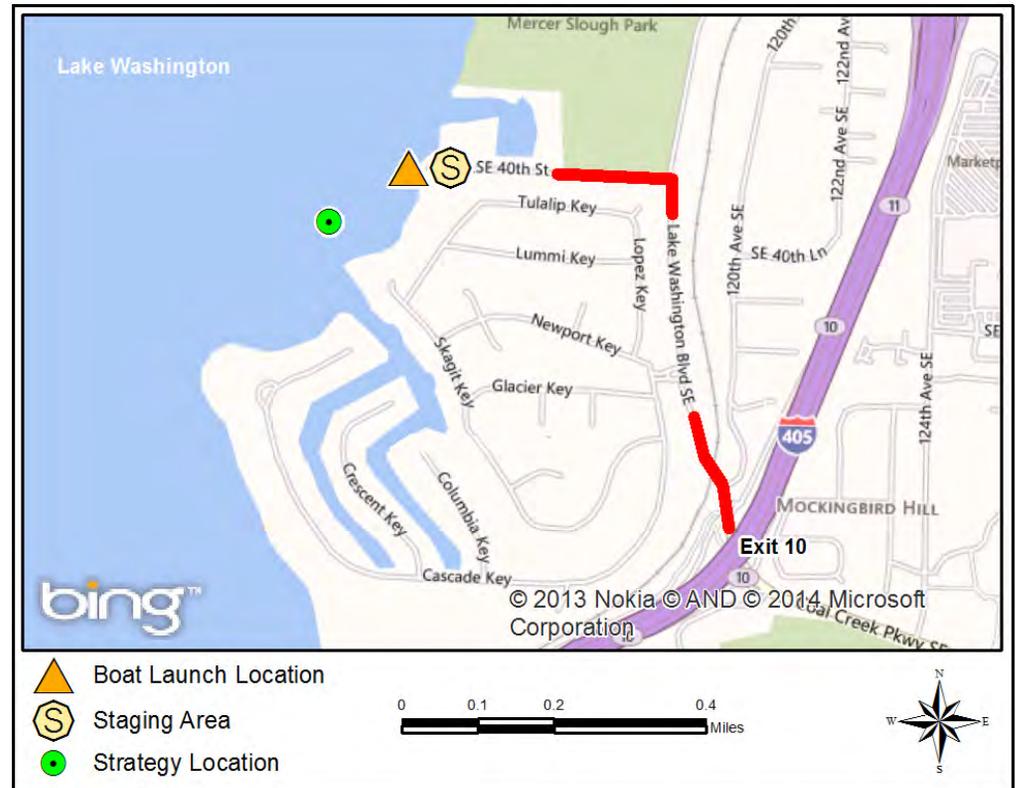
800	Feet	Boom - B3 (River Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
6	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
500	Feet	Line - 3/8" poly line

### Recommended Personnel

1	Supervisor(s)
4	Laborer(s)
1	Boat Operator(s)



Photo COALC-0.0: Aerial photo, looking ENE towards mouth of Coal Creek. Very shallow or mud flat at low lake levels. Newport Yacht Club in upper left.



### SiteContact

No Information

### NearestAddress

75 Skagit Key  
Bellevue, WA 98006

### DrivingDirections

TO STAGING AREA (SA-LKWA-35.6) AND BOAT LAUNCH (BL-LKWA-35.6)

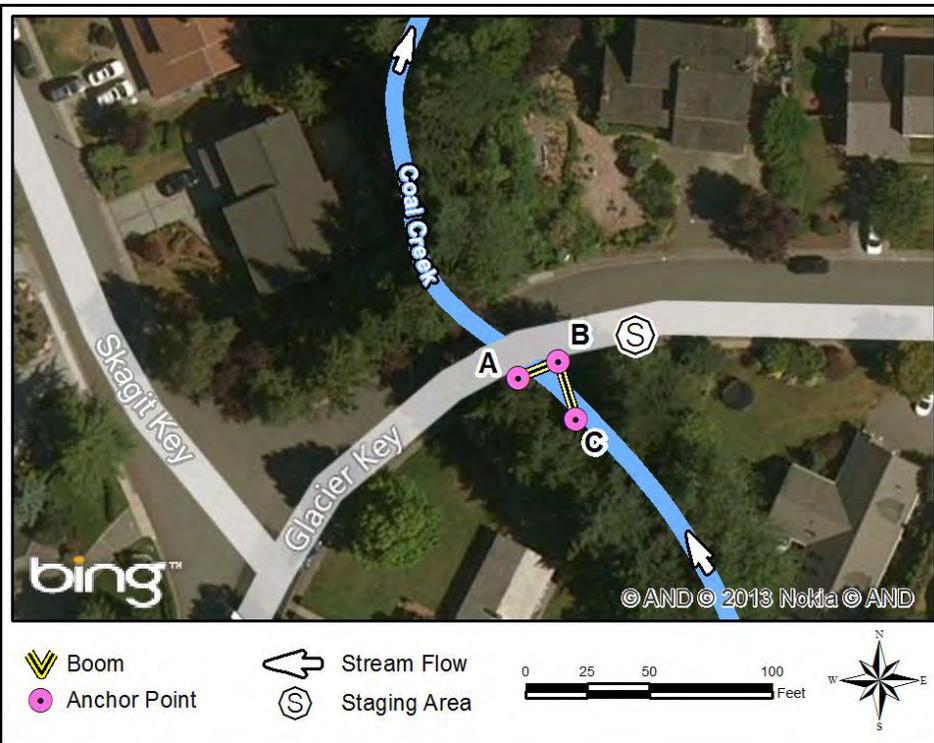
FROM Interstate-405 (Northbound):

1. Take Exit 10 and at bottom of ramp take sharp left turn onto Coal Creek Pkwy SE; continue northwest onto Lake Washington Blvd SE.
2. After ~0.5 miles, turn left onto SE 40th Street.
3. Travel on SE 40th Street to boat ramp at end of the road (~0.3 miles). Stage equipment in parking area or along small pullout at NW corner of roadway before boat lanes.

# Coal Creek (Skagit Key)

COALC-0.5

<b>Position - Location:</b>	47.57079	-122.18695	Bellevue (King County)
<b>Strategy Objective:</b>	Collection	Collect oil moving downstream on Coal Creek	
<b>Implementation:</b>	On SW side of roadway at Glacier Key, secure end of 100ft length of boom to creek bank (creek left) near Point A (N47.57077, W122.18702). Extend boom across creek (to the west), blocking stream at roadway. Secure boom to bank on creek right near Point B. Use line to pull boom upstream and across to creek left at Point C, adjusting boom angle as needed for conditions. Back hard boom with multiple lines of sorbent and snare boom on north and south sides of roadway. Use anchor posts or trees to secure boom to creek banks. Use lines to keep boom secure in creek. Collect oil at or near Point B using Vac Truck or Skimmer w/ storage.		
<b>Staging Area:</b>	On-Site:	Stage on south side of roadway at Glacier Key. Follow WADOT work zone traffic control guidelines.	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Roadway Hazard; Muddy & Unstable Creek Banks; Overgrown Vegetation		
<b>Field Notes:</b>	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Bellevue Police via NORCOM at (425) 577-5656.		
<b>Watercourse:</b>	Creek - Coal Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		

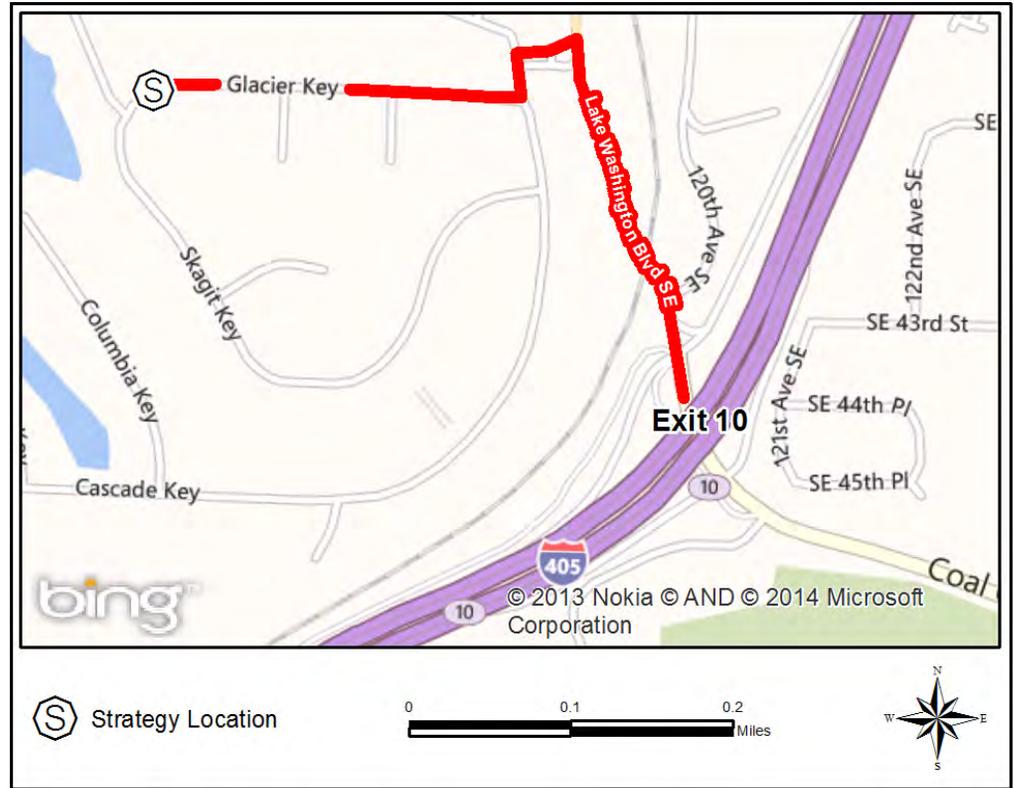
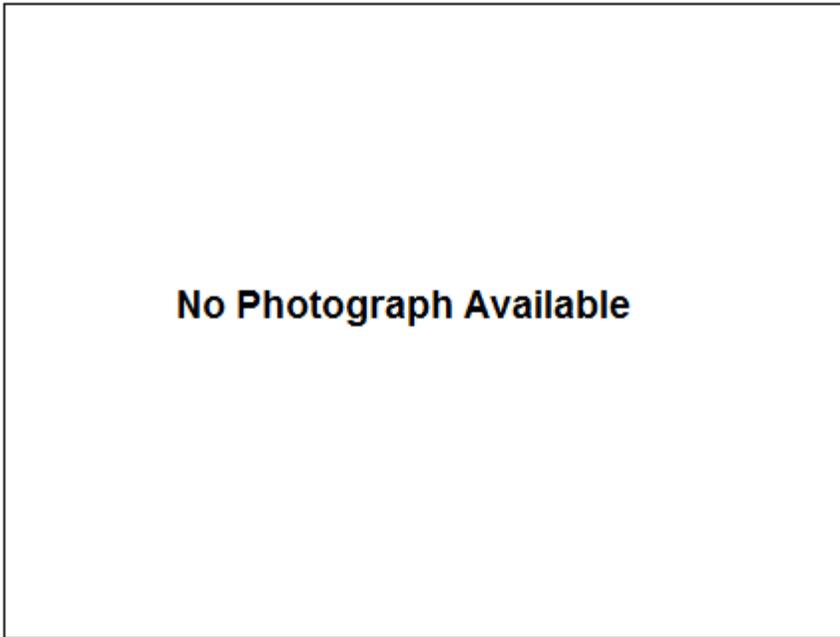


### Recommended Equipment

100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
100	Feet	Boom - Snare (Pom-Poms)
10	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)



SiteContact

No Information

NearestAddress

51 Glacier Key
Bellevue, WA 98006

DrivingDirections

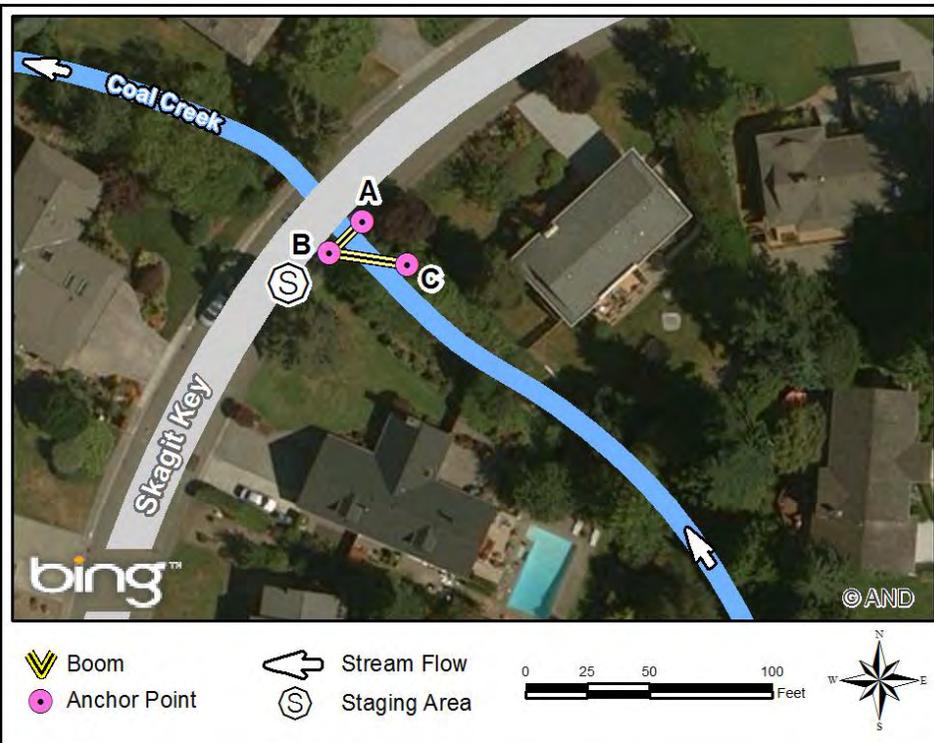
From Interstate-405

- 1. Take Exit 10 on Interstate-405 and head northwest on Lake Washington Blvd SE.
2. After ~0.3 miles, turn left onto Newport Key ("Newport Shores").
3. After ~200ft (at stop sign) turn left onto Cascade Key
4. After ~150ft (first right) turn right onto Glacier Key.
5. After 0.2 miles, before Skagit Key, the road passes over Coal Creek.
6. Stage on roadway or sholder, near creek.

# Coal Creek (Casacde Key Crossing)

COALC-0.9

<b>Position - Location:</b>	47.56961	-122.18306	Bellevue (King County)
<b>Strategy Objective:</b>	Collection	Collect oil moving downstream on Coal Creek	
<b>Implementation:</b>	On NE side of roadway at Skagit Key, secure end of 100ft length of boom to creek bank (creek right) near Point A (N47.56965, W122.18302). Extend boom across creek (to the SE), blocking stream at roadway. Secure boom to bank on creek left near Point B. Use line to pull boom upstream and across to creek right at Point C, adjusting boom angle as needed for conditions. Back hard boom with multiple lines of sorbent and snare boom on SE and NE sides of roadway. Use anchor posts or trees to secure boom to creek banks. Use lines to keep boom secure in creek. Collect oil at or near Point B using Vac truck or Skimmer w/ portable storage.		
<b>Staging Area:</b>	On-Site:	Stage on south side of roadway at Glacier Key. Follow WADOT work zone traffic control guidelines.	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Roadway Hazard; Muddy & Unstable Creek Banks; Overgrown Vegetation		
<b>Field Notes:</b>	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Bellevue Police via NORCOM at (425) 577-5656.		
<b>Watercourse:</b>	Creek - Coal Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		

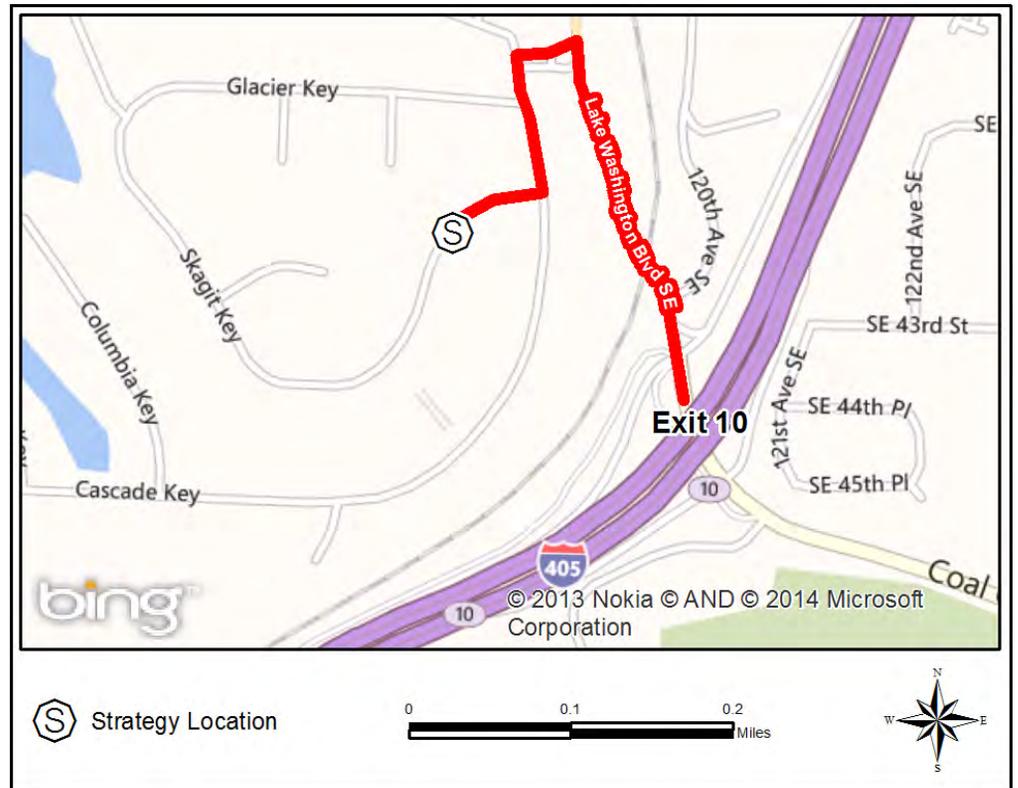
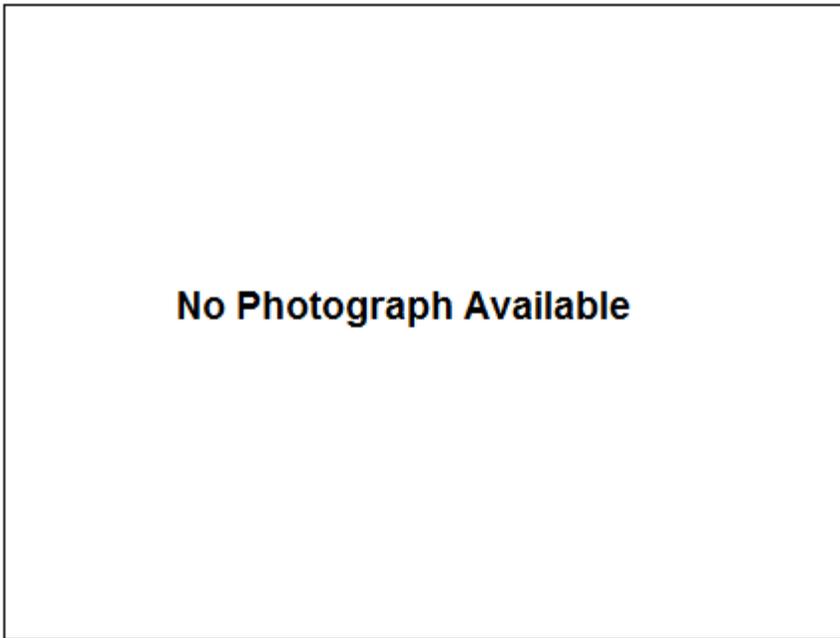


### Recommended Equipment

100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
100	Each	Boom - Snare (Pom-Poms)
9	Each	Anchoring Post(s) - (shoreside)
2	Feet	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)



### SiteContact

No Information

### NearestAddress

5 Skagit Key  
Bellevue, WA 98006

### DrivingDirections

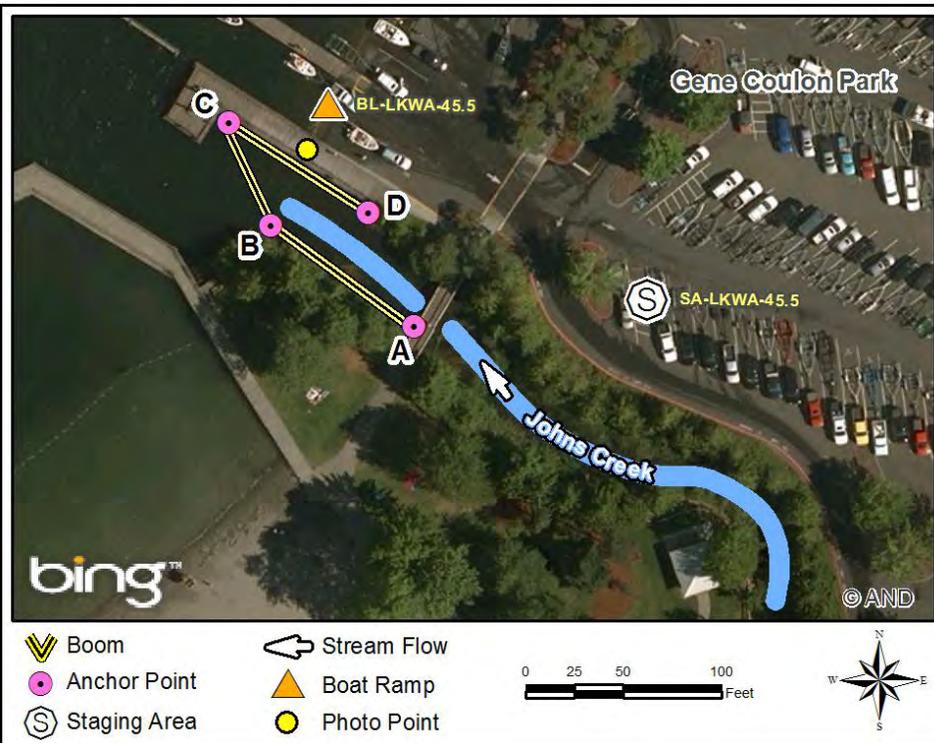
From Interstate-405

1. Take Exit 10 on Interstate-405 and head northwest on Lake Washington Blvd SE.
2. After ~0.3 miles, turn left onto Newport Key ("Newport Shores").
3. After ~200ft (at stop sign) turn left onto Cascade Key
4. After ~430ft (second right) turn right onto Skagit Key.
5. After ~340ft the road passes over Coal Creek. Stage on roadway or sholder, near creek.

# Johns Creek (Mouth) at Gene Coulon Park

JHNSC-0.0

<b>Position - Location:</b>	47.50511	-122.20232	Renton (King County)
<b>Strategy Objective:</b>	Exclusion, Collection	Keep oil in Lake Washington out of Johns Creek. Collect oil in creek before it reaches the lake.	
<b>Implementation:</b>	Using hand-launch workboat, bring end of 250ft length of boom upstream to creek left and secure to bank near Point A (N47.50502, W122.20217) under SW corner of walking bridge over Johns Creek. Extend boom downstream along creek left ~90ft, securing it to bank near Point B. Bring boom across to creek right ~60ft, securing it to inside corner of boat ramp dock near Point C. Run remaining boom upstream along creek right on south side of dock, securing end near Point D. Use anchor posts or trees, and line to keep boom secure in creek. Back hard boom with sorbent and snare, lakeside of Points B & C. Collect oil at/near Point C.		
<b>Staging Area:</b>	On-Site:	Stage in Parking Area (SA-LKWA-45.5); Boat Launch Available (BL-LKWA-45.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Vehicle Hazard (Parking Area); Muddy & Unstable Creek Banks; Overgrown Vegetation		
<b>Field Notes:</b>	Gates to park close at dusk. Notify Renton Fire Department (via Valley Dispatch); call (425) 235-2121 or 911. Notify Renton Parks; call (425) 430-6600. Obstructed access to creek mouth from lake; hand-launch boat fm south dock.		
<b>Watercourse:</b>	Creek - Johns Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

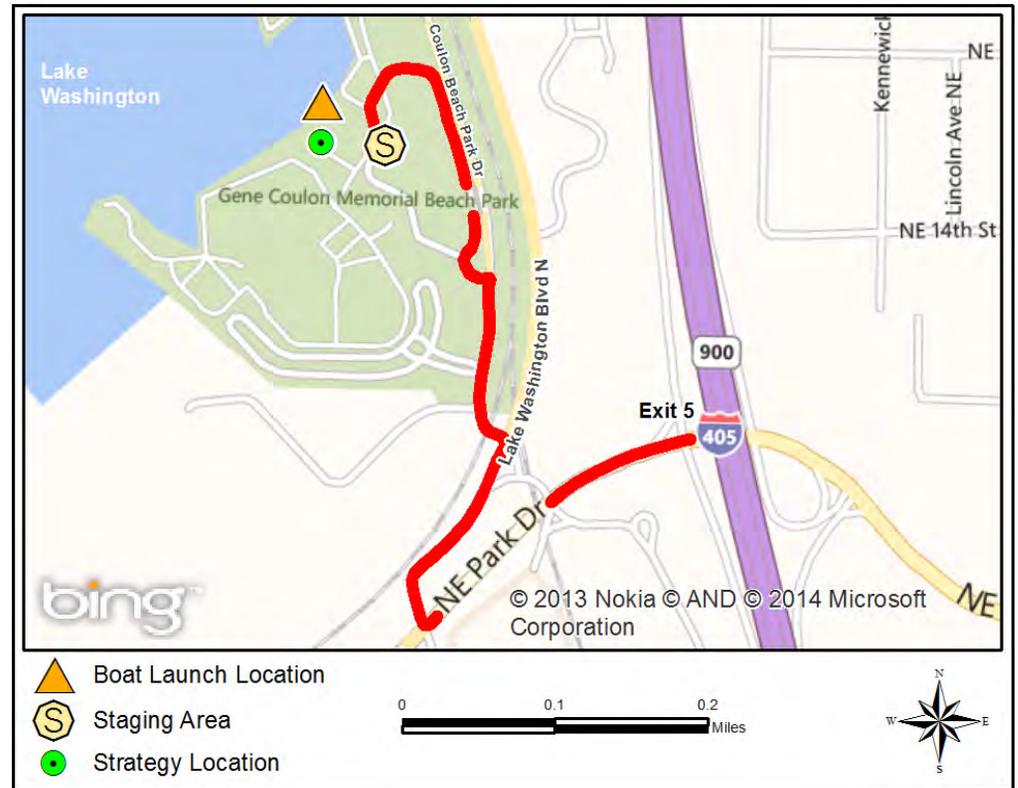
250	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
100	Feet	Boom - Snare (Pom-Poms)
1	Each	Workboat(s) - (hand-launch)
8	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

## Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo JHNSC-0.0: Mouth of Johns Creek at south boat ramp dock at Gene Coulon Park, looking upstream towards bridge over creek.



### SiteContact

City of Renton - Parks Division  
 1055 S. Grady Way  
 Renton, WA 98057  
 (425) 430-6600 or (425) 235-2121

### NearestAddress

1100 Lake Washington Blvd N  
 Renton, WA 98057

### DrivingDirections

TO STAGING AREA (SA-LKWA-45.5) AND BOAT LAUNCH (BL-LKWA-45.5)

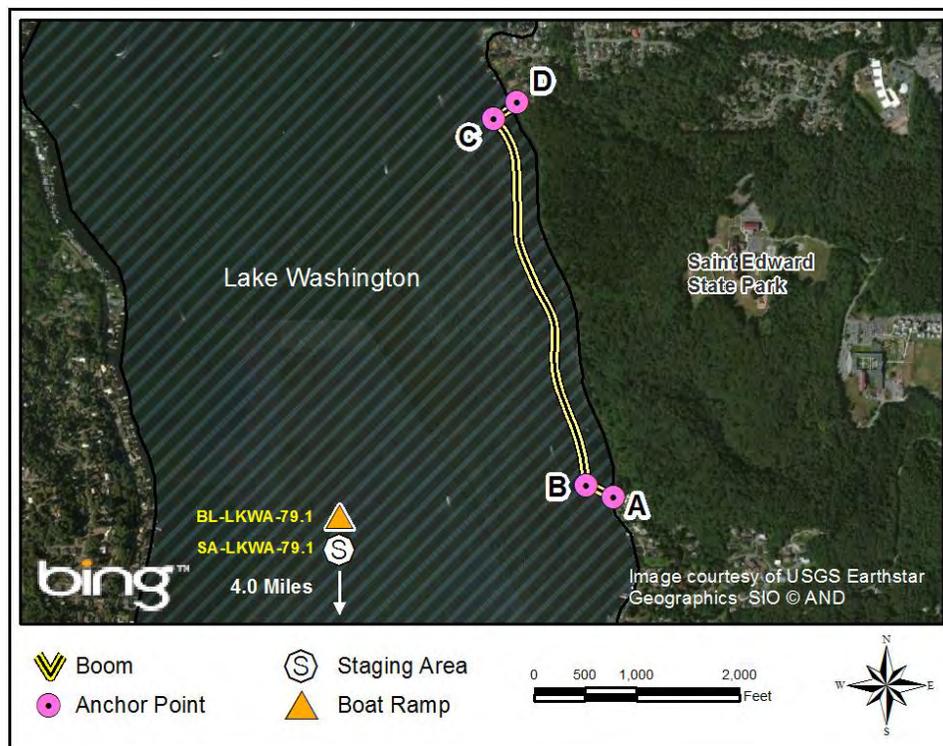
FROM- Interstate 405 (Northbound):

1. Take Exit 5 and travel towards the southwest on NE Park Drive (stay in far right lane).
2. After ~0.2 miles, take right turn and follow curve of road onto Lake Washington Blvd N.
3. After ~0.1 mile, enter left hand turn lane and turn left onto Coulon Beach Park Drive; follow roadway towards the right immediately after the turn.
4. After ~0.1 mile, turn left into the park complex; follow road to the right immediately after turn. Travel on road around parking area for ~0.2 miles to the boat ramp location on Lake Washington. Stage equipment in parking area near boat ramp.

# Saint Edward State Park

LKWA-4.3

<b>Position - Location:</b>	47.73193	-122.26393	Kenmore (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline area adjacent to Saint Edward State Park	
<b>Implementation:</b>	Using workboats, transport 4400ft of boom to strategy location. Anchor boom to shore at south end of Saint Edward State Park, near Point A (N47.7265, W122.26188). From Point A, extend boom WNW about ~300ft, anchoring SW corner of strategy near Point B (N47.72665, W122.2629). From Point B, continue north ~3800ft anchoring NW corner of strategy near Point C (N47.73633, W122.26689) . From Point C, extend boom NE ~300ft and secure it to shore near Point D (N47.73677, W122.26603). Maintain 200ft to 300ft distance from shore between Points B & C. Anchor boom every ~100ft or so (as needed) as you pay it out from work boat.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Submerged Obstructions and Heavy Vegetation Near Shore		
<b>Field Notes:</b>	This is an old lumber yard site. The bottom has many submerged obstructions. Due to the size and exposed location of this strategy, constant maintenance/tending will likely be required for it to remain effective.		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

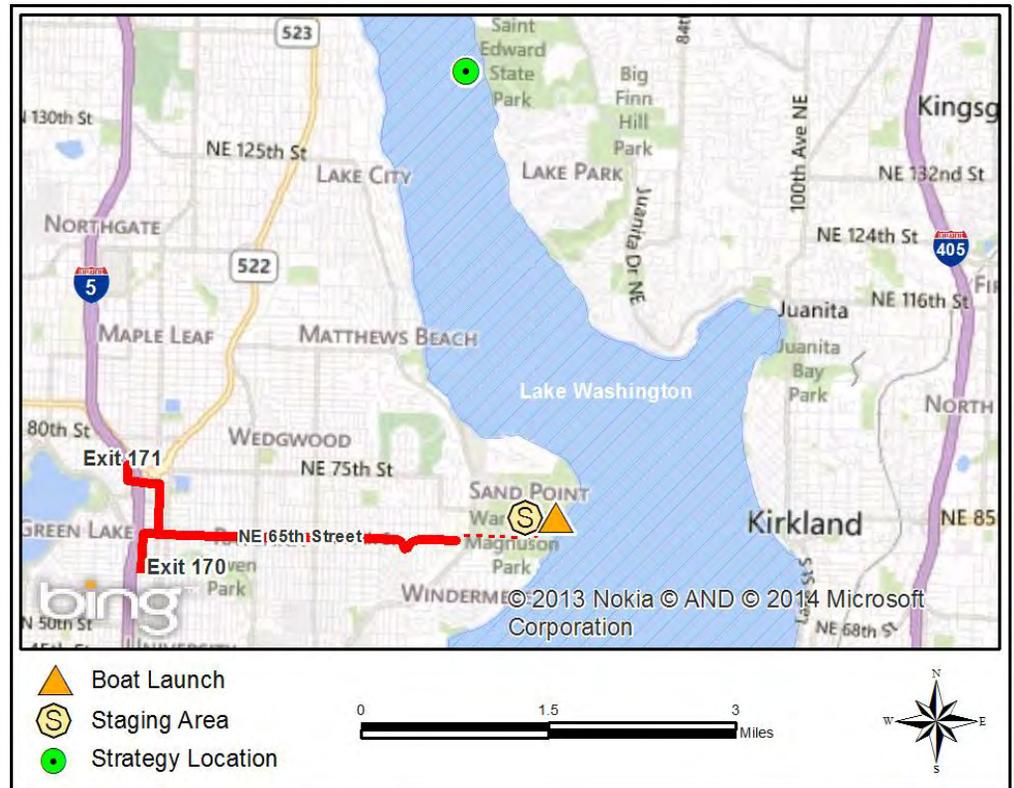
4400	Feet	Boom - B3 (Contractor Boom) or equivalent
3	Each	Workboat(s) - of adequate size for type & amount of boom
3	Each	Towing Bridal(s) - (appropriately sized for boom)
43	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
3	Each	Anchoring Post Driver(s)
3	Each	Heaving Line(s)

### Recommended Personnel

1	Supervisor(s)
8	Laborer(s)
3	Boat Operator(s)



Photo LKWA-4.3: Aerial photo, looking E towards eastern shoreline of Lake Washington off south end of Saint Edward State Park. Anchor Point A noted.



**SiteContact**

Saint Edward State Park  
 14445 Juanita Dr. N.E.  
 Kenmore, WA 98028  
 (425) 823-2992

**NearestAddress**

(Point A)  
 13867 62nd Ave NE, Kirkland, WA 98034

(Point D)  
 14915 58th Lane NE, Kenmore, WA 98028

**DrivingDirections**

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

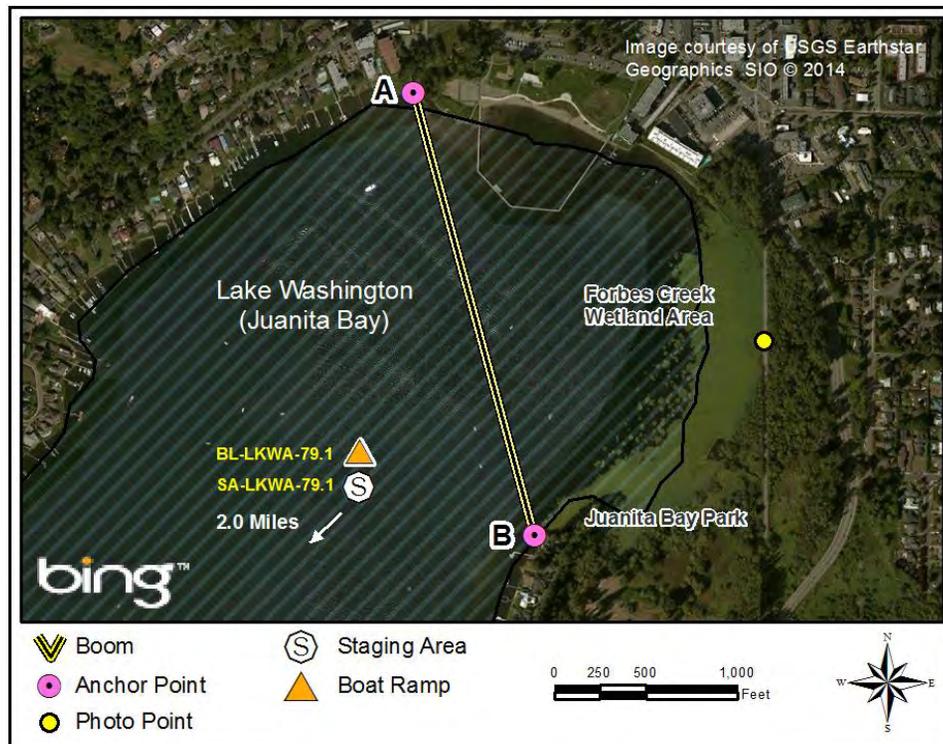
FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying strait onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# Juanita Bay Park (Forbes Creek Wetland)

LKWA-11.0

<b>Position - Location:</b>	47.70148	-122.21488	Kirkland (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Forbes Creek Wetland Area	
<b>Implementation:</b>	Using workboats, transport 2500ft of boom to strategy location on north side of Juanita Bay at Juanita Beach Park in Kirkland. Anchor boom to shore on west side of mouth of Juanita Creek (creek right) near Point A (N47.704212, W122.218439). Extend boom SSE across the bay and full extent of Forbes Creek Wetland, securing boom end to shore/bulkhead near Point B (N47.69768, W122.21526). Use anchor posts, trees, or existing structures to secure boom to shore. Use anchoring systems every 100ft (or as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Submerged Obstructions and Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Notify City of Kirkland; call (425) 587-3900. Due to the size of this strategy constant maintenance/tending will likely be required for it to remain effective.		
<b>Watercourse:</b>	Lake - Lake Washington - Juanita Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands		



## Recommended Equipment

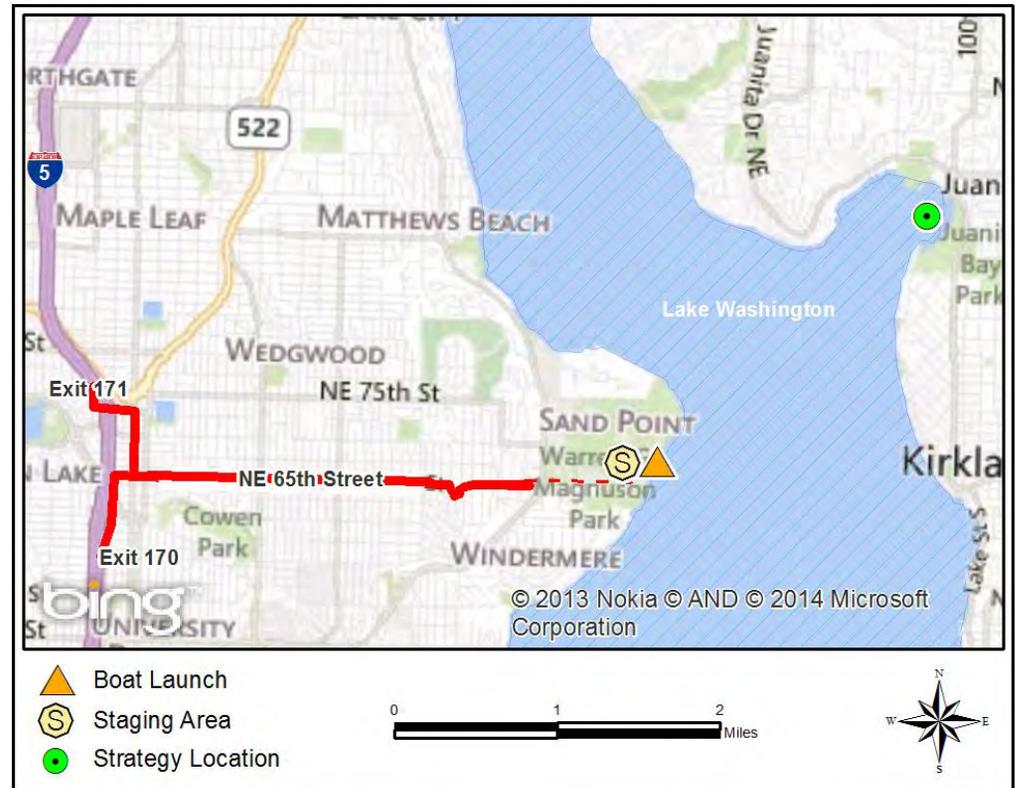
2500	Feet	Boom - B3 (Contractor Boom) or equivalent
2	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
24	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo LKWA-11.0: At Juanita Bay Park on Old Market Street Trail, looking across wetland area NNW towards north end of park.



### SiteContact

City of Kirkland  
 505 Market St Ste A  
 Kirkland, WA 98033  
 (425) 587-3900

### NearestAddress

(Point A)  
 11451 98th Ave NE, Kirkland, WA 98033

(Point B)  
 2095 Rose Point Ln, Kirkland, WA 98033

### DrivingDirections

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

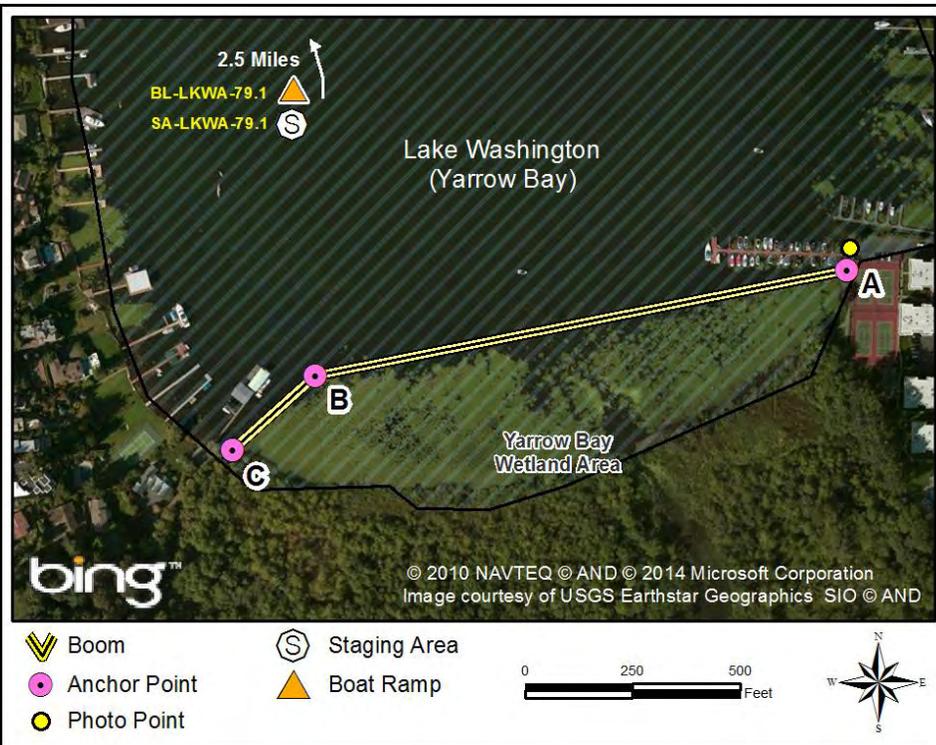
FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# Yarrow Bay Wetland Area

LKWA-17.2

<b>Position - Location:</b>	47.64874	-122.20882	Kirkland (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Yarrow Bay Wetland Area	
<b>Implementation:</b>	Using workboats, transport 1600ft of boom to strategy location. Anchor boom to shore on east side of wetland area near Point A (N47.64969, W122.20574), ~60ft south of dock at Villaggio condominium complex. Extend boom WSW, across full extent of wetland area, anchoring boom near Point B (N47.64894, W122.21075), ~100ft east of private dock. From Point B, bring remaining boom SW about 250ft to shore at west side of wetland area near Point C (N47.64846, W122.21152). Use anchor posts, trees, or existing structures to secure boom to shore. Use anchoring systems every 100ft (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Notify City of Kirkland; call (425) 587-3900. May be able to stage boom on-site near Point A (Vilaggio on Yarrow Bay); call (425) 827-4603. Due to the size and exposed location of this strategy, constant maintenance/tending will likely be required.		
<b>Watercourse:</b>	Lake - Lake Washington - Yarrow Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands		



## Recommended Equipment

1600	Feet	Boom - B3 (Contractor Boom) or equivalent
2	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
15	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo LKWA-17.2: Boat dock at Villaggio condominium complex, looking SW towards south end of Yarrow Bay and wetland area.



### SiteContact

City of Kirkland  
 505 Market St Ste A  
 Kirkland, WA 98033  
 (425) 587-3900

### NearestAddress

(Point A) - Villaggio on Yarrow Bay  
 4311 Lake Washington Blvd NE  
 Kirkland, WA 98033

(Point C)  
 9540 NE 42nd Pl, Yarrow Point, WA 98004

### DrivingDirections

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# Mercer Slough (Near Mouth)

LKWA-35.4

<b>Position - Location:</b>	47.57751	-122.18889	Bellevue (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Mercer Slough	
<b>Implementation:</b>	Using workboats, transport 1200ft of boom to strategy location. Anchor boom to shore at north end of strategy site near Point A (N47.57846, W122.19044). Extend boom south ~450ft, anchoring it near Point B (N47.57723, W122.19041). From Point B, extend boom ~400ft SE and secure to NW corner of boat house dock at Newport Yacht Basin near Point C (N47.57645, W122.18928). Extend remaining boom along north side of boat house dock to shore, anchoring end near Point D (N47.57644, W122.18824). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Stage in parking area at SE 40th Street Boat Launch (SA-LKWA-35.6 & BL-LKWA-35.6)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Notify Bellevue Parks of Strategy Impelentation; call (425) 452-6885. Notify Newport Yacht Basin; call (206) 267-2535.		Limited
<b>Watercourse:</b>	Lake - Lake Washington - Mercer Slough		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands		



### Recommended Equipment

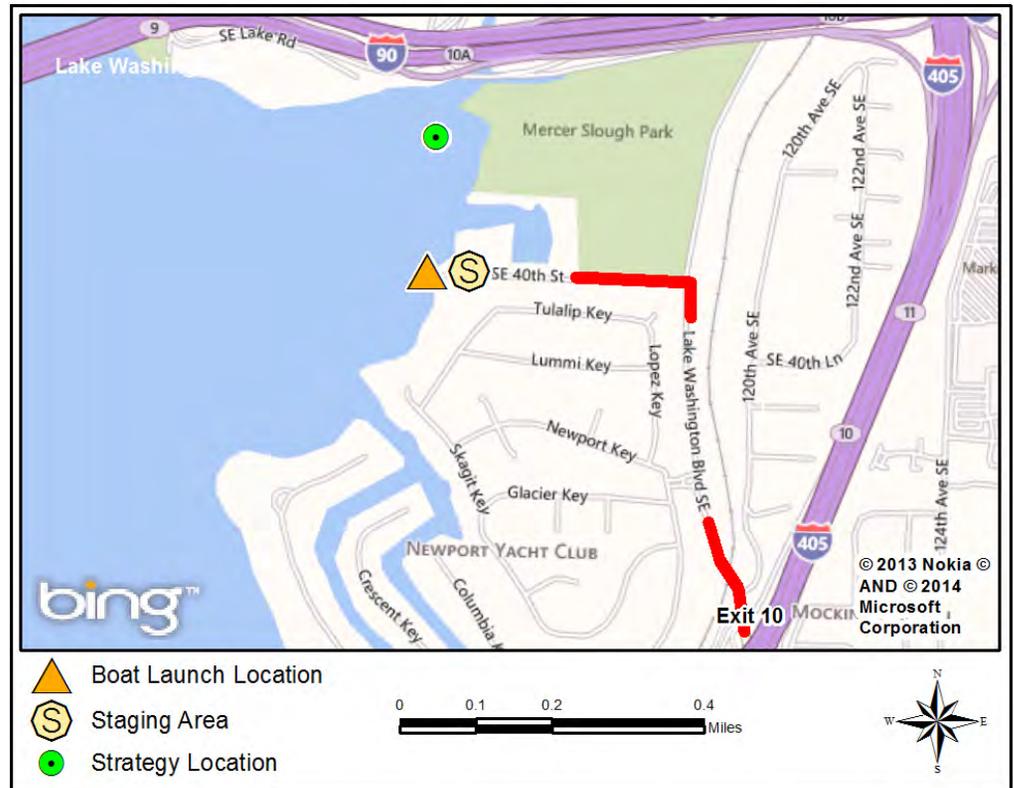
1200	Feet	Boom - B3 (Contractor Boom) or equivalent
2	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
8	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

### Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo LKWA-35.4: On north side of strategy location near Point A, looking south across lake at Mercer Slough towards Newport Yacht Basin.



### SiteContact

City of Bellevue  
 Parks & Community Service  
 450 110th Avenue NE  
 Bellevue, WA 98009  
 (425) 452-6885

### NearestAddress

(Point A)  
 11205 SE Lake Rd, Bellevue, WA 98004

(Points C & D)  
 3911 Lake Washington Blvd SE  
 Bellevue, WA 98006

### DrivingDirections

TO STAGING AREA (SA-LKWA-35.6) AND BOAT LAUNCH (BL-LKWA-35.6)

FROM Interstate-405 (Northbound):

1. Take Exit 10 and at bottom of ramp take sharp left turn onto Coal Creek Pkwy SE; continue northwest onto Lake Washington Blvd SE.
2. After ~0.5 miles, turn left onto SE 40th Street.
3. Travel on SE 40th Street to boat ramp at end of the road (~0.3 miles). Stage equipment in parking area or along small pullout at NW corner of roadway before boat lanes.
4. Strategy location is lakeside of Mercer Slough Park near the mouth of Mercer Slough. It's about ~1000ft NNE of the SE 40th Street Boat Ramp, just north of the Newport Yacht Basin.

# South Lake Washington Restoration Area

LKWA-46.1

<b>Position - Location:</b>	47.50269	-122.20931	Renton (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of South Lake Washington Restoration Area	
<b>Implementation:</b>	Using workboats, transport 1800ft of boom to strategy location. Secure boom to NE corner of boat dock near Point A (N47.50326, W122.20681). Extend boom to the NW about ~150ft and secure to second piling at Point B (N47.50356, W122.20725). From Point B, extend boom WSW about ~900ft anchoring near Point C (47.50262, W122.21069). From Point C, extend boom ~700ft to shore, securing it to shore near Point D (N47.50077, W122.21141). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Stage in boat launch parking area at Gene Coulon Park (SA-LKWA-45.5 & BL-LKWA-45.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Notify DNR Aquatics; call (206) 799-2949. Inform Boeing (Renton Facility); call (206) 655-8800. Notify Renton Fire Department (via Valley Dispatch); call (425) 235-2121. Due to the size and exposed location, constant tending of strategy will likely be required.		
<b>Watercourse:</b>	Lake - Lake Washinton		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Restoration Area		



## Recommended Equipment

1800	Feet	Boom - B3 (Contractor Boom) or equivalent
2	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
17	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)

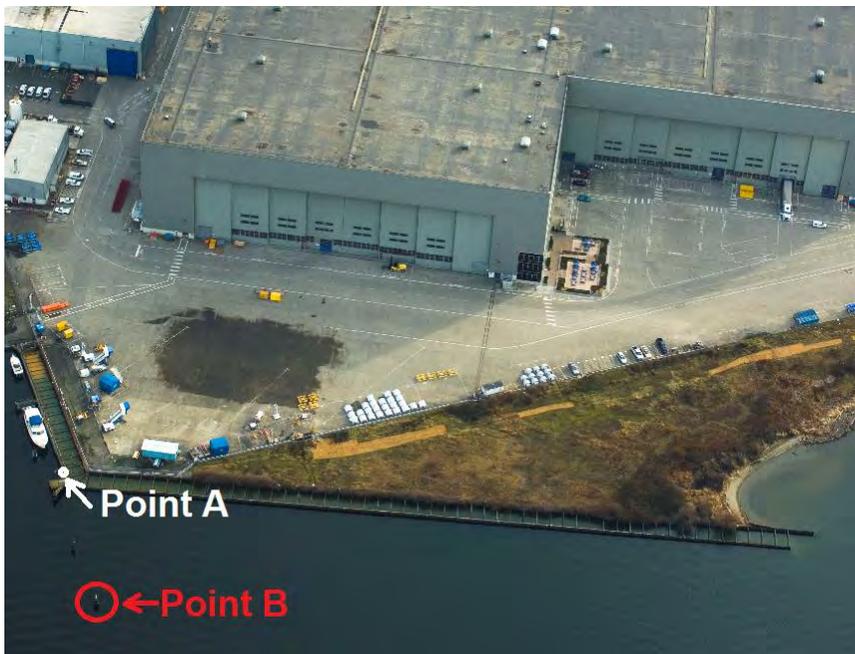


Photo LKWA-46.1: Aerial photo, looking S towards restoration site and Boeing (Renton Facility). Anchor Points A & B noted.



### SiteContact

WA Department of Natural Resources  
Aquatics Restoration Manager  
DNR Aquatics -- Shoreline District  
(206) 799-2949  
monica.shoemaker@dnr.wa.gov

### NearestAddress

968 757th Avenue  
Renton, WA 98057

### DrivingDirections

TO STAGING AREA (SA-LKWA-45.5) AND BOAT LAUNCH (BL-LKWA-45.5)

FROM- Interstate 405 (Northbound):

1. Take Exit 5 and travel towards the southwest on NE Park Drive (stay in far right lane).
2. After ~0.2 miles, take right turn and follow curve of road onto Lake Washington Blvd N.
3. After ~0.1 mile, enter left hand turn lane and turn left onto Coulon Beach Park Drive; follow roadway towards the right immediately after the turn.
4. After ~0.1 mile, turn left into the park complex; follow road to the right immediately after turn. Travel on road around parking area for ~0.2 miles to the boat ramp location on Lake Washington. Stage equipment in parking area near boat ramp.

# Beer Sheva Park (Lower Mapes Creek Outfall)

LKWA-51.2

<b>Position - Location:</b>	47.52394	-122.26193	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline area at Beer Sheva Creek near outfall for Lower Mapes Creek	
<b>Implementation:</b>	Using workboat, transport 450ft boom to western side of cove (north of boat launch). Secure end of boom to shore near Point A (N47.52364, W122.26272). Extend boom east about ~350ft, anchoring it just west of private dock near Point B (N47.52352, W122.2613). Extend remaining boom north ~70ft to shore, securing it near Point C (47.52371, W122.26133). May be able to use dock to secure boom rather than anchors between Points B & C if permission granted by private property owner. Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft or so (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	On-Site:	Stage in parking area at Atlantic City Boat Ramp (SA-LKWA-51.0 & BL-LKWA-51.0)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore; Shallow Water; Floating Debris		
<b>Field Notes:</b>	Notify Seattle Parks; call (206) 982-4583 (pager). Outfall for Lower Mapes Creek is located north of the boat launch towards north end of the cove, hidden by tall grass and overhanging trees. Coordinate use of dock at Points B & C with property owner.		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Freshwater Wetlands; Sensitive Habitat		



## Recommended Equipment

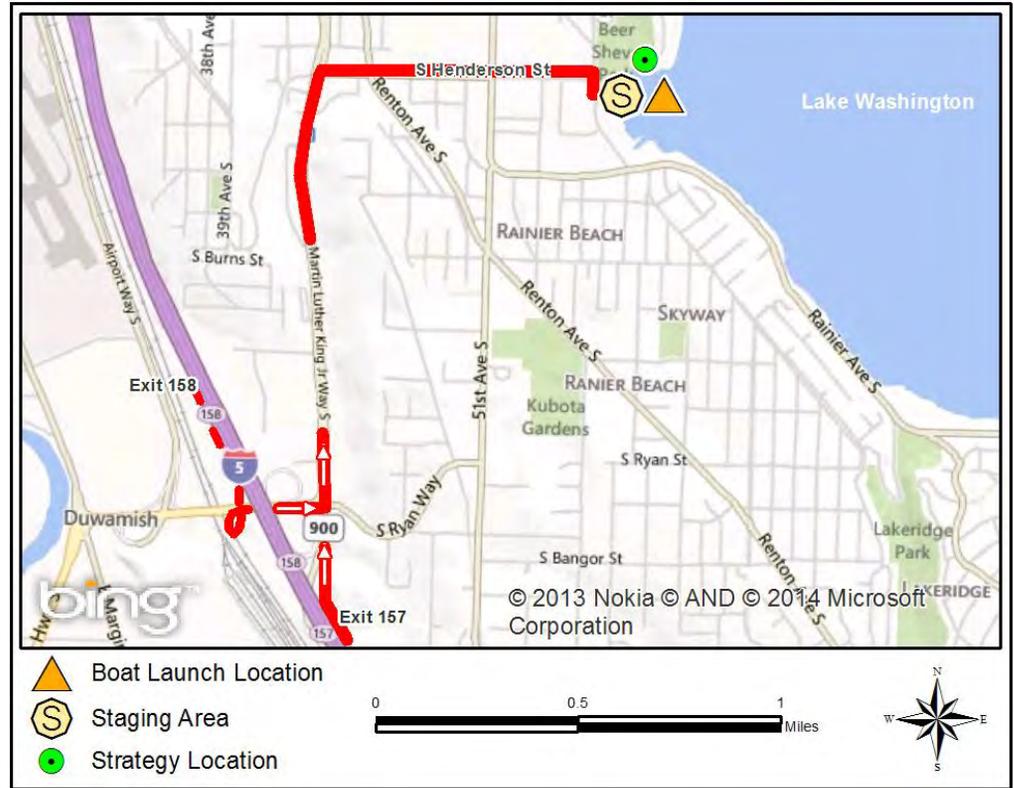
450	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
4	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)

## Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo LKWA-51.2: At strategy location looking SW towards shoreline at Beer Sheva Park, immediately north of boat launch location BL-LKWA-51.0.



### SiteContact

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### NearestAddress

(Point A)  
 8650 55th Ave S, Seattle, WA 98118

(Point B & C)  
 8698 Island Drive S, Seattle, WA 98118

### DrivingDirections

TO STAGING AREA (SA-LKWA-51.0) AND BOAT LAUNCH (BL-LKWA-51.0)

FROM Interstate-5 (Northbound):

1. Take Exit 157 (M L King Way) and within exit take ramp to right for M L King Way. At traffic light at intersection of M L King Way with Boeing Access Road, stay straight to remain on M L King Way.
2. Go to step 4 below.

FROM Interstate-5 (Southbound):

1. Take Exit 158 (Boeing Access Rd, E Marginal Way) and stay in the left lane.
2. At traffic light, turn left onto the Boeing Access Road.
3. Travel east on the Boeing Access Road for ~0.2 miles, turning left onto M L King Way.
4. Travel ~1.0 miles north on M L King Way and turn right onto S Henderson Street.
5. Travel east on S Henderson Street for ~0.7 miles, and turn right onto Seward Park Avenue S.
6. Travel south on Seward Park Avenue S for ~300ft and turn left into the entrance for the boat ramp and parking area. Stage in parking lot.

# Lakewood Marina (North End)

LKWA-59.3a

<b>Position - Location:</b>	47.56419	-122.26714	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline area south of Lakewood Marina	
<b>Implementation:</b>	Using workboat, transport 350ft boom to SE corner of Adam's Street Park (an old and out of service boat ramp) and secure to shore near Point A (N47.5648, W122.26692). Extend boom south about ~350ft to NE corner of island at Lakewood Marina near Point B (N47.56386, W122.26649). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft or so (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Stage in boat launch parking area at Stan Sayres Memorial Park (SA-LKWA-60.5 & BL-LKWA-60.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Vehicle Traffic		
<b>Field Notes:</b>	Notify Seattle Parks; call (206) 982-4583 (pager). Notify staff at Lakewood marina; call 206-722-3887. Single lane wood bridge to marina's island restricts on-site access by vehicle.		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

350	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
3	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)

## Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



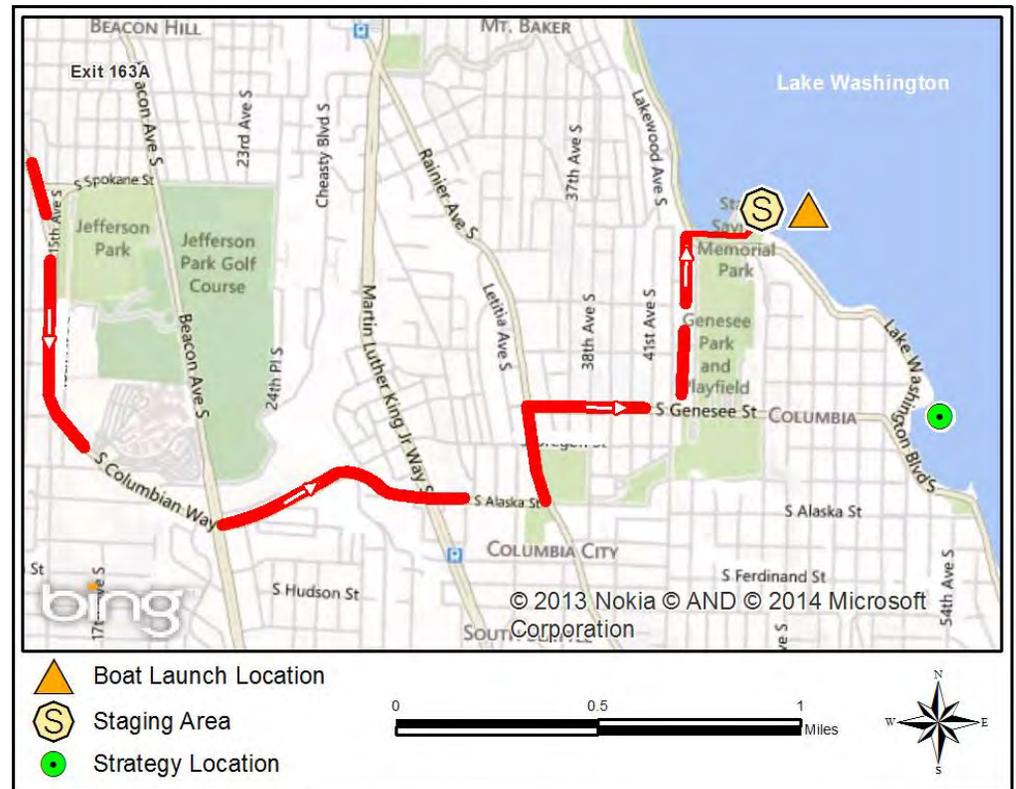
Photo LKWA-59.3a: Aerial of strategy location on Lake Washington, looking west. Anchor Points A & B in relation to Adams Street Park and Lakeside Marina depicted in photograph.

### SiteContact

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### NearestAddress

4500 Lake Washington Blvd  
 Seattle, WA 98119



### DrivingDirections

TO STAGING AREA (SA-LKWA-60.5) AND BOAT LAUNCH (BL-LKWA-60.5)

FROM - Interstate 5 (Northbound):

- (1) Take Exit 163 (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the right (Columbia Way); roadway will curve to the right (get in right lane). (3) Go to step 3 below.

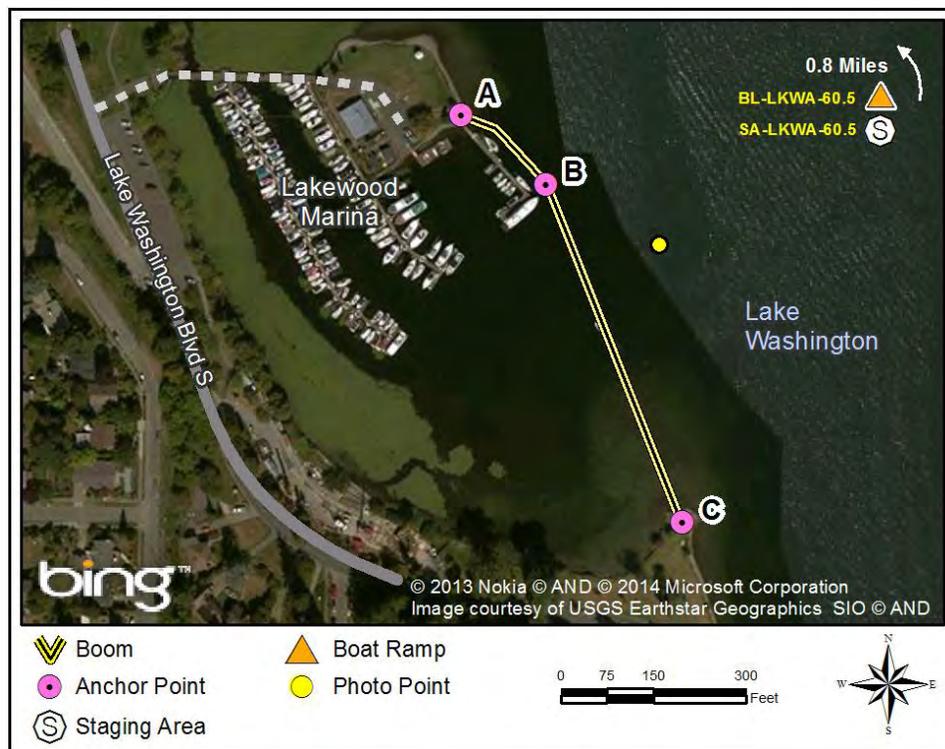
FROM - Interstate 5 (Southbound):

- (1) Take Exit 163A (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the left (Columbia Way, 15th Ave S). Ramp will curve left over I-5, then back to the right (get in right lane). (3) At first stop light, stay straight to remain on S Columbia Way. Stay on S Columbia Way for 2.0 miles (becomes 15th Ave S and later becomes S Alaska Street). (4) Turn left onto Rainier Avenue S. (5) After 0.2 miles turn right onto S Genesee Street. (6) After 0.4 miles, turn left onto 43rd Avenue S. After 0.4 miles turn right onto Lake Washington Blvd S. After 0.1 miles, turn left into Stan Sayres Park; boat ramp and parking/staging area are 400ft ahead on right and left.

# Lakewood Marina (South End)

LKWA-59.3b

<b>Position - Location:</b>	47.56234	-122.26597	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline area south of Lakewood Marina	
<b>Implementation:</b>	Using workboat, transport 800ft boom to SE corner of island at Lakewood Marina (Lake Washington side of marina). Secure end to shore near Point A (N47.56358, W122.26623). Extend boom SSE about ~200ft, lakeside of breakwater (floating steel pipe) and secure to southern end of floating pipe near Point B (N47.56328, W122.26566). From Point B, extend boom south ~600ft, across the entrance to the marina, securing it to shore near Point C (N47.56181, W122.26472). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft or so (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Stage in boat launch parking area at Stan Sayres Memorial Park (SA-LKWA-60.5 & BL-LKWA-60.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Vehicle Traffic		
<b>Field Notes:</b>	Notify Seattle Parks; call (206) 982-4583 (pager). Notify staff at Lakewood marina; call 206-722-3887. Strategy deployment will block marina entrance. Single lane wood bridge to marina's island restricts on-site access by vehicle.		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

800	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
7	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
4	Laborer(s)
1	Boat Operator(s)



Photo LKWA-59.3b: On Lake Washington, lakeside of Lakewood Marina, looking north towards breakwater (floating steel pipe) and marina's island.



### SiteContact

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### NearestAddress

4500 Lake Washington Blvd  
 Seattle, WA 98119

### DrivingDirections

**TO STAGING AREA (SA-LKWA-60.5) AND BOAT LAUNCH (BL-LKWA-60.5)**  
**FROM - Interstate 5 (Northbound):**  
 (1) Take Exit 163 (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the right (Columbia Way); roadway will curve to the right (get in right lane). (3) Go to step 3 below.

**FROM - Interstate 5 (Southbound):**  
 (1) Take Exit 163A (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the left (Columbia Way, 15th Ave S). Ramp will curve left over I-5, then back to the right (get in right lane). (3) At first stop light, stay straight to remain on S Columbia Way. Stay on S Columbia Way for 2.0 miles (becomes 15th Ave S and later becomes S Alaska Street). (4) Turn left onto Rainier Avenue S. (5) After 0.2 miles turn right onto S Genesee Street. (6) After 0.4 miles, turn left onto 43rd Avenue S. After 0.4 miles turn right onto Lake Washington Blvd S. After 0.1 miles, turn left into Stan Sayres Park; boat ramp and parking/staging area are 400ft ahead on right and left.

# University of Washington (East Arboretum)

LKWA-68.6

<b>Position - Location:</b>	47.64491	-122.28549	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline area at East Arboretum	
<b>Implementation:</b>	Using workboats, transport 3000ft boom to SE corner of strategy location and secure an end to shore near Point A (N47.64271, W122.28029), at Canterbury Shores Condominiums. Extend boom NW about ~250ft, securing it to east corner of Canterbury's dock near Point B (N47.64325, W122.28106). From Point B, extend boom NW under Hwy 520 bridge and out into Union Bay ~2750ft, arcing to the WNW towards Point C (N47.64681, W122.29002), lakeside of any on-water vegetation. Anchor boom as you go, every 100ft or so (as needed). Secure remaining end to shore near Point C. Use anchor posts/structures to secure boom to shore.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Hwy 520 Bridge Structure		
<b>Field Notes:</b>	Notify Canterbury Shores Condominiums (Points A & B); call (206) 323-3129. Notify UW Botanic Gardens; call (206) 543-8616. Notify Seattle Parks; call (206) 982-4583 (pager). Due to size, constant maintenance/tending of strategy will likely be required.		
<b>Watercourse:</b>	Lake - Lake Washington - Union Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat		



## Recommended Equipment

3000	Feet	Boom - B3 (Contractor Boom) or equivalent
3	Each	Workboat(s) - of adequate size for type & amount of boom
3	Each	Towing Bridal(s) - (appropriately sized for boom)
29	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
3	Each	Anchoring Post Driver(s)
3	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
8	Laborer(s)
3	Boat Operator(s)



Photo LKWA-68.6: Aerial of SE corner of strategy location on Lake Washington at Union Bay (south of the Hwy 520 Bridge) looking south towards anchor Points A & B.

**SiteContact**

University of Washington  
 Botanic Gardens  
 3501 NE 41st Street  
 Seattle, WA 98105  
 (206) 543-8616

**NearestAddress**

(Point A & B)  
 2500 Canterbury Ln E, Seattle, 98112

(Point C)  
 2798 E Foster Island Rd, Seattle, 98112



**DrivingDirections**

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

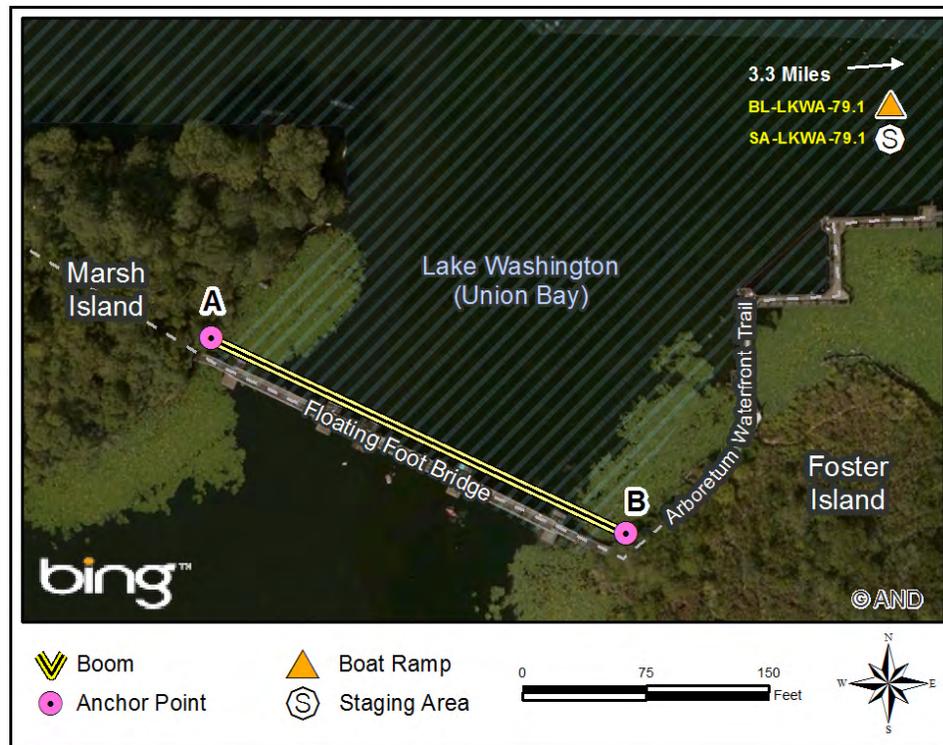
FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# University of Washington Arboretum (East Channel)

LKWA-70.7

<b>Position - Location:</b>	47.64609	-122.29396	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of area south of floating foot bridge.	
<b>Implementation:</b>	Using workboat, transport 300ft boom to strategy location on east side of Marsh Island, lakeside of the Arboretum Waterfront Trail. Secure one end of the boom to shore near the north and west side of floating foot bridge near Point A (N47.64619, W122.29449). Extend boom ESE about ~300ft along north side of Foot Bridge (and floats), securing it to shore on Foster Island near Point B (N47.64588, W122.29343). Use anchors or lines and the bridge structure to keep boom secure in water. Use anchor posts or existing structures to secure boom to shore.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore; Floating Bridge Structure		
<b>Field Notes:</b>	Notify UW Botanic Gardens of strategy deployment; (206) 543-8616 or (206) 543-8800. Notify Seattle Parks; call (206) 982-4583 (pager).		
<b>Watercourse:</b>	Lake - Lake Washington - Union Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat		



### Recommended Equipment

300	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
2	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



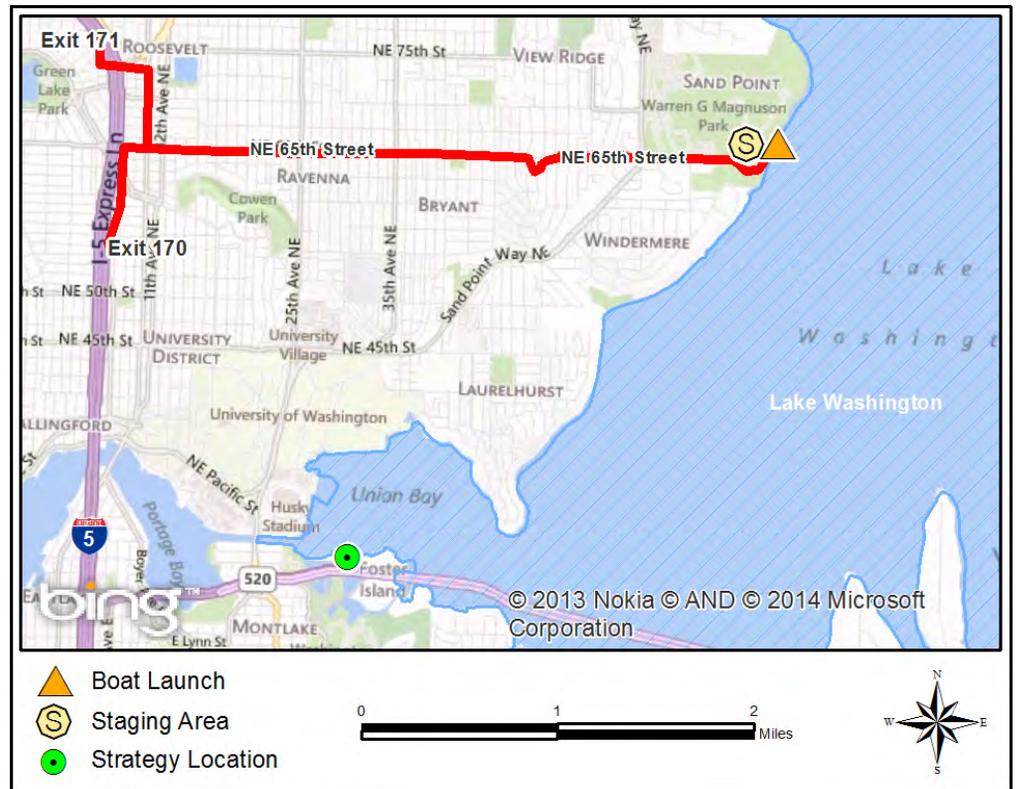
Photo LKWA-70.7: Aerial looking NE towards strategy location from south of Hwy 520 Bridge. Anchor Points A & B on north side of floating foot bridge depicted on photograph.

**SiteContact**

University of Washington  
 Botanic Gardens  
 3501 NE 41st Street  
 Seattle, WA 98105  
 (206) 543-8616 or (206) 543-8800

**NearestAddress**

2700 24th Ave E  
 Seattle, WA 98112



**DrivingDirections**

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

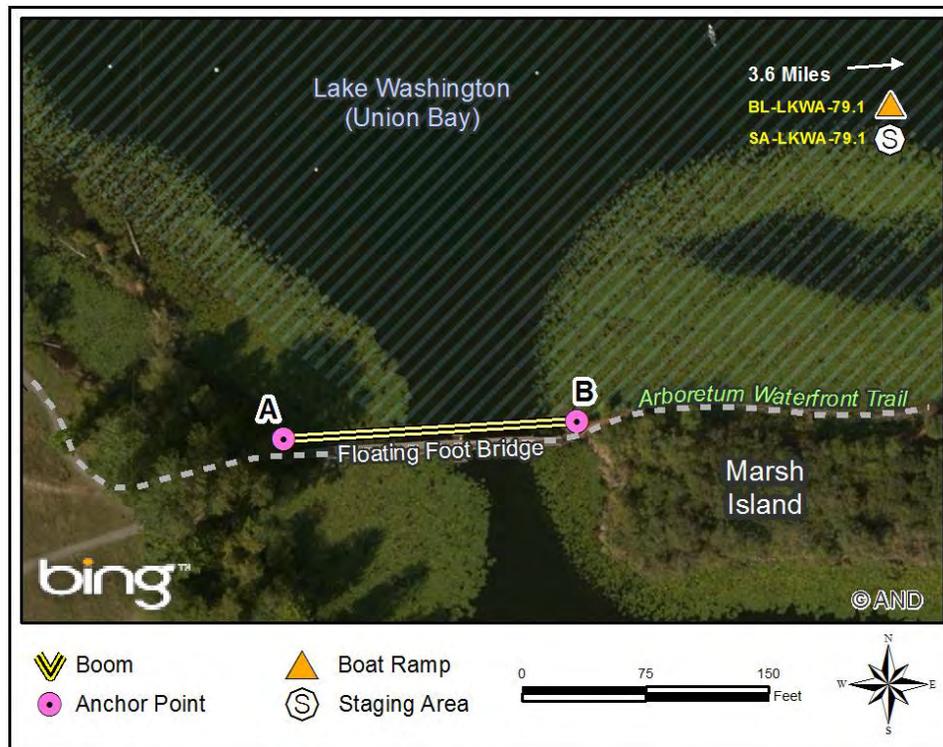
FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# University of Washington Arboretum (West Channel)

LKWA-71.1

<b>Position - Location:</b>	47.64600	-122.29913	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of area south of floating foot bridge.	
<b>Implementation:</b>	Using workboat, transport 200ft boom to strategy location on west side of Marsh Island, lakeside of the Arboretum Waterfront Trail. Secure one end of the boom to shore on north and west side of floating foot bridge near Point A (N47.64596, W122.29951). Extend boom east about ~200ft along north side of foot bridge (and floats), securing it to shore on Marsh Island near Point B (N47.64602, W122.2987). Use anchors or lines and the bridge structure to keep boom secure in water. Use anchor posts or existing structures to secure boom to shore.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore; Floating Foot Bridge Structure		
<b>Field Notes:</b>	Notify UW Botanic Gardens of strategy deployment; (206) 543-8616 or (206) 543-8800. Notify Seattle Parks; call (206) 982-4583 (pager).		
<b>Watercourse:</b>	Lake - Lake Washington - Union Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat		



## Recommended Equipment

200	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
1	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)

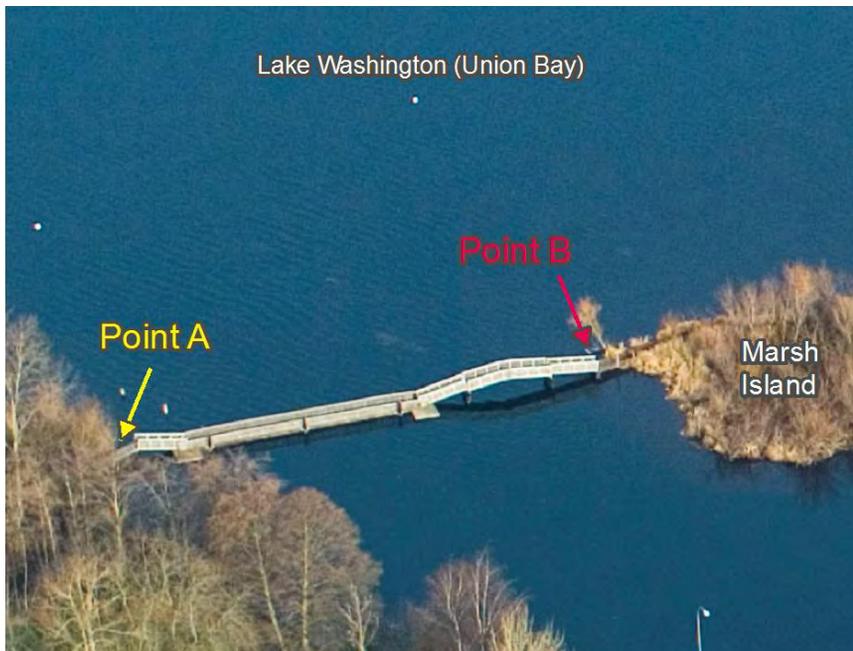


Photo LKWA-71.1: Aerial looking NE towards strategy location from south of Hwy 520 Bridge. Anchor Points A & B on north side of floating foot bridge depicted on photograph.

### SiteContact

University of Washington  
 Botanic Gardens  
 3501 NE 41st Street  
 Seattle, WA 98105  
 (206) 543-8616 or (206) 543-8800

### NearestAddress

2700 24th Ave E  
 Seattle, WA 98112



- Boat Launch
- Staging Area
- Strategy Location

### DrivingDirections

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# University Slough (Union Bay Natural Area)

LKWA-73.4

<b>Position - Location:</b>	47.65206	-122.29565	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Union Slough and Union Bay Natural Area	
<b>Implementation:</b>	Using workboats, transport 3800ft of boom to strategy location. Anchor boom to shore near north end of UW's Waterfront Activities Dock at Point A (~N47.65049, W122.29851). Extend boom SE about ~600ft, setting the southern corner of strategy near Point B (N47.64948, W122.2966). From Point B, extend boom NNE ~1600ft anchoring near Point C (N47.65255, W122.29212). From Point C, extend boom NE ~1600ft to shore near Point D (N47.65483, W122.28673). Use anchor posts or strutures to secure boom to shore. As you pay the boom out from the workboat, anchor it every 100ft or so, as needed to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Notify University of Washington Police; call (206) 685-8973. Inform UW Botanic Gardens; call (206) 543-8616. Due to the size of this strategy, constant maintenance/tending will likely be required for it to remain effective.		
<b>Watercourse:</b>	Lake - Lake Washington - Union Bay		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat		



## Recommended Equipment

3800	Feet	Boom - B3 (Contractor Boom) or equivalent
3	Each	Workboat(s) - of adequate size for type & amount of boom
37	Each	Anchoring System(s) - (anchor, lines, floats)
3	Each	Towing Bridal(s) - (appropriately sized for boom)
6	Each	Anchoring Post(s) - (shoreside)
3	Each	Anchoring Post Driver(s)
3	Each	Heaving Line(s)

## Recommended Personnel

1	Supervisor(s)
8	Laborer(s)
3	Boat Operator(s)



Photo LKWA-73.4: Aerial photo, looking NW towards western shoreline of Union Bay (Lake Washington) at UW campus. Anchor Point A near north end of UW's Waterfront Activities Dock noted in photograph.

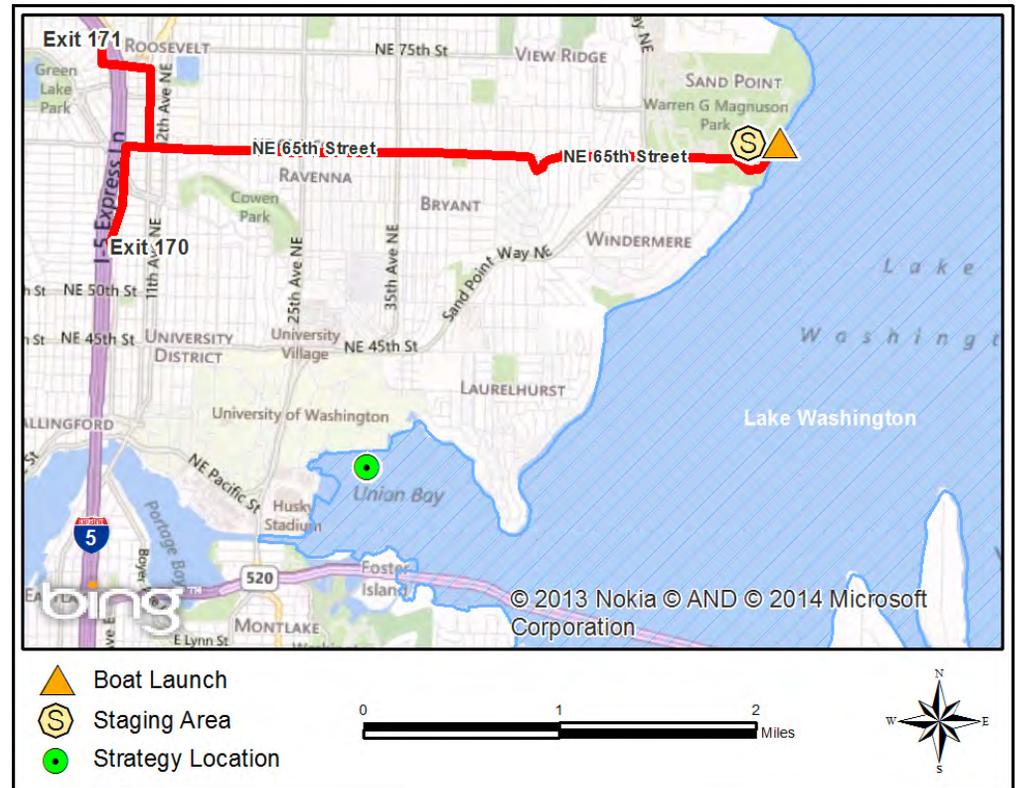
**SiteContact**

University of Washington  
 Botanic Gardens  
 3501 NE 41st Street  
 Seattle, WA 98105  
 (206) 543-8616

**NearestAddress**

(Point A)  
 UW Campus (Walla Walla Road)  
 3900 Montlake Blvd NE, Seattle, 98105

(Point D)  
 3939 NE Surber Dr, Seattle, WA 98105



- Boat Launch
- Staging Area
- Strategy Location



**DrivingDirections**

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# May Creek (Mouth)

MAYC-0.0

<b>Position - Location:</b>	47.52796	-122.20522	Renton (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of May Creek	
<b>Implementation:</b>	Using workboat, transport 450ft boom to strategy location. Secure end of boom to shore immediately north of creek's mouth (creek right) near Point A (N47.528302, W122.205468). Extend boom SW about ~190ft, and anchor near Point B (N47.5279, W122.20596). From Point B, extend boom SE ~160ft and anchor near Point C (N47.52762, W122.20545). From Point C, extend boom to shore and secure immediately south of creek's mouth (creek left) near Point D (N47.527624, W122.205157). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft or so (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Stage in boat launch parking area at Gene Coulon Park (SA-LKWA-45.5 & BL-LKWA-45.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Shallow Water and Mud/Muddy Bottom at Mouth; Heavy Brush Along Creek Banks		
<b>Field Notes:</b>	Winds from the south can push lake water up into May Creek. Area along creek right was toxics cleanup site.		
<b>Watercourse:</b>	Creek - May Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources, Freshwaer Wildlife		



### Recommended Equipment

450	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
5	Each	Anchoring System(s) - (anchor, lines, floats)
1	Each	Towing Bridal(s) - (appropriately sized for boom)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo MAYC-0.0: On May Creek (creek left) upstream of mouth, looking downstream towards mouth and Lake Washington.



### SiteContact

Barbee Mill Waterfront LLC  
4101 Lake Washington Blvd N  
Renton, WA 98056

### NearestAddress

(Point A)  
4057 Williams Ave N, Renton, WA 98056

(Point C)  
4015 Wells Ave N, Renton, WA 98056

### DrivingDirections

TO STAGING AREA (SA-LKWA-45.5) AND BOAT LAUNCH (BL-LKWA-45.5)

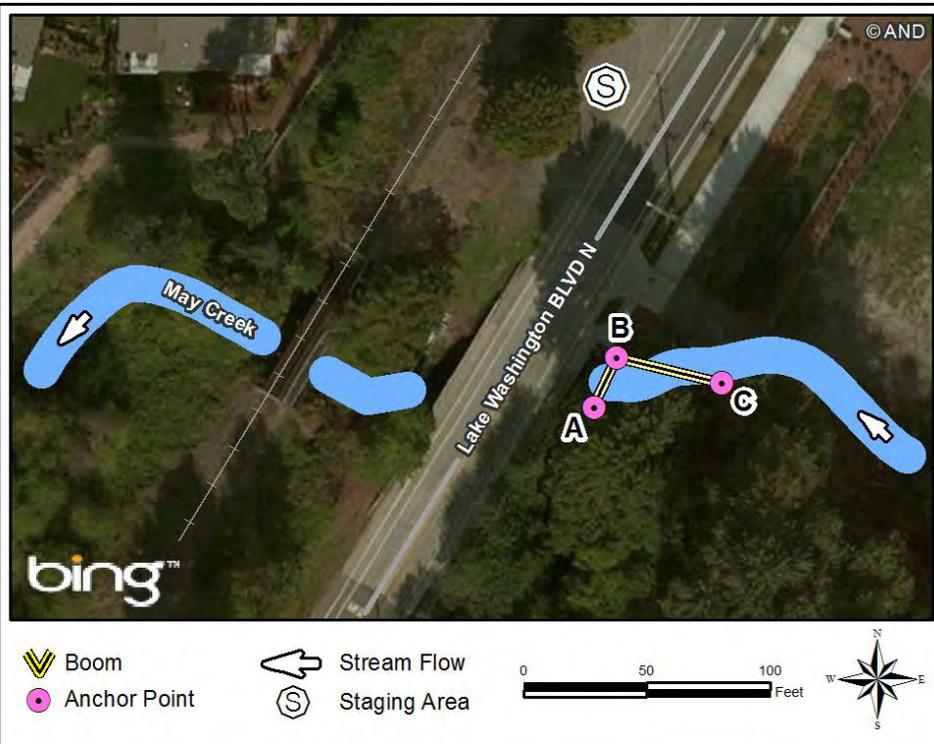
FROM- Interstate 405 (Northbound):

1. Take Exit 5 and travel towards the southwest on NE Park Drive (stay in far right lane).
2. After ~0.2 miles, take right turn and follow curve of road onto Lake Washington Blvd N.
3. After ~0.1 mile, enter left hand turn lane and turn left onto Coulon Beach Park Drive; follow roadway towards the right immediately after the turn.
4. After ~0.1 mile, turn left into the park complex; follow road to the right immediately after turn. Travel on road around parking area for ~0.2 miles to the boat ramp location on Lake Washington. Stage equipment in parking area near boat ramp.

# May Creek

MAYC-0.4

<b>Position - Location:</b>	47.52989	-122.20099	Renton (King County)
<b>Strategy Objective:</b>	Collection	Collect oil moving downstream on May Creek	
<b>Implementation:</b>	On south side of roadway bridge over May Creek at Lake Washington Blvd N, secure end of 100ft length of boom to creek bank (creek left) near Point A (N47.52994, W122.20103). Extend boom NE across creek (along the bridge) and secure to creek right near Point B (N47.53, W122.201). Use line to pull boom upstream and across to creek left as far as possible and secure to bank (Point C). Adjust boom angle as needed for conditions. Back hard boom with multiple lines of sorbent and snare boom on both sides of bridge. Use anchor posts or trees to secure boom to banks. Use lines to keep boom secure in creek. Collect oil at or near Point B.		
<b>Staging Area:</b>	On-Site:	Stage on north side of roadway off Lake Washington Blvd N. Follow WADOT work zone traffic control guidelines.	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Roadway/Vehicle Hazard; Muddy & Unstable Creek Banks; Overgrown Vegetation		
<b>Field Notes:</b>	Temporary use of roadway or shoulder is needed to implement this strategy; follow WADOT work zone traffic control guidelines. If staging or working on roadway or sholder, inform City of Renton Police at (425) 430-7500.		
<b>Watercourse:</b>	Creek - May Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources, Freshwaer Wildlife		



### Recommended Equipment

100	Feet	Boom - B3 (River Boom) or equivalent
100	Feet	Boom - Sorbent
100	Feet	Boom - Snare (Pom-Poms)
9	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)

No Photograph Available



SiteContact

No Information

NearestAddress

4350 Lake Washington Blvd N  
Renton, WA 98056

DrivingDirections

From Interstate-405

1. Take Exit 7 on Interstate-405 and head SW on N 44th Street (becomes Lake Washington Blvd N)
2. After ~0.2 miles, pull-off road onto right sholder, about ~80ft before bridge over May Creek. Stage on shoulder of roadway near bridge.

# Mercer Island - Luther Burbank Park (North End)

MRCRI-1.6

<b>Position - Location:</b>	47.59544	-122.22785	Mercer Island (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline areas at north end of Luther Burbank Park on Mercer Island	
<b>Implementation:</b>	Using workboats, transport 1600ft boom around the northern tip of Luther Burbank Park to strategy location. Secure boom end to shore near Point A (N47.59439, W122.22868). Extend boom north about ~440ft, anchoring near Point B (N47.59561, W122.22872), then east ~470ft anchoring near Point C (N47.59563, W122.2268). From Point C, extend boom SE ~530ft and anchor near Point D (N47.59443, W122.22559), then SW ~140ft and secure to shore near Point E (N47.59418, W122.22602). Use anchor posts or existing structures to secure boom to shore. Use anchoring systems every 100ft or so (as needed) to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Mercer Island Boat Launch for Staging (SA-MRCRI-4.4 & BL-MRCRI-4.4)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Shallow Water Near Shore; Heavy Vegetation		
<b>Field Notes:</b>	Notify Mercer Island Police & Marine Patrol; call (425) 577-5656 & (206) 275-7953. Notify Mercer Island Parks; call (206) 275-7609. Park Gate is closed 10pm - 6am; coordinate with MI Parks for access to shoreline areas within park (key card may be needed).		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

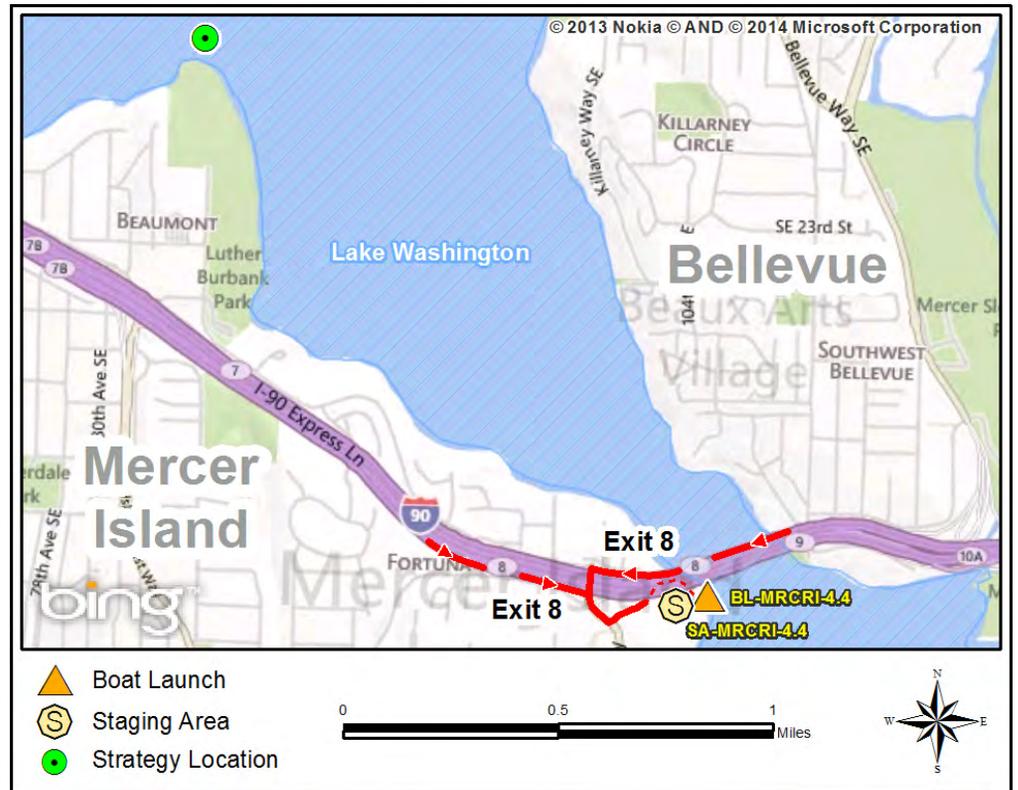
1600	Feet	Boom - B3 (Contractor Boom) or equivalent
2	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
15	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo MRCRI-1.6: On Lake Washington, SE of strategy location looking NW towards shoreline area of Luther Burbank Park on Mercer Island.



### SiteContact

City of Mercer Island  
 Parks & Recreation  
 2040 84th Ave SE  
 Mercer Island, WA 98040  
 (206) 275-7609, miparks@mercergov.org

### NearestAddress

(Point A)  
 1950 Mango St, Mercer Island, WA 98040

(Point E)  
 2040 84th Ave SE, Mercer Island, 98040

### DrivingDirections

**TO STAGING AREA (SA-MRCRI-4.4) AND BOAT LAUNCH (BL-MRCRI-4.4) AT MERCER ISLAND BOAT LAUNCH**  
**FROM - Interstate 90 (Eastbound - Away from Seattle):**

(1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn right onto E Mercer Way (use middle lane and stay straight on E Mercer Way). (3) After 0.1 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

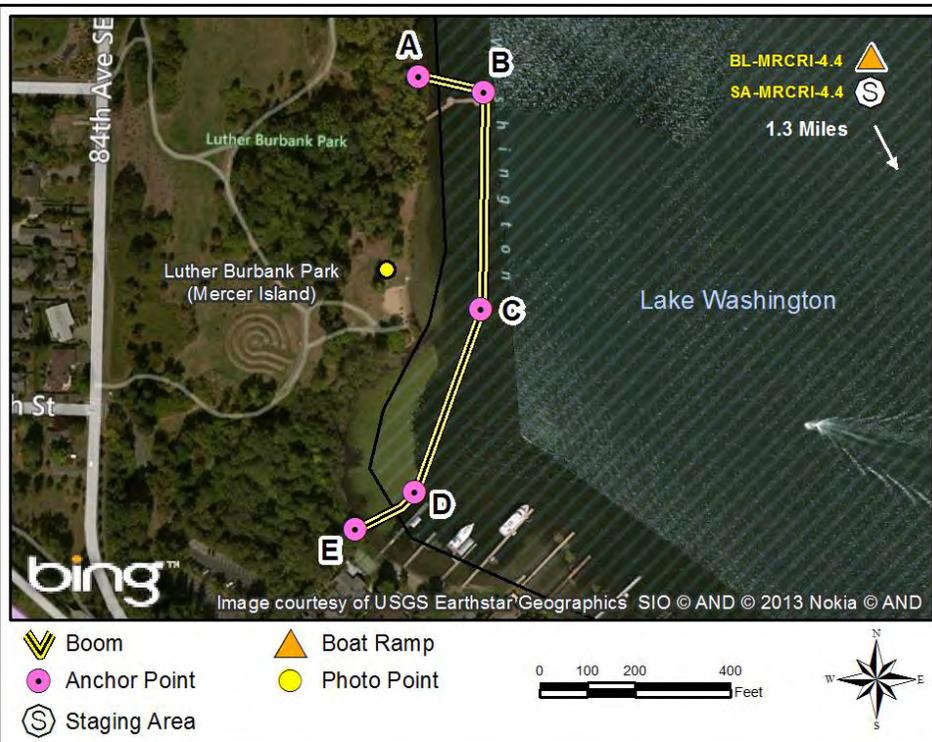
**FROM - Interstate 90 (Westbound - Towards Seattle):**

(1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn left onto E Mercer Way (stay in left lane). (3) After 0.2 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

# Mercer Island - Luther Burbank Park (Southeast Side)

MRCRI-2.4

<b>Position - Location:</b>	47.58764	-122.22393	Mercer Island (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of shoreline areas along SE side of Luther Burbank Park on Mercer Island	
<b>Implementation:</b>	Using workboat, transport 1150ft boom to the SE side of Luther Burbank Park. Secure boom end to shore immediately north of the fishing pier near Point A (N47.5892, W122.2242, about ~400ft south of the boat docks). Extend boom ESE ~150 and secure to east end of fishing pier (Point B). From Point B, extend boom south 450ft and secure near Point C (N47.58785, W122.2236, eastern extent of swimming area), then SSW 400ft around south side of piling at Point D (N47.58682, W122.22411), and secure to shore at SE corner of park at Point E (along south side of small dock). Use anchors every 100ft or so, as needed to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Mercer Island Boat Launch for Staging (SA-MRCRI-4.4 & BL-MRCRI-4.4)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Shallow Water Near Shore; Heavy Vegetation		
<b>Field Notes:</b>	Notify Mercer Island Police & Marine Patrol; call (425) 577-5656 & (206) 275-7953. Notify Mercer Island Parks; call (206) 275-7609. Park Gate is closed 10pm - 6am; coordinate with MI Parks for access to shoreline areas within park (key card may be needed).		
<b>Watercourse:</b>	Lake - Lake Washington		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



## Recommended Equipment

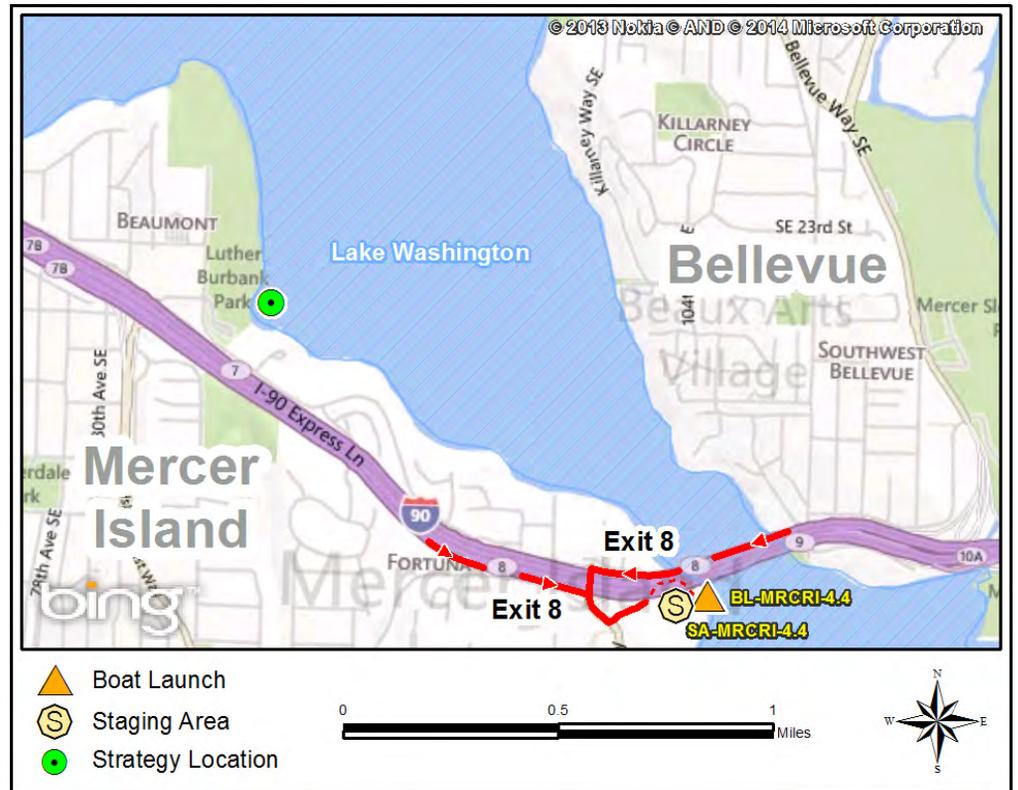
1150	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
9	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo MRCRI-2.4: At strategy location near swimming area for Luther Burbank Park, looking SE.



**SiteContact**

City of Mercer Island  
 Parks & Recreation  
 2040 84th Ave SE  
 Mercer Island, WA 98040  
 (206) 275-7609, miparks@mercergov.org

**NearestAddress**

(Point A)  
 2406 84th Ave SE, Mercer Island, 98040

(Point E)  
 8434 N Mercer Way, Mercer Island, 98040

**DrivingDirections**

TO STAGING AREA (SA-MRCRI-4.4) AND BOAT LAUNCH (BL-MRCRI-4.4) AT MERCER ISLAND BOAT LAUNCH  
 FROM - Interstate 90 (Eastbound - Away from Seattle):

- (1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn right onto E Mercer Way (use middle lane and stay straight on E Mercer Way). (3) After 0.1 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

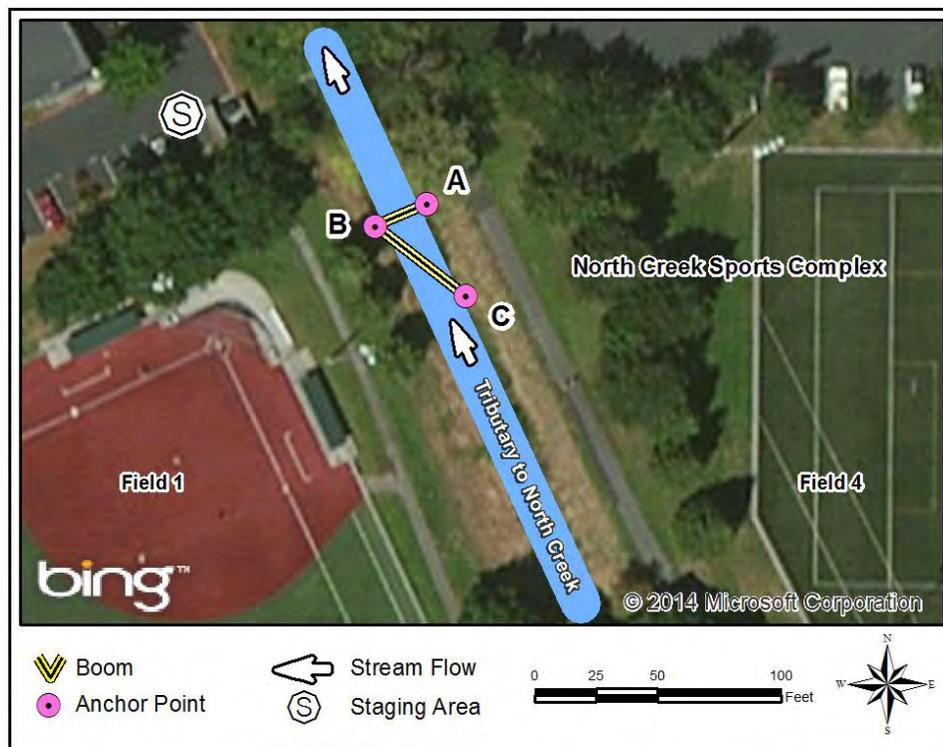
FROM - Interstate 90 (Westbound - Towards Seattle):

- (1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn left onto E Mercer Way (stay in left lane). (3) After 0.2 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

# North Creek Tributary (North Creek Sports Field)

NCTRB-0.3

<b>Position - Location:</b>	47.76639	-122.18217	Bothell (King County)
<b>Strategy Objective:</b>	Collection	Collect oil moving downstream on North Creek Tributary	
<b>Implementation:</b>	Transport 70ft boom to site and secure boom end to bank on stream right near Point A (N47.76659, W122.18232), immediately east of North Creek Sports Complex - Field 1. Extend boom WSW about ~25ft and secure to stream left near Point B. Extend boom across and upstream ~45ft securing it to stream right near Point C. Back hard boom with multiple lines of sorbent and snare boom across stream, downstream from points A & B. Use anchor posts, trees, or existing structures to keep boom secure to banks. Use lines to keep boom secure in creek. Collect oil at or near Point B using Vac truck or Skimmer w/ portable storage.		
<b>Staging Area:</b>	On-Site:	North Creek Sports Field - Field 1 Parking Area	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Roadway Hazard; Muddy & Unstable Creek Banks; Heavy Vegetation		
<b>Field Notes:</b>	Stage in SE corner of parking lot at North Creek Corporate Center (lot immediately north of Field 1); inform local security or property manager. Notify Bothell Parks; call (425) 486-7430. Stream flow variable; adjust strategy as for needed conditions.		
<b>Watercourse:</b>	Creek - North Creek - Tributary Canal that Drains to Creek (North Creek is a Tributary to the Sammamish River)		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		

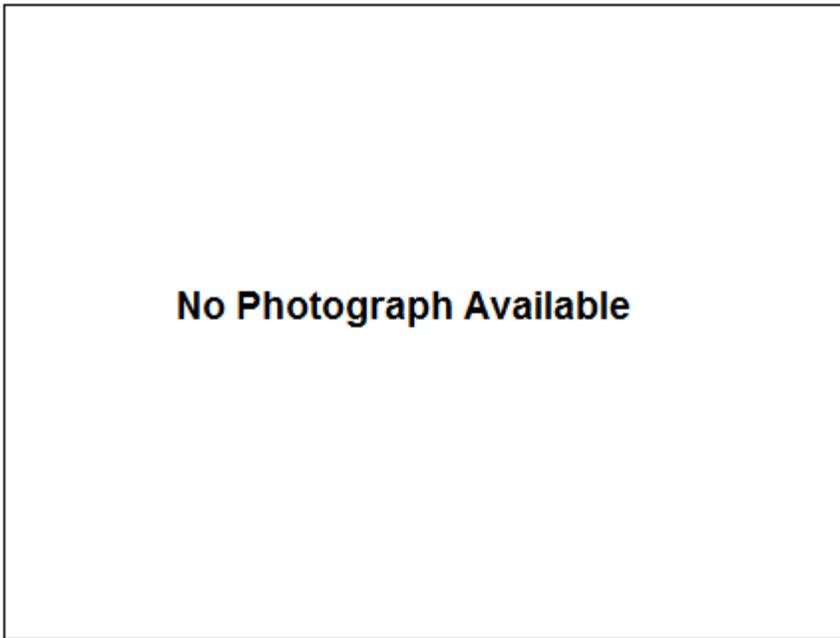


## Recommended Equipment

70	Feet	Boom - B3 (Contractor Boom) or equivalent
100	Feet	Boom - Sorbent
100	Feet	Boom - Snare (Pom-Poms)
13	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

## Recommended Personnel

1	Supervisor(s)
2	Laborer(s)



**SiteContact**

City of Bothell  
Parks & Recreation  
9929 NE 180th Street  
Bothell, WA 98011  
(425) 486-7430

**NearestAddress**

19016 North Creek Parkway  
Bothell, WA 98011

**DrivingDirections**

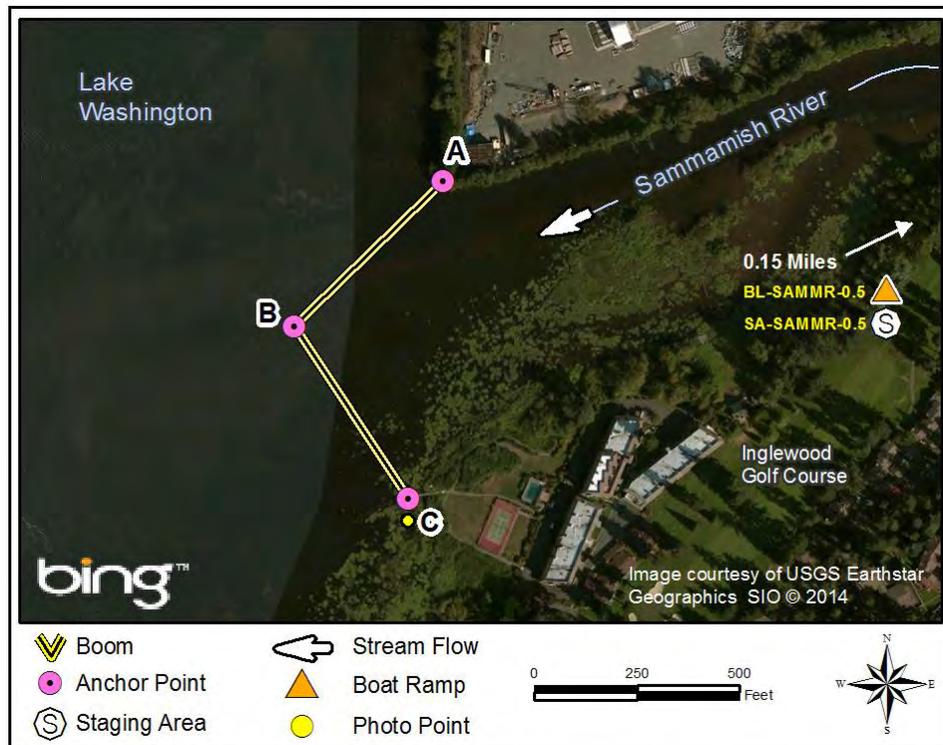
From Interstate-405

1. Take Exit 24 on Interstate-405 and head east on NE 195th Street.
2. After ~0.2 miles, turn right onto North Creek Parkway.
3. After ~0.2 miles, turn left into (south end) parking lot for North Creek Corporate Center.
4. Travel to far SE corner of parking lot to stage equipment; if available, inform local security or property manager of need to stage equipment in parking area.

# Sammamish River (Mouth)

SAMMR-0.0

<b>Position - Location:</b>	47.75310	-122.25736	Kenmore (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of the Sammamish River.	
<b>Implementation:</b>	Using workboat, secure end of 1000ft length of boom to shore on river right near Point A (N47.753961, W122.257456). Extend boom south 750ft, across mouth of river, securing boom to shore just north of private dock near Point C (N47.75188, W122.25761). Pull tension on boom near its mid-point, extending it out into Lake Washington until chevron is formed; anchor near Point B (N47.752959, W122.258895). Use anchor posts to secure boom to shore. Use additional anchoring systems to keep boom secure in the lake and at the mouth of river.		
<b>Staging Area:</b>	Off-Site:	Use WDFW River Access Point for Staging Area & Boat Launch (SA-SAMMR-0.5 & BL-SAMMR-0.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Near Shore		
<b>Field Notes:</b>	Inglewood community on south side of river is private property; must seek permission from property owners to access river by land.		
<b>Watercourse:</b>	River - Sammamish River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Sensitive Habitat		



## Recommended Equipment

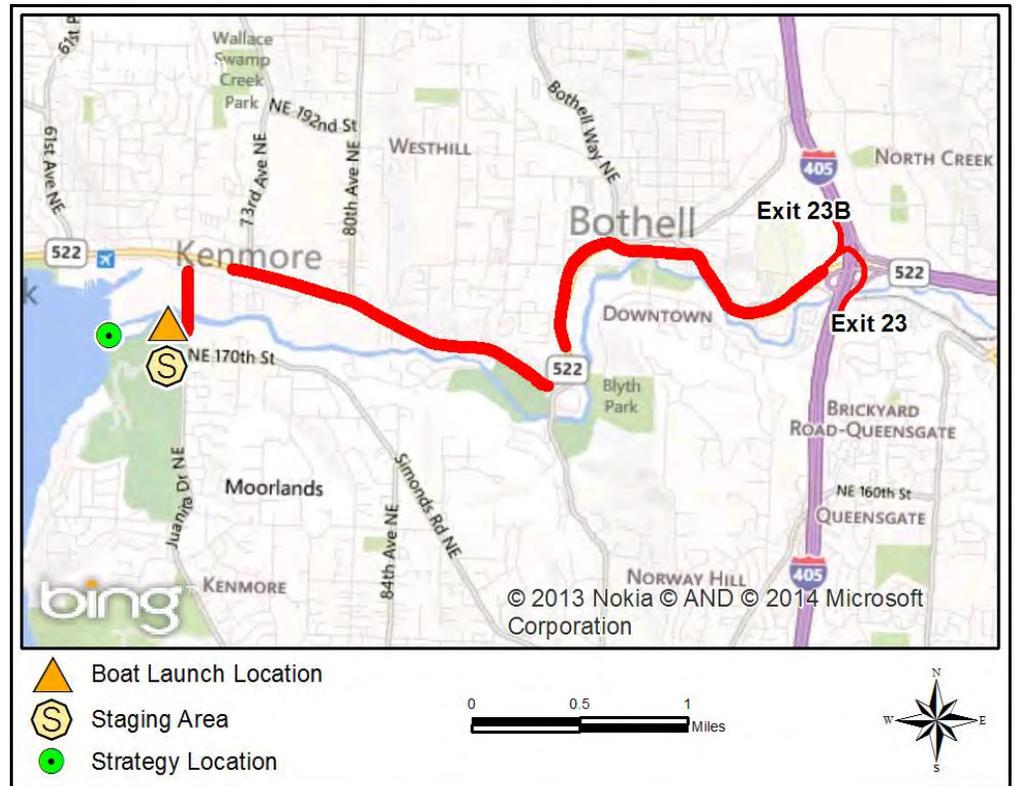
1000	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
2	Each	Towing Bridal(s) - (appropriately sized for boom)
9	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
300	Feet	Line - 3/8" poly line

## Recommended Personnel

1	Supervisor(s)
6	Laborer(s)
2	Boat Operator(s)



Photo SAMMR-0.0: From dock lakeside of 17000 NE 156th Court, near Anchor Point D, looking north along shoreline towards mouth of Sammamish River.



### SiteContact

No Information

### NearestAddress

(Point A)  
6723 NE 175th St, Kenmore, WA 98028

(Point D)  
17000 NE 156th Ct, Kenmore, WA 98028

### DrivingDirections

TO STAGING AREA (SA-SAMMR-0.5) AND BOAT LAUNCH (BL-SAMMR-0.5) AT WDFW RIVER ACCESS

From - Interstate 405 (Northbound)  
Take Exit 23 (Hwy 522 West, Bothell/Seattle)

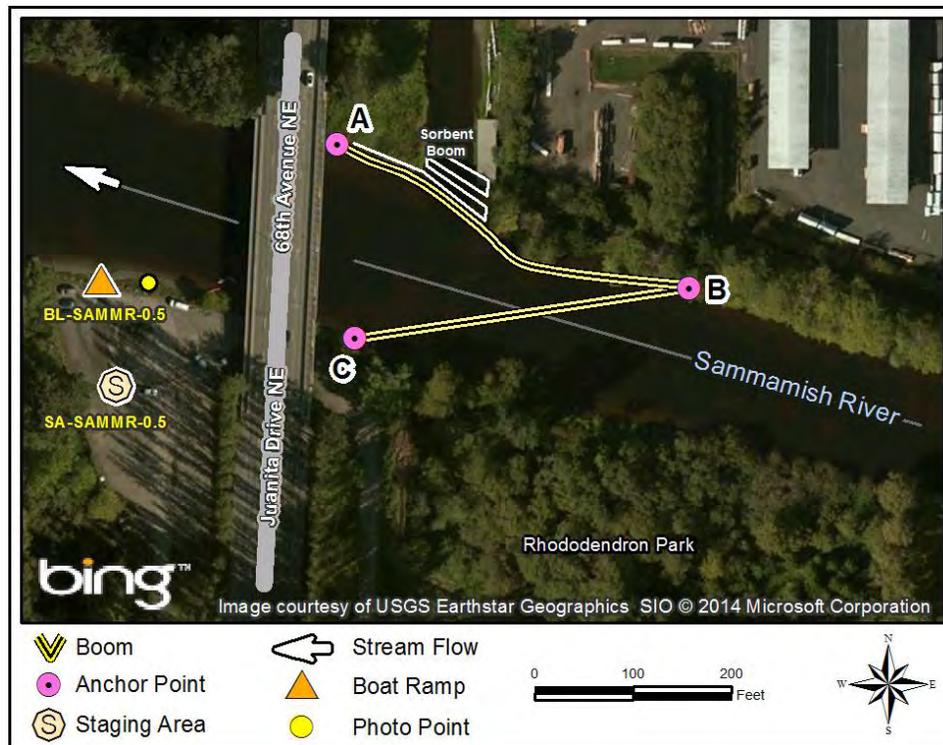
From - Interstate 405 (Southbound)  
Take Exit 23B (Hwy 522 West, Bothell)

1. Travel west on Hwy 522 (aka Woodinville Drive and later Bothell Way NE)
2. After ~3.2 miles, turn left onto 68th Avenue NE
3. After ~0.3 miles, just after the bridge over the Sammamish River, turn right into the WDFW Water Access Point. Stage equipment in parking area near boat ramp.

# Sammamish River - 68th Avenue NE

SAMMR-0.6

<b>Position - Location:</b>	47.75442	-122.24915	Kenmore (King County)
<b>Strategy Objective:</b>	Exclusion, Collection	Keep oil out of wetland area on NE side of bridge (river right). Collect oil on river left.	
<b>Implementation:</b>	Using workboat, transport 750ft of boom to strategy location. Secure boom to river bank on NE corner of 68th Avenue Bridge (river right, upstream side of bridge) near Point A (N47.75477, W122.24963). Extend boom upstream ~400ft along river right to Point B (N47.75445, W122.24814), securing it to river bank as you go (as needed). Extend boom across to river left and downstream ~350ft, securing end to bank near Point C (47.75425,-122.24951). Use anchor posts or trees to secure boom to shore. Use anchoring systems to keep boom secure in river and along banks. Use sorbent boom for wetland area between Points A & B near bridge.		
<b>Staging Area:</b>	On-Site:	WDFW River Access Point on SW side of bridge; Staging Area & Boat Launch (SA-SAMMR-0.5 & BL-SAMMR-0.5)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Boat Traffic; Heavy Vegetation Along River Banks		
<b>Field Notes:</b>	Collection Point at/near Point C; Vac Truck or Skimmer & Storage Needed. Notify WDFW; call (425) 775-1311. Notify City of Kenmore (non-emergency dispatch); call (206) 296-3311. Wetland area is located on northeast side of 68th Avenue Bridge.		
<b>Watercourse:</b>	River - Sammamish River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife; Wetland		



### Recommended Equipment

750	Feet	Boom - B3 (Contractor Boom) or equivalent
500	Feet	Boom - Sorbent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
7	Each	Anchoring System(s) - (anchor, lines, floats)
14	Each	Anchoring Post(s) - (shoreside)
300	Feet	Line - 3/8" poly line
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
4	Laborer(s)
1	Boat Operator(s)



Photo SAMMR-0.6: On river left downstream of 68th Avenue Bridge, looking upstream (east) under the bridge and beyond towards strategy location.



**SiteContact**

WDFW Region 4  
 16018 Mill Creek Blvd  
 Mill Creek, WA 98012-1296  
 Ph: (425) 775-1311

**NearestAddress**

17181 Juanita Drive NE  
 Kenmore, WA 98028

**DrivingDirections**

TO STAGING AREA (SA-SAMMR-0.5) AND BOAT LAUNCH (BL-SAMMR-0.5) AT WDFW RIVER ACCESS

From - Interstate 405 (Northbound)  
 Take Exit 23 (Hwy 522 West, Bothell/Seattle)

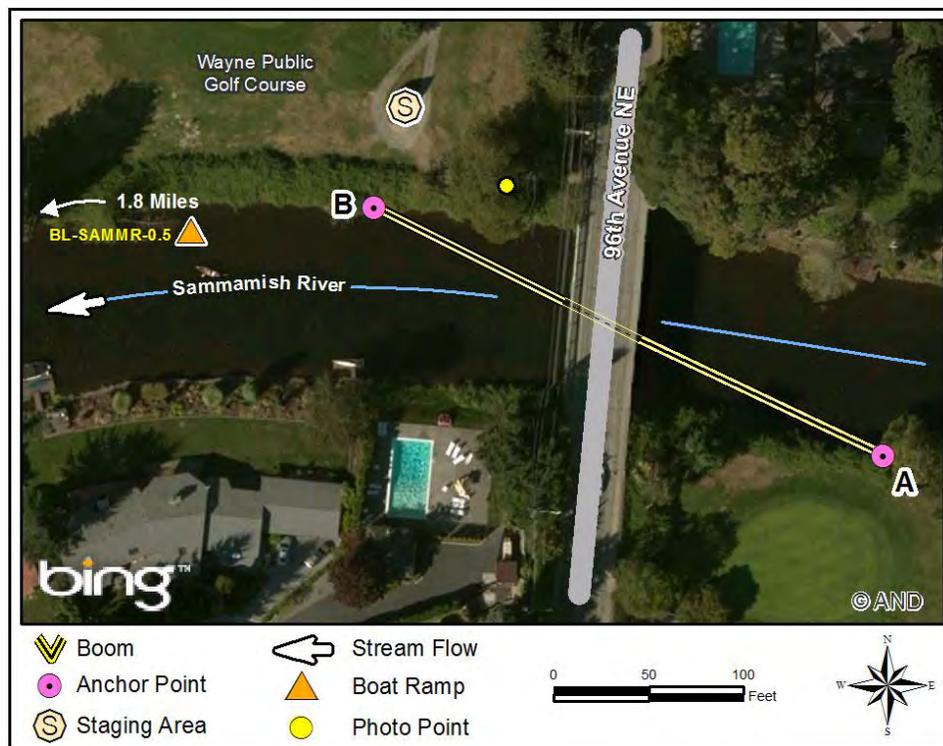
From - Interstate 405 (Southbound)  
 Take Exit 23B (Hwy 522 West, Bothell)

1. Travel west on Hwy 522 (aka Woodinville Drive and later Bothell Way NE)
2. After ~3.2 miles, turn left onto 68th Avenue NE
3. After ~0.3 miles, just after the bridge over the Sammamish River, turn right into the WDFW Water Access Point. Stage equipment in parking area near boat ramp.

# Sammamish River - 96th Avenue NE

SAMMR-2.3

<b>Position - Location:</b>	47.74823	-122.21342	Bothell (King County)
<b>Strategy Objective:</b>	Collection	Collect oil on river right immediately downstream of 96th Avenue Bridge	
<b>Implementation:</b>	Using work boat, secure end of 300ft length of boom to bank on river left near Point A (N47.74805, W122.21282, ~135ft upstream from the south side of 96th Avenue Bridge). Extend boom downstream and across to river right, securing boom to bank near Point B (N47.7484, W122.21392, about ~110ft downstream from north side of bridge). Use anchor posts or trees to secure boom to river banks. Use anchoring systems to keep boom secure in river. Use hand-launch work boat to support skimming operations at/near Point B. Access to river banks at Points A & B may be limited due to heavy vegetation; compress with plywood sheets.		
<b>Staging Area:</b>	On-Site:	Parking area at Wayne Golf Course or riverside of tee area for 18th hole; coordinate with property owner/manager.	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Heavy Vegetation Along River Banks; Steep & Muddy River Banks; Bridge Structures/Pillars		
<b>Field Notes:</b>	Private Property: coordinate activities with property owner/manager; call (425) 486-4714 or (425) 485-6237. May be able to stage Vac Truck on bridge; follow WADOT traffic guidelines.		
<b>Watercourse:</b>	River - Sammamish River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

300	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size (jet drive recommended)
1	Each	Workboat(s) - (hand-launch)
1	Each	Towing Bridal(s) - (appropriately sized for boom)
4	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
10	Each	Plywood sheets (4ft x 4ft)
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



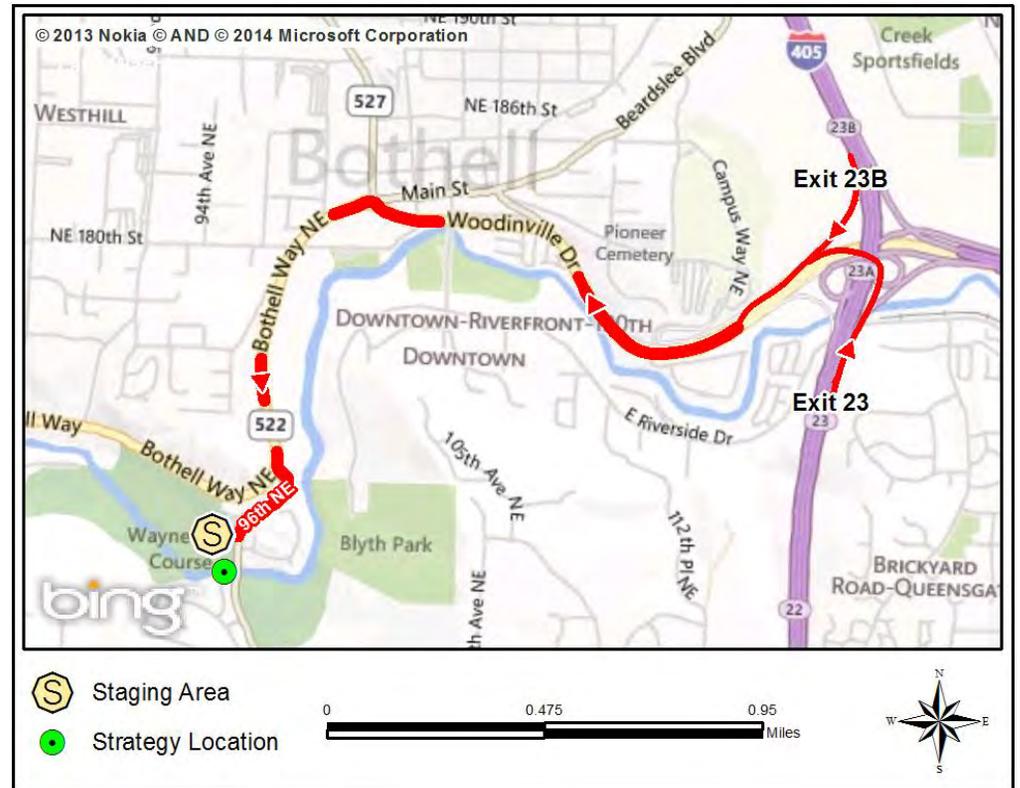
Photo SAMMR-2.3: At strategy location on Sammamish River (river right) at Wayne Public Golf Course, looking south towards west side of 96th Avenue Bridge and river left.

**SiteContact**

Wayne Public Golf Course  
 Property Manager/Owner  
 16721 96th Ave NE, Bothell, WA 98011  
 (425) 486-4714 or (425) 485-6237  
 www.waynegolfcourse.com

**NearestAddress**

16721 96th Ave NE  
 Bothell, WA 98011



**DrivingDirections**

From - Interstate 405 (Northbound)  
 Take Exit 23 (Hwy 522 West, Bothell/Seattle)

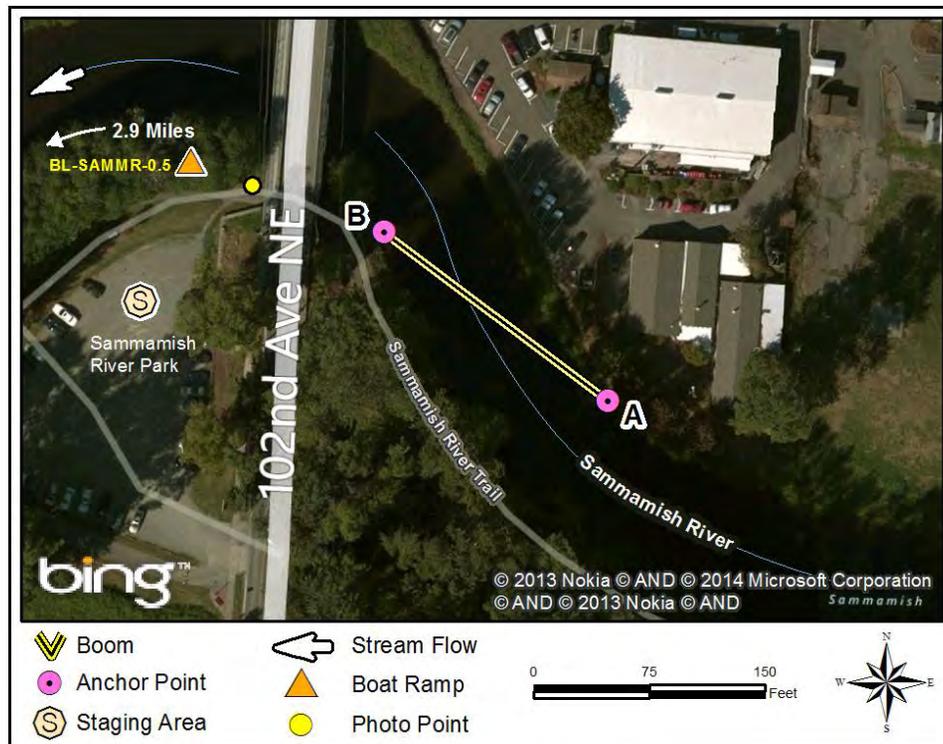
From - Interstate 405 (Southbound)  
 Take Exit 23B (Hwy 522 West, Bothell)

1. After merging onto Hwy 522 travel west for 1.3 miles on Woodinville Drive (Hwy 522)
2. Woodinville Drive (Hwy 522) becomes Bothell Way NE (Hwy 522)
3. From Bothell Way NE, turn left onto 96th Avenue NE
4. Travel SW on 96th Avenue NE for 0.2 miles and turn right into parking lot at Wayne Public Golf Course. Stage in parking area or near the river behind the tee-off area for the 18th hole. Coordinate with property manager/owner.

# Sammamish River - 102nd Avenue NE

SAMMR-3.4

<b>Position - Location:</b>	47.75877	-122.20337	Bothell (King County)
<b>Strategy Objective:</b>	Collection	Collect oil on river left immediately upstream of 102nd Avenue Bridge	
<b>Implementation:</b>	Using work boat, secure end of 200ft length of boom to bank on river right near Point A (N47.75853, W122.20295, ~250ft upstream from 102nd Avenue Bridge). Extend boom downstream and across to river left, securing boom to bank near Point B (N47.75882, W122.20356, about ~50ft upstream from bridge). Use anchor posts or trees to secure boom to river banks. Use anchoring systems to keep boom secure in river. Collect oil at/near Point B using Vac Truck or skimmer with portable storage.		
<b>Staging Area:</b>	On-Site:	Stage in parking area at Sammamish River Park (west of 102nd Avenue NE on south side of bridge - river left).	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Heavy Vegetation Along River Banks; Muddy River Banks; Bridge Structures/Pillars		
<b>Field Notes:</b>	Notify City of Bothell Parks & Recreation; call (425) 486-7430. Notify King County Parks Duty Officer; call (206) 296-8100. Contact Fluke Metal Products for access to river right upstream of bridge (Point B); call (425) 485-9666.		
<b>Watercourse:</b>	River - Sammamish River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

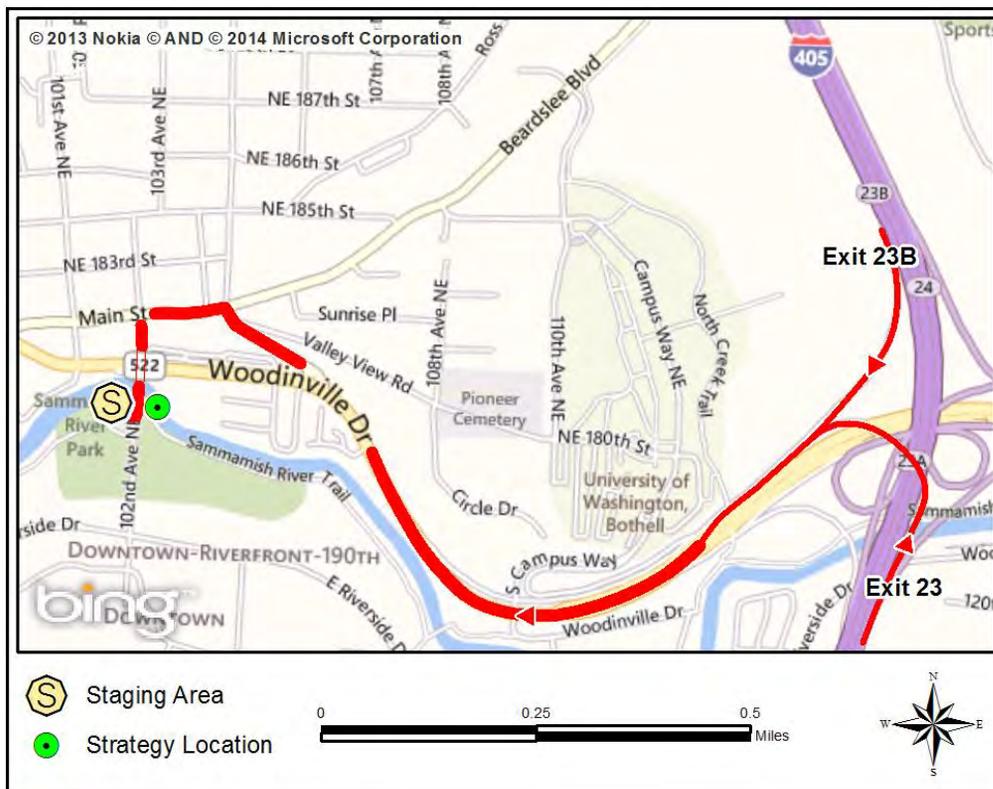
200	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size (jet drive recommended)
1	Each	Towing Bridal(s) - (appropriately sized for boom)
3	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
2	Each	Anchoring Post Driver(s)
2	Each	Heaving Line(s)
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo SAMMR-3.4: On Sammamish River Trail near parking area at Sammamish River Park, looking under 102nd Avenue Bridge, upstream toward strategy location in background.



**SiteContact**

City of Bothell Parks & Recreation  
 9929 NE 180th Street, Bothell 98011  
 (425) 486-7430  
 recreation@ci.bothell.wa.us

**NearestAddress**

(Point A)  
 17773 102nd Avenue NE, Bothell, 98011

(Point B)  
 10223 Woodinville Drive, Bothell, 98011

**DrivingDirections**

From - Interstate 405 (Northbound)  
 Take Exit 23 (Hwy 522 West, Bothell/Seattle)

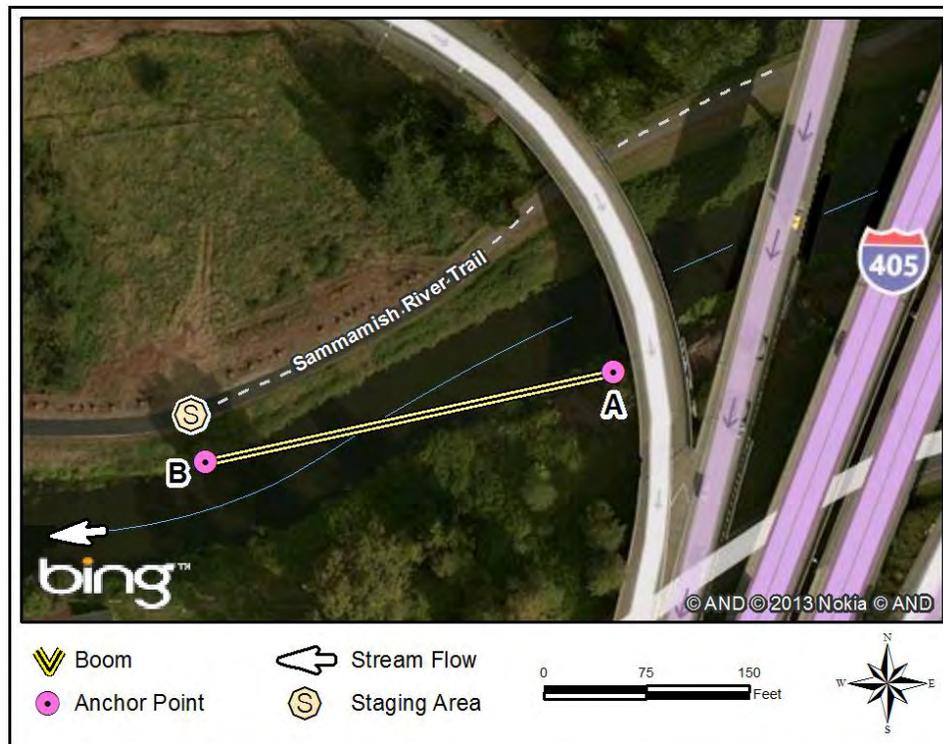
From - Interstate 405 (Southbound)  
 Take Exit 23B (Hwy 522 West, Bothell)

1. After merging onto Hwy 522 (Woodinville Drive), travel west for 0.2 miles; take first exit (Kaysner Way).
2. Travel NW on Kaysner Way for 0.1 miles. At stop sign, take left onto Main Street.
3. Travel west on Main Street for 0.1 miles. At stop sign, turn left onto 102nd Avenue NE.
4. Travel south on 102nd Avenue NE for 0.1 miles, turning right into parking area for Sammamish River Park just after the bridge over the river. Stage in parking lot near Sammamish River Trail.

# Sammamish River - Interstate 405

SAMMR-4.5

<b>Position - Location:</b>	47.75635	-122.18654	Bothell (King County)
<b>Strategy Objective:</b>	Collection	Collect oil on river right immediately downstream of Interstate-405 overpass.	
<b>Implementation:</b>	Using hand-launch work boat, secure end of 300ft length of boom to bank on river left near Point A (N47.75642, W122.18595, near SW corner of I-405 on-ramp overpass). Extend boom downstream and across to river right and secure remaining end to bank near Point B (N47.75623, W122.18712, about ~300ft downstream from NW side of on-ramp overpass). Use lines and anchoring systems to keep boom secure in river. Collect oil at/near Point B using skimmer with portable storage. Access to river banks at Points A & B limited due to heavy vegetation; compress with plywood sheets. Detour pedestrian/bicycle traffic on trail away from the area.		
<b>Staging Area:</b>	On-Site:	Stage equipment on Sammamish River Trail; access via gate at west end of NE 178th Street (Woodinville).	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Heavy Vegetation Along River Banks; Muddy River Banks; Bridge Structures/Pillars		
<b>Field Notes:</b>	Notify King County Parks Duty Officer and Woodinville Parks – trail access help can be provided; call (206) 296-8100 and (260) 510-3700. Notify Bothell Parks; call (425) 486-7430. Trail can support pickups but not heavy trucks. Reroute pedestrian/bicycle traffic.		
<b>Watercourse:</b>	River - Sammamish River		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

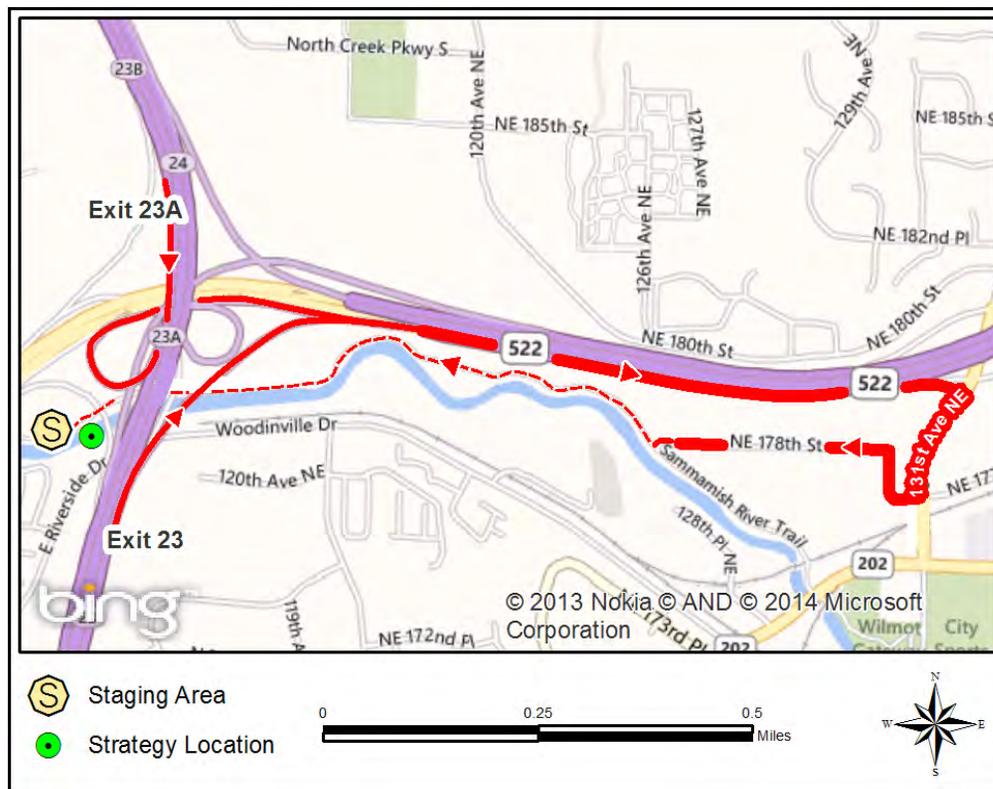
300	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - (hand-launch)
1	Each	Towing Bridal(s) - (appropriately sized for boom)
4	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
300	Feet	Line - 3/8" poly line
10	Each	Plywood sheets (4ft x 4ft)
1	Each	Skimmer (appropriately sized) with Portable Storage

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo SAMMR-4.5: Near strategy location on south bank (river left) under Interstate-405/Hwy 522 interchange, Looking north towards river right.



**SiteContact**

King County  
 Parks and Recreation Division  
 201 S. Jackson Street, # 700  
 Seattle, WA 98104  
 (206) 477-4527 and (206) 296-8100 (24hr)

**NearestAddress**

12610 NE 178th Street  
 Woodinville, WA 98072

**DrivingDirections**

From - Interstate 405 (Northbound) - Take Exit 23 (Hwy 522 East, Woodinville/Wenatchee)  
 From - Interstate 405 (Southbound) - Take Exit 23A (Hwy 522 East, Woodinville/Monroe)

1. From the I-405/Hwy 522 travel east on Hwy 522 for about ~0.7 miles - stay in right lane.
2. Take the Woodinville/Redmond exit (stay in right lane within exit).
3. Near end of exit, stay to the right and enter 131st Avenue NE.
4. Travel south on 131st Avenue NE for 0.1 miles, then (at first stop light) turn right onto NE 177th Place.
5. After ~100ft, NE 177th becomes 130th Ave NE at curve. Travel 300ft to the end of road and turn left onto NE 178th Street. Travel ~0.3 miles to end of NE 178th Street.
6. Pass through fenced gate and turn right onto Sammamish River Trail.
7. Travel west (slowly) on the trail for 0.8 miles, under the I-405/Hwy 522 interchange overpass. Stage on the trail ~300ft west of the interchange.

# Thornton Creek (Mouth)

THORC-0.0

<b>Position - Location:</b>	47.69476	-122.27162	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Thornton Creek	
<b>Implementation:</b>	Using workboat, transport 200ft of boom to strategy location. Anchor boom to shore at SE corner of Matthews Beach Park near Point A (N47.69505, W122.27144). Extend boom south about ~75ft anchoring near Point B. Extend boom SW ~125ft and secure remaining end to shore (south of the creek) near Point C (N47.6946, W122.27183). Use anchor posts, trees, or existing structures to secure boom to shore. Use lines or additional anchors to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Warren G. Magnuson Park (Seattle) for Staging Area & Boat Launch (SA-LKWA-79.1 & BL-LKWA-79.1)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Shallow Water; Mud/Muddy Bottom & Creek Banks, Heavy Brush Near Shore		
<b>Field Notes:</b>	Fluctuating sand/silt bar near mouth of creek; water depth may vary. Site accessible by foot through Matthews Beach Park. Notify Seattle Parks; call (206) 982-4583 (pager).		
<b>Watercourse:</b>	Creek - Thornton Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



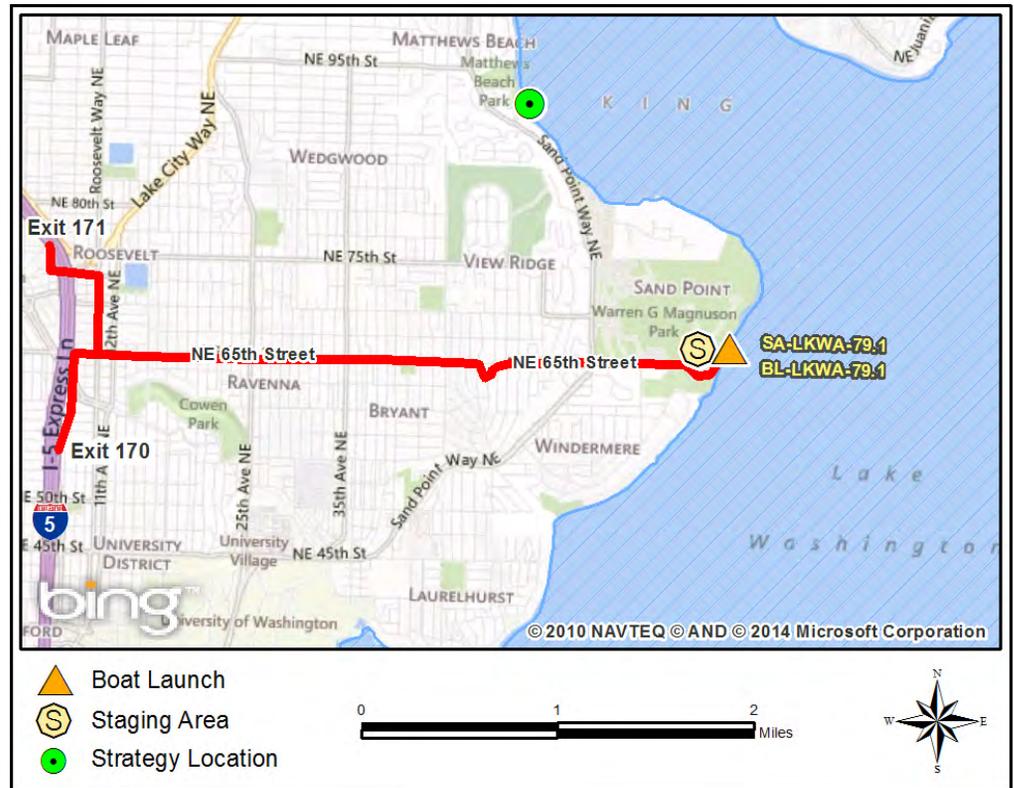
### Recommended Equipment

200	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
2	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)
200	Feet	Line - 3/8" poly line

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)

No Photograph Available



## SiteContact

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

## NearestAddress

9045 51st Avenue NE  
 Seattle, WA 98115

## DrivingDirections

TO STAGING AREA (SA-LKWA-79.1) AND BOAT LAUNCH (BL-LKWA-79.1) AT WARREN G. MAGNUSON PARK

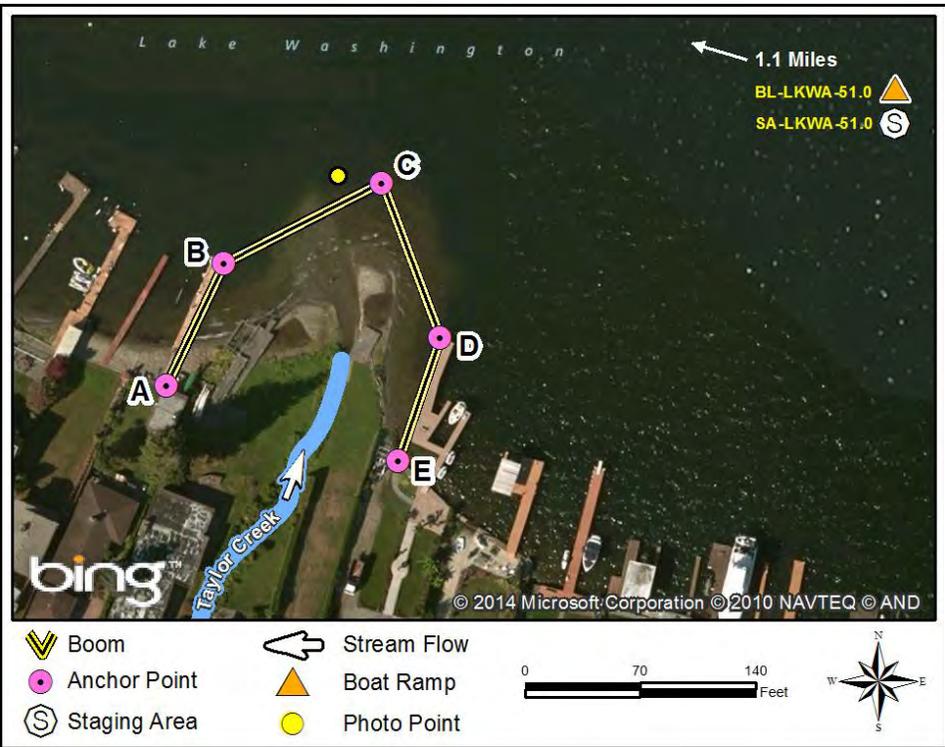
FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying strait onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# Taylor Creek (Mouth)

TYLRC-0.0

<b>Position - Location:</b>	47.51231	-122.24625	Seattle (King County)
<b>Strategy Objective:</b>	Exclusion	Keep oil out of Taylor Creek	
<b>Implementation:</b>	Using workboat, transport 400ft of boom to strategy location. Secure boom to shore at base of dock near Point A (N47.51221, W122.24668; 10024 Rainier Ave S). Extend boom northward along eastern side of dock and secure to dock end at Point B. Extend boom NE about ~110ft, anchoring near Point C (N47.51256, W122.24616). Extend boom SE ~110ft, securing it dock end at Point D (N47.5123, W122.24601; 10050 Rainier Ave S). Extend boom southward along western side of dock securing it to shore. Use anchor posts, trees, or existing structures to secure boom to shore. Use additional anchors to keep boom secure in lake.		
<b>Staging Area:</b>	Off-Site:	Use Beer Sheva Park for Staging Area & Boat Launch (SA-LKWA-51.0 & BL-LKWA-51.0)	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Shallow Water; Mud/Muddy Bottom & Creek Banks		
<b>Field Notes:</b>	Must coordinate use of private docks at Points A & B and Points D & E with property owners.		
<b>Watercourse:</b>	Creek - Taylor Creek		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

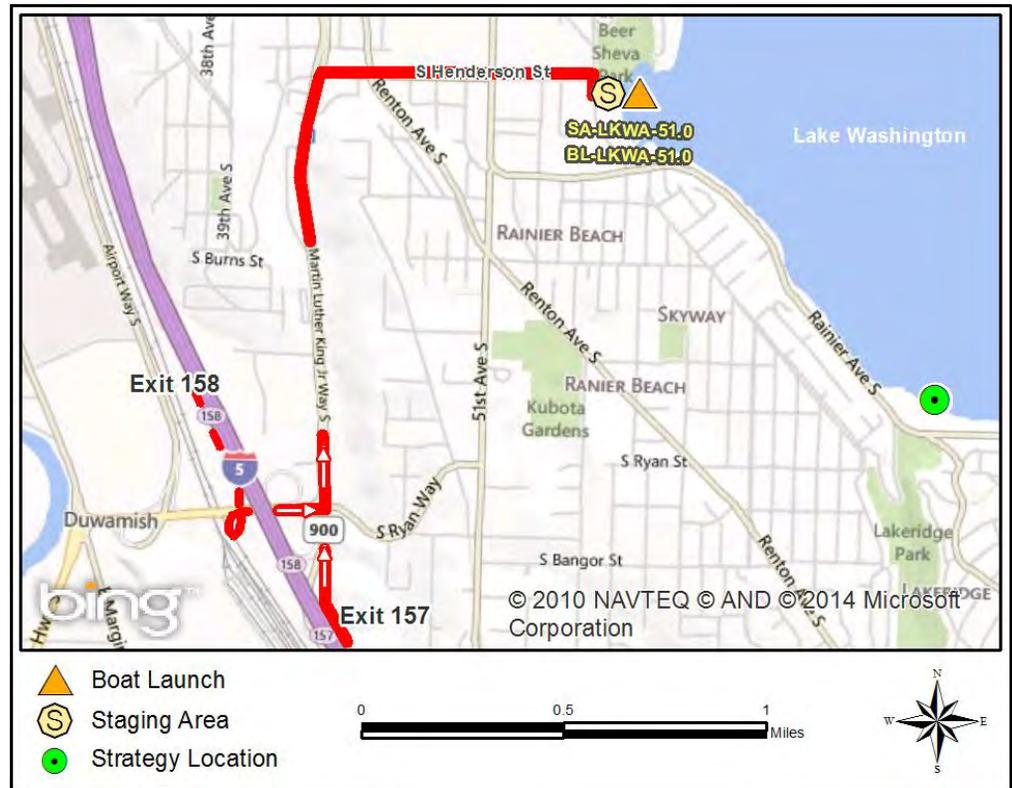
400	Feet	Boom - B3 (Contractor Boom) or equivalent
1	Each	Workboat(s) - of adequate size for type & amount of boom
1	Each	Towing Bridal(s) - (appropriately sized for boom)
3	Each	Anchoring System(s) - (anchor, lines, floats)
6	Each	Anchoring Post(s) - (shoreside)
1	Each	Anchoring Post Driver(s)
1	Each	Heaving Line(s)

### Recommended Personnel

1	Supervisor(s)
3	Laborer(s)
1	Boat Operator(s)



Photo TYLRC-0.0: On Lake Washington looking south towards mouth of Taylor Creek and strategy location.



### SiteContact

No Information

### NearestAddress

(Points A & B)  
10024 Rainier Ave S, Seattle, WA 98178

(Points D & E)  
10050 Rainier Ave S, Seattle, WA 98178

### DrivingDirections

TO STAGING AREA (SA-LKWA-51.0) AND BOAT LAUNCH (BL-LKWA-51.0) AT BEER SHEVA PARK  
FROM Interstate-5 (Northbound):

1. Take Exit 157 (M L King Way) and within exit take ramp to right for M L King Way. At traffic light at intersection of M L King Way with Boeing Access Road, stay straight to remain on M L King Way.
2. Go to step 4 below.

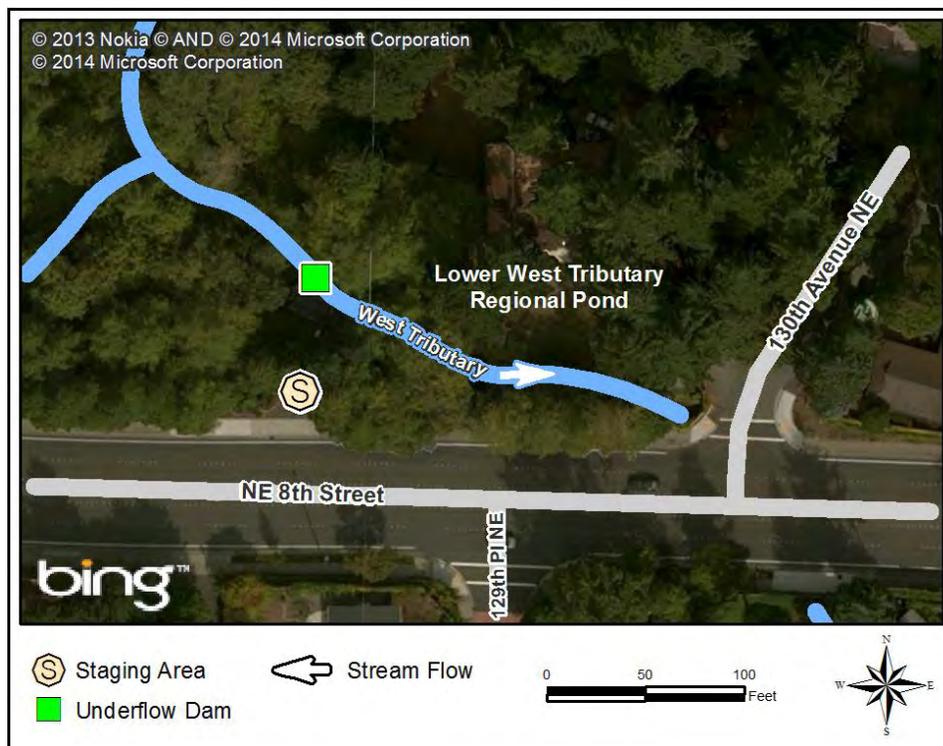
FROM Interstate-5 (Southbound):

1. Take Exit 158 (Boeing Access Rd, E Marginal Way) and stay in the left lane.
2. At traffic light, turn left onto the Boeing Access Road.
3. Travel east on the Boeing Access Road for ~0.2 miles, turning left onto M L King Way.
4. Travel ~1.0 miles north on M L King Way and turn right onto S Henderson Street.
5. Travel east on S Henderson Street for ~0.7 miles, and turn right onto Seward Park Avenue S.
6. Travel south on Seward Park Avenue S for ~300ft and turn left into the entrance for the boat ramp and parking area. Stage in parking lot.

# Lower West Tributary Regional Pond

WSTRB-2.6

<b>Position - Location:</b>	47.61743	-122.16812	Bellevue (King County)
<b>Strategy Objective:</b>	Underflow Dam	Contain and recover product on West Tributary on north side of NE 8th Street	
<b>Implementation:</b>	Construct underflow dam upstream of flood control structure, using sandbags, plastic sheeting, and PVC or corrugated pipe (8" diameter minimum). Deploy sorbent boom downstream of underflow dam to capture any residual sheen or escaping product.		
<b>Staging Area:</b>	On-Site:	Stage one pulloff/trail on north side of NE 8th Street, ~200ft west of 130th Avenue NE.	
<b>Site Safety:</b>	Slips, Trips, Falls; Water Hazard; Mud/Muddy & Unstable Creek Banks; Vehicle Traffic on Roadway; Heavy Vegetation		
<b>Field Notes:</b>	Key is needed to access creek and pond area; contact City of Bellevue Utilities at (425) 452-6932 for assistance. WDFW Emergency HPA Permit required to implement strategy; call (360) 534-8233 (24hr pager).		
<b>Watercourse:</b>	Creek - West Tributary (drains to Kelsey Creek and Mercer Slough)		
<b>Resources at Risk:</b>	General Fish & Wildlife Resources; Freshwater Wildlife		



### Recommended Equipment

100	Feet	Boom - Sorbent
80		Sandbag(s)
10	Each	Pipe(s), 8 inch x 8ft, PVC or Flexible Corrugated Plastic Pipe
1	Each	Plastic Sheeting (100ft)
2	Each	Heaving Line(s)
300	Roll	Line - 3/8" poly line
1	Asst	Equipment (shovels, pickaxes, tamper bars, sledge hammers)
1	Each	Vac Truck (with operator) or Skimmer with Portable Storage

### Recommended Personnel

1	Supervisor(s)
4	Laborer(s)

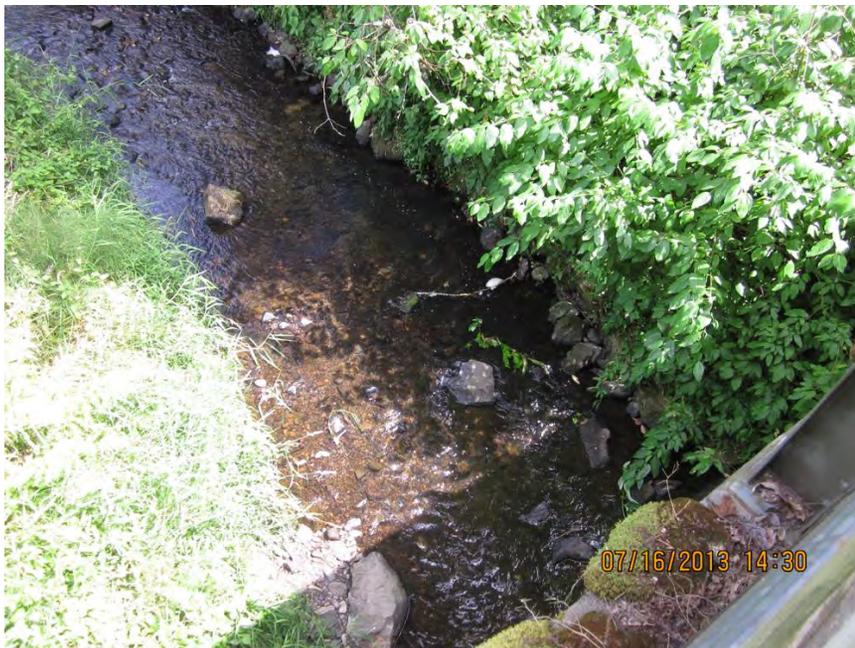
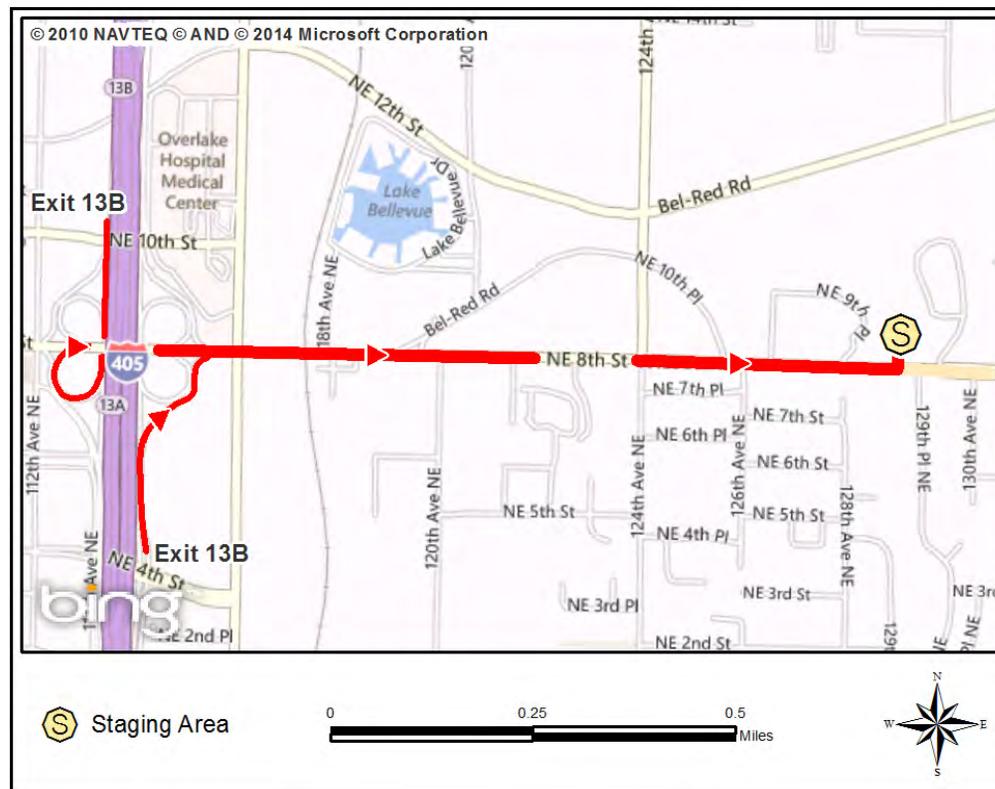


Photo WSTRB-2.6: Photo of area near strategy location.



## SiteContact

City of Bellevue  
 Utilities Department  
 450 110th Ave. NE  
 Bellevue, WA 98009  
 Phone: (425) 452-6932

## NearestAddress

659 129th Place NE  
 Bellevue, WA 98005

## DrivingDirections

From Interstate-405

1. Take Exit 13B on Interstate-405 (NE 8th Street – EAST)
2. From I-405 head east on NE 8th Street for about ~ 0.9 miles.
3. Just after a small split in the road (with a few trees and shrubs), about 500ft beyond the spot where there is a covered bus stop on the right and left side of the street, there will be a single bus stop (covered) on the left side (none on the right/south side). Along the far side (east side) of that bus stop there is a small pulloff/trail that should be able to accommodate one or two vehicles for staging. Contact the City of Bellevue Utilities for access assistance; call (425) 452-6932.

# **Appendix 4B**

## **Notification Strategy 2-Pagers**

No Notification Strategies Currently Exist for Lake Washington

# **Appendix 4C**

## **Staging Area 2-Pagers**

**Staging Area – List**

**SA-LKWA-35.6**

**SA-LKWA-51.0**

**SA-LKWA-79.1**

**SA-SAMMR-0.5**

**SA-LKWA-45.5**

**SA-LKWA-60.5**

**SA-MRCRI-4.4**

# SE 40th Street Boat Launch - Staging Area

SA-LKWA-35.6

## Staging Area

**Position - Location:** 47.57502 -122.1888 Bellevue (King County)

**Comments:** Boat launch available at site; one lane for launching boats and the other for retrieving. Paid launch fee allows users to park for up to 24 hours on a space-available basis. Notify Bellevue Parks if site used for staging; call (425) 452-6885. For more info see: <http://parkstrails.myparksandrecreation.com/Details.aspx?pid=33>.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	2 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	1 Dock
Restrooms	Yes	1 Portable Toilet
Power	Unknown	
Water	Unknown	
Parking (car)	No	
Parking (trailer)	Yes	~65 (marked)
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	Ramp/Parking Area	~35,000 SqFt
Lot Cover (primary)	Asphalt	
Covered Spaces	No	
User Fee	Yes	\$11/day to \$13/day

## GRP Response Strategies Served:

COALC-0.0, LKWA-35.4

## Staging Area

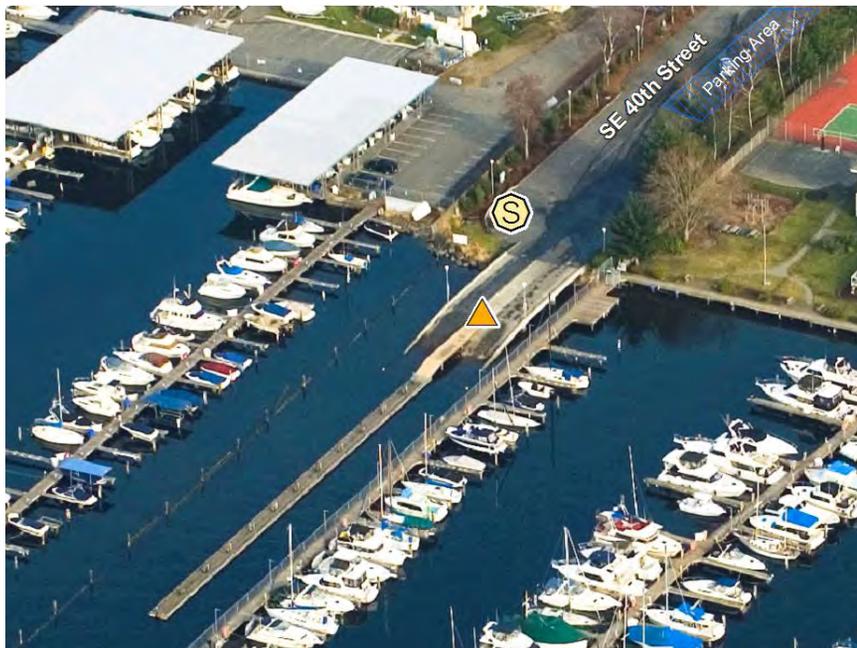
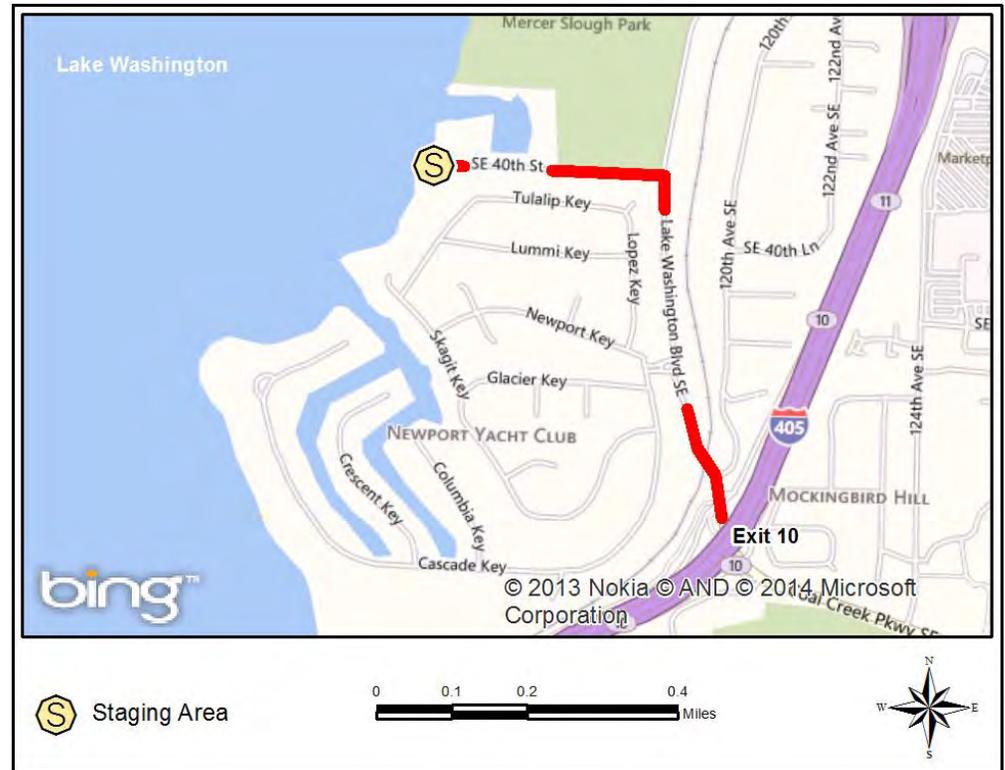


Photo SA-LKWA-35.6: Aerial photo, looking ENE towards boat ramp and end of SE 40th Street that could be used for staging. Parking area depicted, which could also be used for staging equipment.



### Site Contact Information:

City of Bellevue  
 Parks & Community Services  
 450 110th Avenue NE, P.O. Box 90012  
 Bellevue, WA 98009  
 (425) 452-6885

### Nearest Address:

3911 Lake Washington Blvd SE  
 Bellevue, WA 98006

### Driving Directions:

FROM Interstate-405 (Northbound):

1. Take Exit 10 and at bottom of ramp take sharp left turn onto Coal Creek Pkwy SE; continue northwest onto Lake Washington Blvd SE.
2. After ~0.5 miles, turn left onto SE 40th Street.
3. Travel on SE 40th Street to boat ramp at end of the road (~0.3 miles). Stage equipment in parking area or along small pullout at NW corner of roadway before boat lanes.

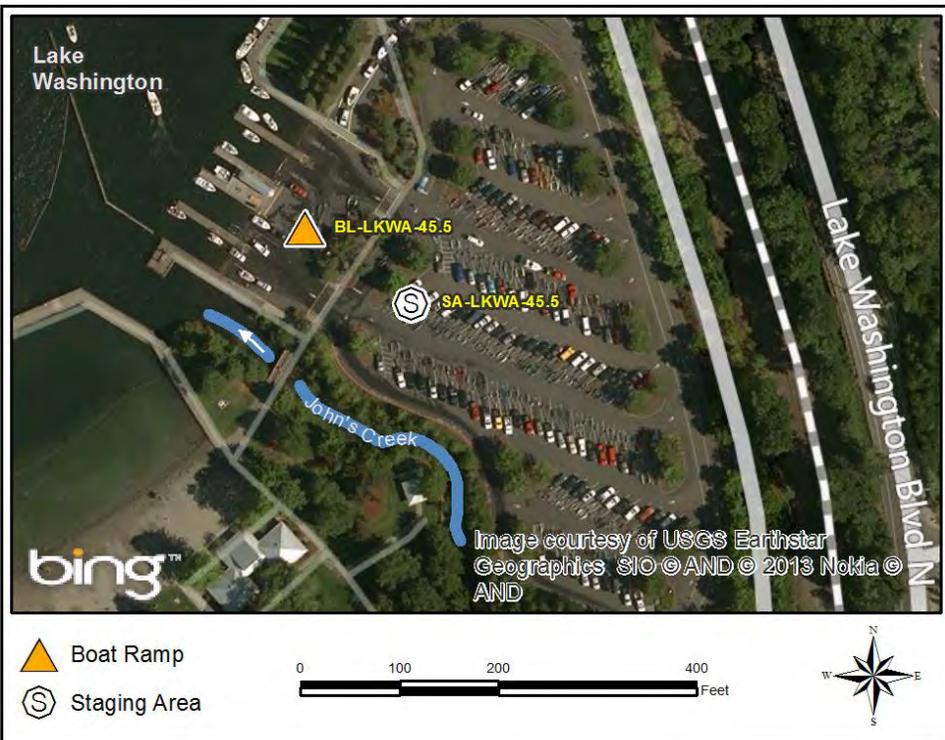
# Gene Coulon Memorial Beach Park - Staging Area

SA-LKWA-45.5

## Staging Area

**Position - Location:** 47.5052 -122.20156 Renton (King County)

**Comments:** Open 24-hours/day. Automated pay box system for parking and launch fees. Boats that weigh 10,000 pounds or more, or are 30 feet or longer, are prohibited from launching from this site. For additional information, please call (425) 430-6700 or view website at <http://rentonwa.gov/living/default.aspx?id=81>. Notify Renton Parks if site used for staging; call (425) 430-6600.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	8 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	4
Restrooms	Yes	
Power	Yes	
Water	Yes	
Parking (car)	Yes	60+ (marked)
Parking (trailer)	Yes	100+ (marked)
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	5 bars
Estimated Lot Size	SqFt	280,000+
Lot Cover (primary)	Asphalt	
Covered Spaces	No	
User Fee	Yes	\$10-\$20 (boat ramp)

## GRP Response Strategies Served:

JHNSC-0.0, LKWA-46.1, MAYC-0.0

## Staging Area

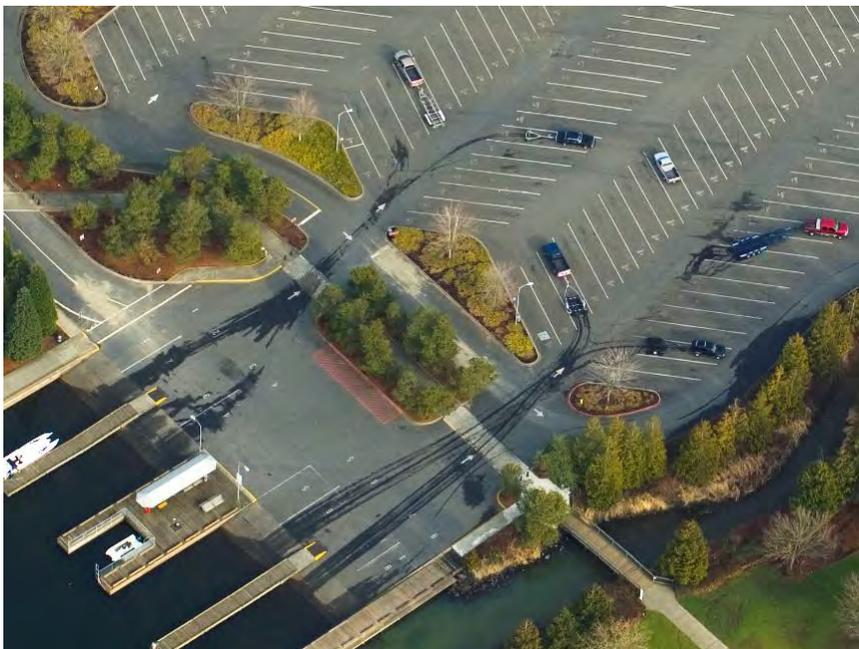


Photo SA-LKWA-45.5: Aerial photo, looking NE towards boat ramp lanes and parking lot (Staging Area) in background. Mouth of Johns Creek in lower center and lower right of photograph.



### Site Contact Information:

City of Renton - Parks Division  
 1055 S. Grady Way  
 Renton, WA 98057  
 (425) 430-6600 or (425) 235-2121

### Nearest Address:

1201 Lake Washington Blvd N  
 Renton, WA 98057

### Driving Directions:

FROM- Interstate 405 (Northbound):

1. Take Exit 5 and travel towards the southwest on NE Park Drive (stay in far right lane).
2. After ~0.2 miles, take right turn and follow curve of road onto Lake Washington Blvd N.
3. After ~0.1 mile, enter left hand turn lane and turn left onto Coulon Beach Park Drive; follow roadway towards the right immediately after the turn.
4. After ~0.1 mile, turn left into the park complex; follow road to the right immediately after turn. Travel on road around parking area for ~0.2 miles to the boat ramp location on Lake Washington. Stage equipment in parking area near boat ramp.

# Beer Sheva Park - Staging Area (Atlantic City Boat Ramp)

SA-LKWA-51.0

## Staging Area

**Position - Location:** 47.52317    -122.26368    Seattle (King County)

**Comments:** Wide ramp with plenty of dock space that can accommodate up to six launches and/or retrievals at a time. Park closed from 11PM to 4AM; call Seattle Parks (duty pager) at (206) 982-4583 for afterhours access assistance. For more information about this location see: [https://www.seattle.gov/parks/park\\_detail.asp?ID=4081](https://www.seattle.gov/parks/park_detail.asp?ID=4081). Notify Seattle Parks if site used for staging; call (206) 982-4583.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	6 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	2 Docks
Restrooms	Unknown	
Power	Unknown	
Water	Unknown	
Parking (car)	Yes	15 Marked
Parking (trailer)	Yes	32 Marked
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	SqFt	89,000
Lot Cover (primary)	Asphalt	65%
Covered Spaces	No	
User Fee	Yes	\$12/day (boat ramp)

## GRP Response Strategies Served:

LKWA-51.2, TYLRC-0.0

## Staging Area



Photo SA-LKWA-51.0: Aerial photo, looking SW towards Atlantic City Boat Ramp and Parking Area at Beer Sheva Park. Construction work at site noted.



### Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### Nearest Address:

9017 Seward Park Ave S  
 Seattle, WA 98118

### Driving Directions:

FROM Interstate-5 (Northbound):

1. Take Exit 157 (M L King Way) and within exit take ramp to right for M L King Way. At traffic light at intersection of M L King Way with Boeing Access Road, stay straight to remain on M L King Way.
2. Go to step 4 below.

FROM Interstate-5 (Southbound):

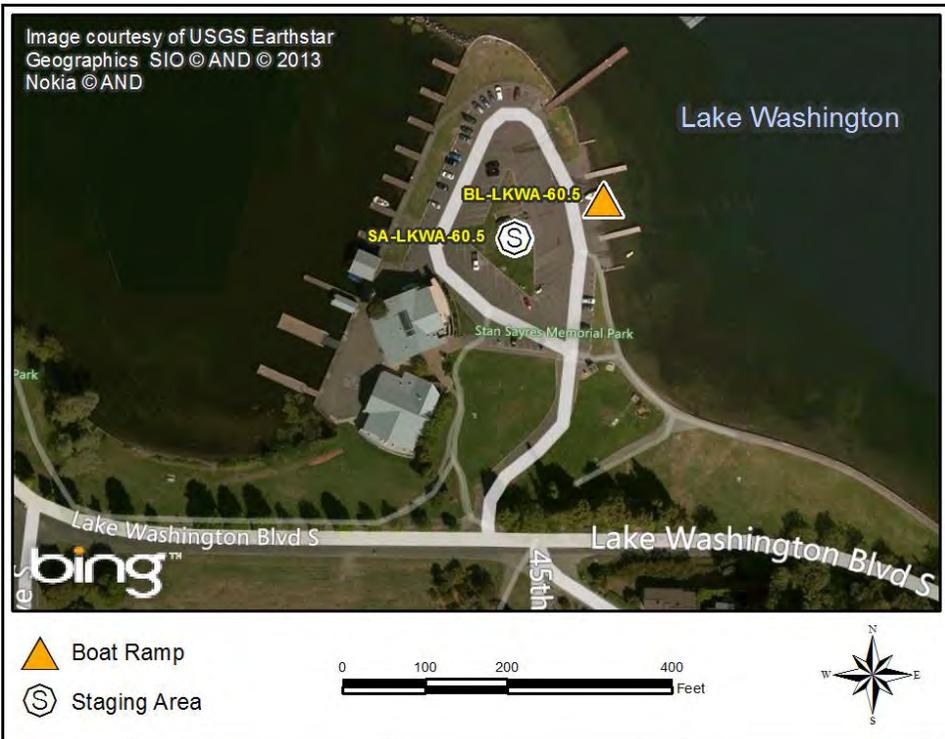
1. Take Exit 158 (Boeing Access Rd, E Marginal Way) and stay in the left lane.
2. At traffic light, turn left onto the Boeing Access Road.
3. Travel east on the Boeing Access Road for ~0.2 miles, turning left onto M L King Way.
4. Travel ~1.0 miles north on M L King Way and turn right onto S Henderson Street.
5. Travel east on S Henderson Street for ~0.7 miles, and turn right onto Seward Park Avenue S.
6. Travel south on Seward Park Avenue S for ~300ft and turn left into the entrance for the boat ramp and parking area. Stage in parking lot.

# Stan Sayres Memorial Park - Staging Area

SA-LKWA-60.5

## Staging Area

<b>Position - Location:</b>	47.5711	-122.27719	Seattle (King County)
<b>Comments:</b>	Boat launch at site provides four wide launching lanes usually protected from rough water. Notify Seattle Parks if site used for staging; call (206) 982-4583		



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	4 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	2 Docks
Restrooms	Yes	6 Portable Toilets
Power	Unknown	
Water	Unknown	
Parking (car)	Yes	60 (Marked)
Parking (trailer)	Yes	30 (Marked)
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	SqFt	62,000
Lot Cover (primary)	Asphalt	68% Cover
Covered Spaces	No	
User Fee	Yes	\$12/day (boat ramp)

## GRP Response Strategies Served:

LKWA-59.3a, LKWA-59.3b

## Staging Area



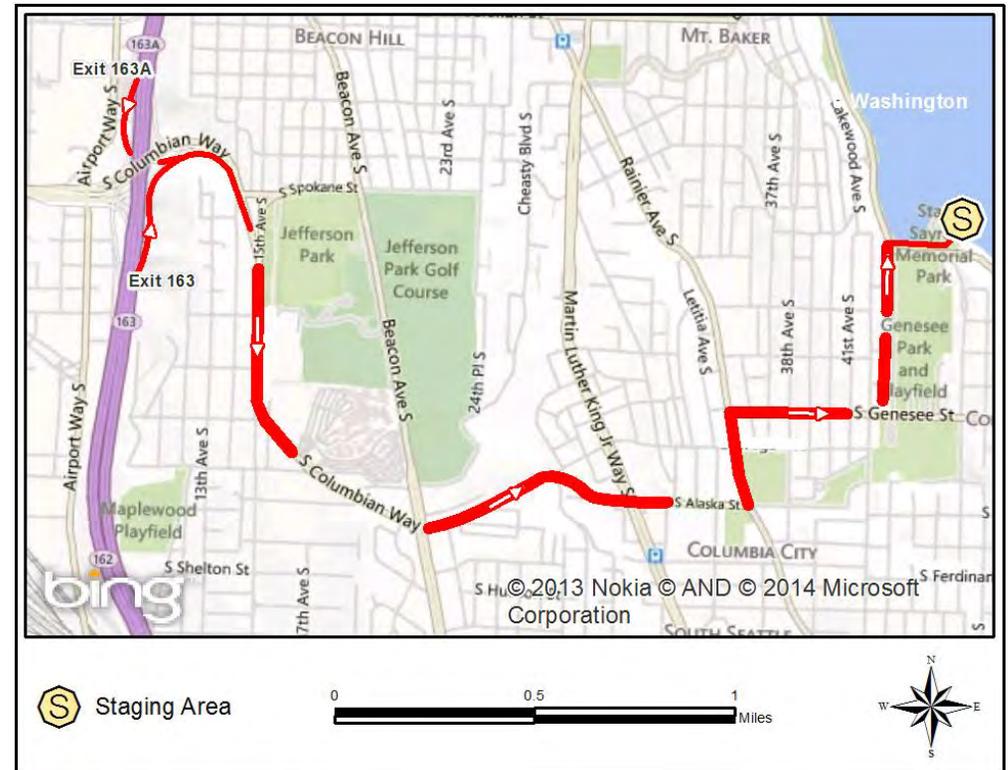
Photo SA-LKWA-60.5: Aerial of Stan Sayres Memorial Park, taken from altitude looking west toward boat launch and parking/staging area, both noted in photograph.

### Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### Nearest Address:

3800 Lake Washington Blvd S  
 Seattle, WA 98118



### Driving Directions:

FROM - Interstate 5 (Northbound):

- (1) Take Exit 163 (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the right (Columbia Way); roadway will curve to the right (get in right lane). (3) Go to step 3 below.

FROM - Interstate 5 (Southbound):

- (1) Take Exit 163A (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the left (Columbia Way, 15th Ave S). Ramp will curve left over I-5, then back to the right (get in right lane). (3) At first stop light, stay straight to remain on S Columbia Way. Stay on S Columbia Way for 2.0 miles (becomes 15th Ave S and later becomes S Alaska Street). (4) Turn left onto Rainier Avenue S. (5) After 0.2 miles turn right onto S Genesee Street. (6) After 0.4 miles, turn left onto 43rd Avenue S. After 0.4 miles turn right onto Lake Washington Blvd S. After 0.1 miles, turn left into Stan Sayres Park; boat ramp and parking/staging area are 400ft ahead on right and left.

# Warren G. Magnuson Park - Staging Area

SA-LKWA-79.1

## Staging Area

**Position - Location:** 47.67687 -122.25063 Seattle (King County)

**Comments:** Gates locked between 10PM & 4AM; call Seattle Parks (duty pager) at (206) 982-4583 for afterhours access assistance. Notify Seattle Parks if site used for staging; call (206) 982-4583. The two south lanes are for launching and two north lanes for retrieval. For more info see: <https://www.seattle.gov/parks/magnuson/boating.htm>.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	4 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	3
Restrooms	Yes	2 Portable Toilets
Power	Yes	1 Outlet
Water	No	
Parking (car)	Yes	70 Spaces (Marked)
Parking (trailer)	Yes	50 Spaces (Marked)
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	3 Bars +
Estimated Lot Size	SqFt	200,000
Lot Cover (primary)	Asphalt	50%
Covered Spaces	No	
User Fee	Yes (Boat Launch)	\$12/day (boat ramp)

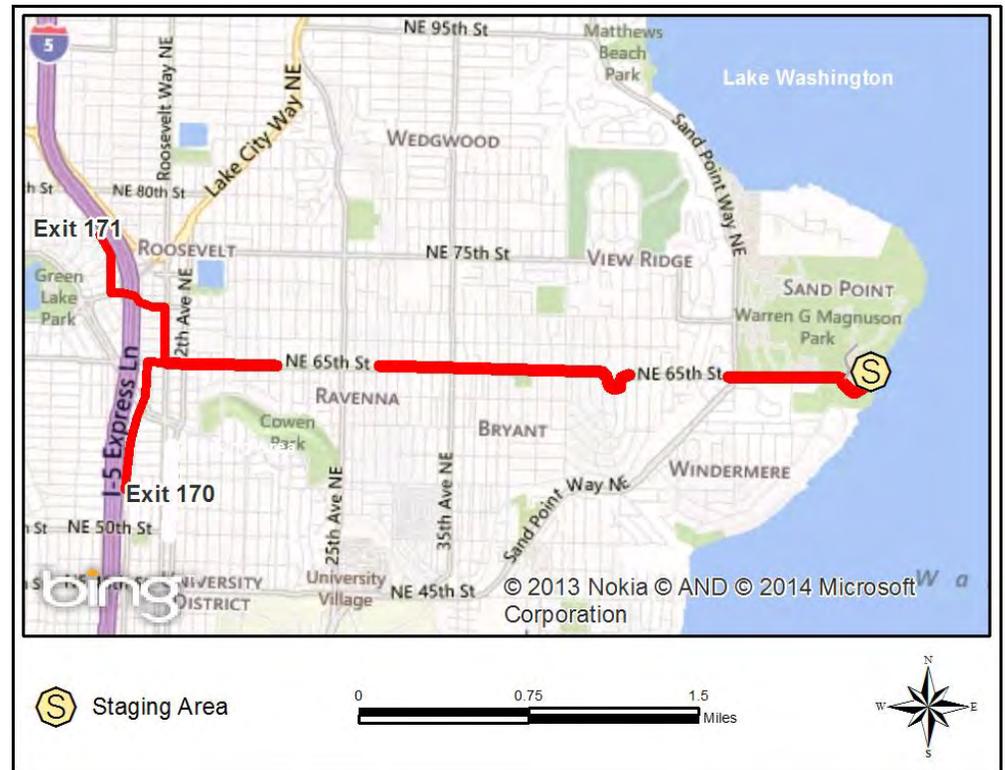
## GRP Response Strategies Served:

LKWA-4.3, LKWA-11.0, LKWA-17.2, LKWA-68.6, LKWA-70.7, LKWA-71.1  
LKWA-73.4, THORC-0.0

## Staging Area



Photo SA-LKWA-79.1: Aerial of boat launch and parking areas at Warren G. Magnuson Park, taken from lake (at altitude) looking west. Boat launch center right; parking areas shown in middle and left center.



### Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### Nearest Address:

7400 Sand Point Way NE  
 Seattle, WA

### Driving Directions:

FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying strait onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots. Stage equipment in boat launch parking area, or in main parking area as close as possible to the boat launch.

# Mercer Island Boat Launch - Staging Area

SA-MRCRI-4.4

## Staging Area

<b>Position - Location:</b>	47.57774	-122.20323
<b>Comments:</b>	Boat Launch open from 5AM until 10:30PM. For afterhours access assistance contact Mercer Island Police or Fire (via dispatch); call (425) 577-5656. Notify Mercer Island Parks and Recreation if site used for staging; call (206) 275-7609.	



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	1
Boat Ramp Type	Concrete	< 7° Grade
Boat Dock	Yes	1 Dock
Restrooms	Yes	2 Portable Toilets
Power	No	
Water	No	
Parking (car)	No	
Parking (trailer)	Yes	60 Marked
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	5 bars
Estimated Lot Size	SqFt	40,000
Lot Cover (primary)	Asphalt	
Covered Spaces	Yes	Under I-90 Bridge
User Fee	Yes	\$11/day (boat ramp)

## GRP Response Strategies Served:

MRCRI-1.6, MRCRI-2.4

## Staging Area



Photo SA-MRCRI-4.4: Aerial of Mercer Island Boat Launch Staging Area under the I-90 Bridge, taken from altitude looking NW from south side of bridge. The boat launch and staging area are noted in the photograph.

### Site Contact Information:

City of Mercer Island  
Parks & Recreation  
2040 84th Ave SE  
Mercer Island, WA 98040  
(206) 275-7609, miparks@mercergov.org

### Nearest Address:

3600 East Mercer Way (Frontage Road)  
Mercer Island, WA 98040



### Driving Directions:

FROM - Interstate 90 (Eastbound - Away from Seattle):

- (1) Take Exit 8 (E Mercer Way).
- (2) At traffic light (at end of exit ramp) turn right onto E Mercer Way (use middle lane and stay straight on E Mercer Way).
- (3) After 0.1 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left).
- (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

FROM - Interstate 90 (Westbound - Towards Seattle):

- (1) Take Exit 8 (E Mercer Way).
- (2) At traffic light (at end of exit ramp) turn left onto E Mercer Way (stay in left lane).
- (3) After 0.2 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left).
- (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

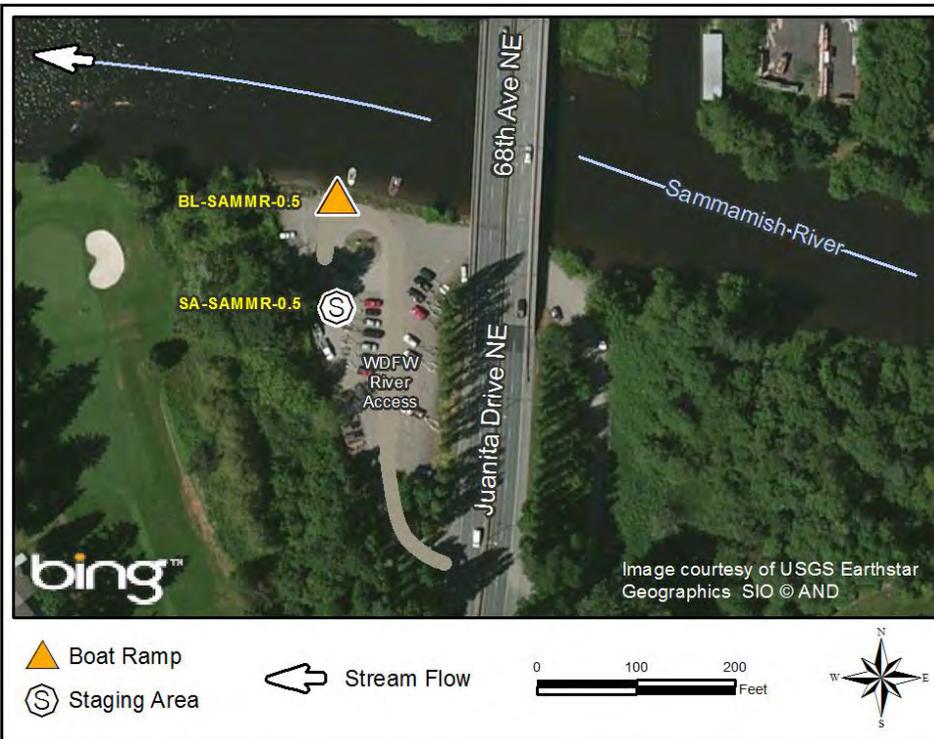
# Sammamish River - Staging Area (WDFW Water Access)

SA-SAMMR-0.5

## Staging Area

**Position - Location:** 47.75408 -122.25045 Kenmore (King County)

**Comments:** Located at Washington Department of Fish and Wildlife (WDFW) Water Access Site on Sammamish River. Discovery Pass Required unless other arrangements have been made with WDFW. Notify WDFW if site used for staging; call (425) 775-1311. For more information see: [http://wdfw.wa.gov/lands/water\\_access/30250/](http://wdfw.wa.gov/lands/water_access/30250/).



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	1 Lane
Boat Ramp Type	Concrete	
Boat Dock	No	
Restrooms	Yes	
Power	No	
Water	No	
Parking (car)	Yes	~30 (vehicle & trailer)
Parking (trailer)	Yes	~30 (not marked)
Waste Disposal	No	
Telephones	No	
Cell Phone Coverage	Yes	Multiple
Estimated Lot Size	SqFt	37,000
Lot Cover (primary)	Dirt/Gravel	90%
Covered Spaces	No	
User Fee	Yes	Discover Pass Req'd

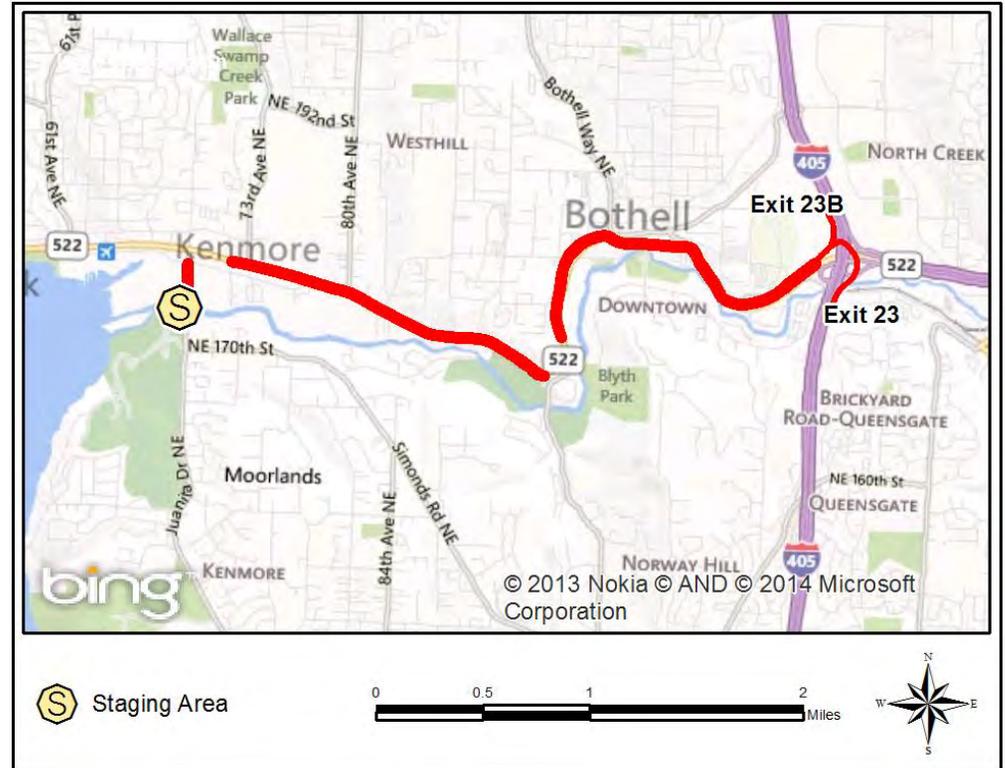
## GRP Response Strategies Served:

SAMMR-0.0, SAMMR-0.6, SAMMR-2.3, SAMMR-3.4

## Staging Area



Photo SA-SAMMR-0.5: Aerial of boat launch and parking areas at WDFW Water Access site on Sammamish River, looking south towards river left at altitude. Boat launch towards lower right corner of photograph.



### Site Contact Information:

WDFW Region 4  
 16018 Mill Creek Blvd  
 Mill Creek, WA 98012-1296  
 Ph: (425) 775-1311

### Nearest Address:

17181 Juanita Drive NE  
 Kenmore, WA 98028

### Driving Directions:

From - Interstate 405 (Northbound)  
 Take Exit 23 (Hwy 522 West, Bothell/Seattle)

From - Interstate 405 (Southbound)  
 Take Exit 23B (Hwy 522 West, Bothell)

1. Travel west on Hwy 522 (aka Woodinville Drive and later Bothell Way NE)
2. After ~3.2 miles, turn left onto 68th Avenue NE
3. After ~0.3 miles, just after the bridge over the Sammamish River, turn right into the WDFW Water Access Point. Stage equipment in parking area near boat ramp.

# **Appendix 4D**

## **Boat Launch 2-Pagers**

**Boat Launch Location – List**

**BL-LKWA-14.0**

**BL-LKWA-45.5**

**BL-LKWA-60.5**

**BL-MRCRI-4.4**

**BL-LKWA-35.6**

**BL-LKWA-51.0**

**BL-LKWA-79.1**

**BL-SAMMR-0.5**

# Kirkland Marina Park - Boat Launch

BL-LKWA-14.0

## Boat Launch Location

**Position - Location:** 47.67565    -122.20956    Kirkland (King County)

**Comments:** Ramp can accommodate vessels up to 24ft. Access limited by hydraulic post from April through October - access card is needed to lower the post; call City of Kirkland at (425) 587-3900 for access assistance. Open access to ramp from November through March. See [http://www.kirklandwa.gov/depart/parks/Kirkland\\_Marina.htm](http://www.kirklandwa.gov/depart/parks/Kirkland_Marina.htm).



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	1 Lane
Boat Ramp Type	Concrete	
Boat Dock	Yes	1 Dock
Restrooms	Unknown	
Power	Unknown	
Water	Unknown	
Parking (car)	Yes	~100 (marked)
Parking (trailer)	Unknown	
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	Ramp/Parking Area	~7000 SqFt
Lot Cover (primary)	Asphalt	
Covered Spaces	Yes	2800 SqFt
User Fee	Yes	Access Card Req'd

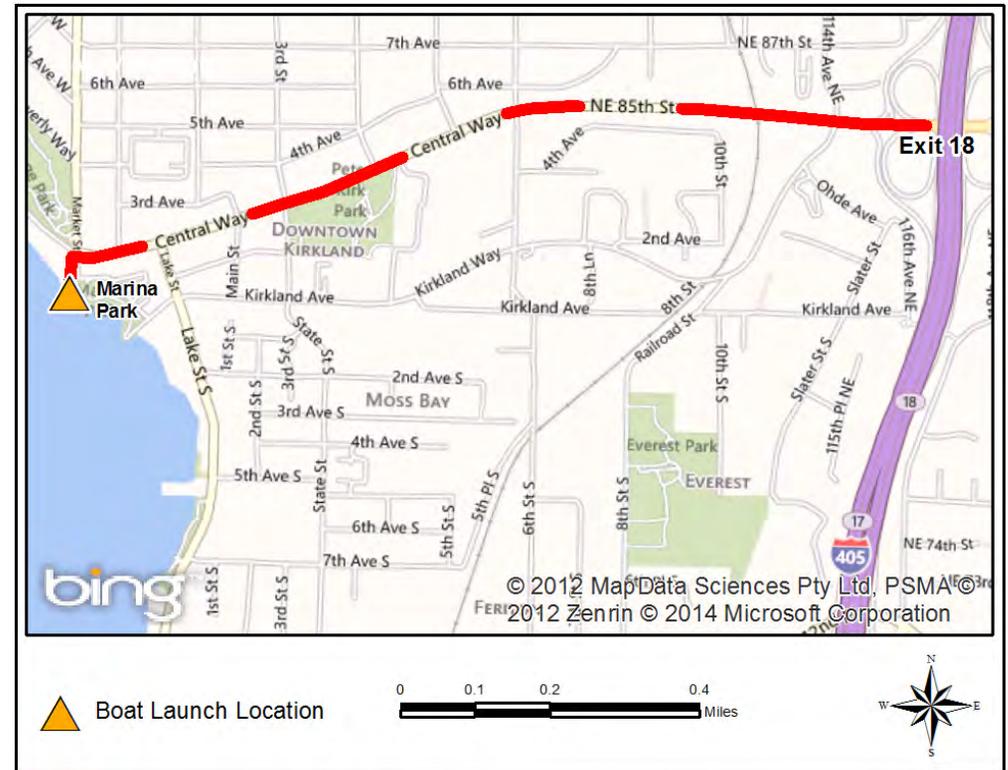
## GRP Response Strategies Served:

No Information

## Boat Launch Location



Photo BL-LKWA-14.0: Aerial photo, looking NE toward boat ramp and dock at Kirkland Marina Park.



## Site Contact Information:

City of Kirkland  
505 Market Street  
Kirkland, WA 98033  
(425) 587-3900

## Nearest Address:

46 Lakeshore Plaza Drive  
Kirkland, WA 98033

## Driving Directions:

1. Take Exit 18 on Interstate-405 and head west on NE 85th Street (becomes Central Way)
2. After ~1.2 miles, (at stop sign) turn left onto Lakeshore Plaza Drive
3. After 200ft boat ramp will be on your right off Lakeshore Plaza Drive (at Marina Park)

# SE 40th Street - Boat Launch

BL-LKWA-35.6

## Boat Launch Location

**Position - Location:** 47.575      -122.18885      Bellevue (King County)

**Comments:** One lane for launching boats and the other lane for retrieving. Paid launch fee allows users to park for up to 24 hours on a space-available basis. For more info see: <http://parkstrails.myparksandrecreation.com/Details.aspx?pid=33>. Notify Bellevue Parks if site used for staging; call (425) 452-6885.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	2 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	1 Dock
Restrooms	Yes	1 Portable Toilet
Power	Unknown	
Water	Unknown	
Parking (car)	No	
Parking (trailer)	Yes	~65 (marked)
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	Ramp/Parking Area	~35,000 SqFt
Lot Cover (primary)	Asphalt	
Covered Spaces	No	
User Fee	Yes	\$11/day to \$13/day

## GRP Response Strategies Served:

COALC-0.0, LKWA-35.4

## Boat Launch Location

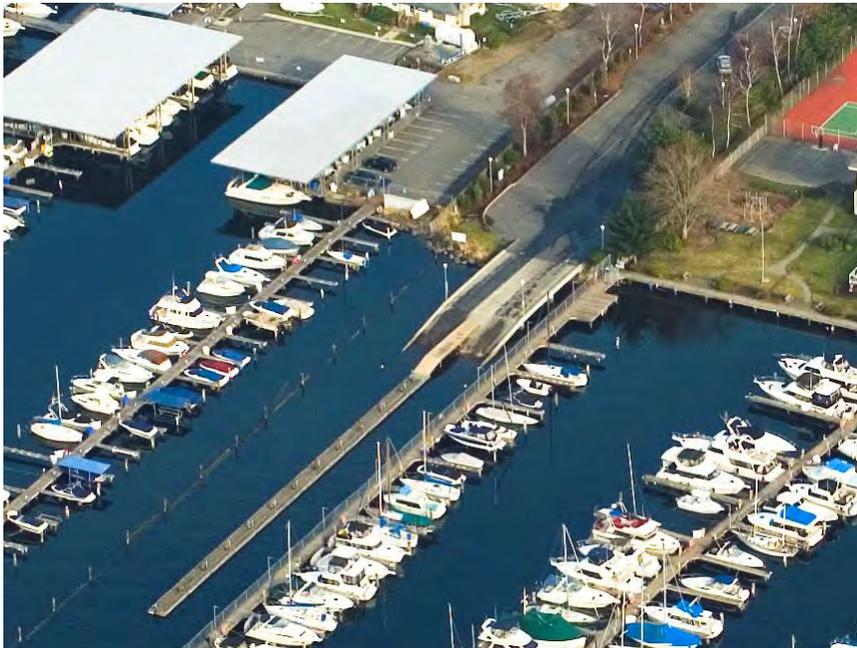
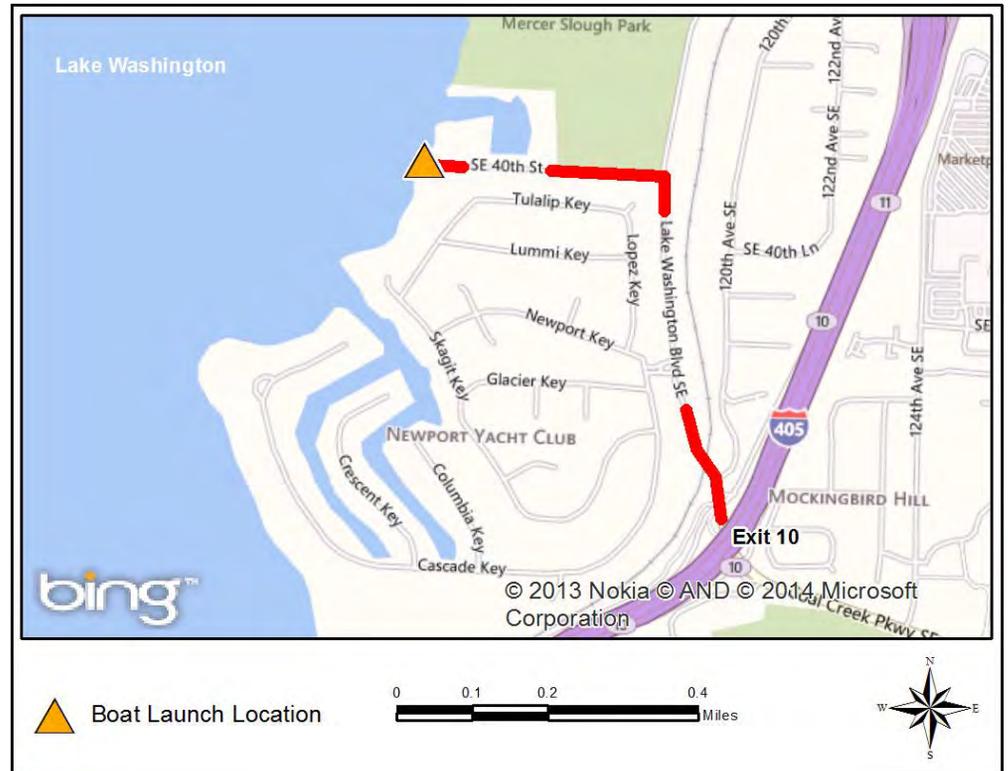


Photo BL-LKWA-35.8: Aerial photo, looking ENE towards ramp lanes and SE 40th Street. Newport Yacht Club docks in middle to lower right of photograph.



## Site Contact Information:

City of Bellevue  
Parks & Community Services  
450 110th Avenue NE, P.O. Box 90012  
Bellevue, WA 98009  
(425) 452-6885

## Nearest Address:

3911 Lake Washington Blvd SE  
Bellevue, WA 98006

## Driving Directions:

FROM Interstate-405 (Northbound):

1. Take Exit 10 and at bottom of ramp take sharp left turn onto Coal Creek Pkwy SE; continue northwest onto Lake Washington Blvd SE.
2. After ~0.5 miles, turn left onto SE 40th Street.
3. Travel on SE 40th Street to boat ramp at end of the road (~0.3 miles).

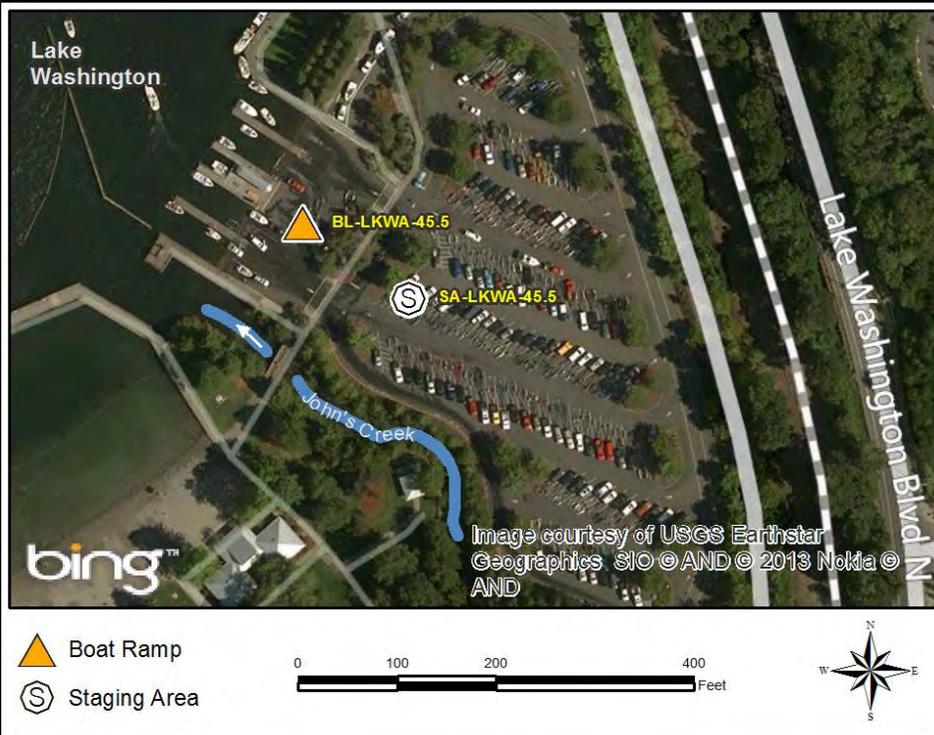
# Gene Coulon Memorial Beach Park - Boat Launch

BL-LKWA-45.5

## Boat Launch Location

**Position - Location:** 47.50548 -122.20211 Renton (King County)

**Comments:** Open 24-hours/day. Automated pay box system for parking and launch fees. Boats that weigh 10,000 pounds or more, or are 30 feet or longer, are prohibited from launching from this site. For additional information, please call (425) 430-6700 or view website at <http://rentonwa.gov/living/default.aspx?id=81>. Notify Renton Parks if site used for staging; call (425) 430-6600.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	8 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	4 Docks
Restrooms	Yes	
Power	Yes	
Water	Yes	
Parking (car)	Yes	60+ (marked)
Parking (trailer)	Yes	100+ (marked)
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	5 bars
Estimated Lot Size	SqFt	280,000+
Lot Cover (primary)	Asphalt	
Covered Spaces	No	
User Fee	Yes	\$10-\$20 (boat ramp)

## GRP Response Strategies Served:

JHNSC-0.0, LKWA-46.1, MAYC-0.0

## Boat Launch Location

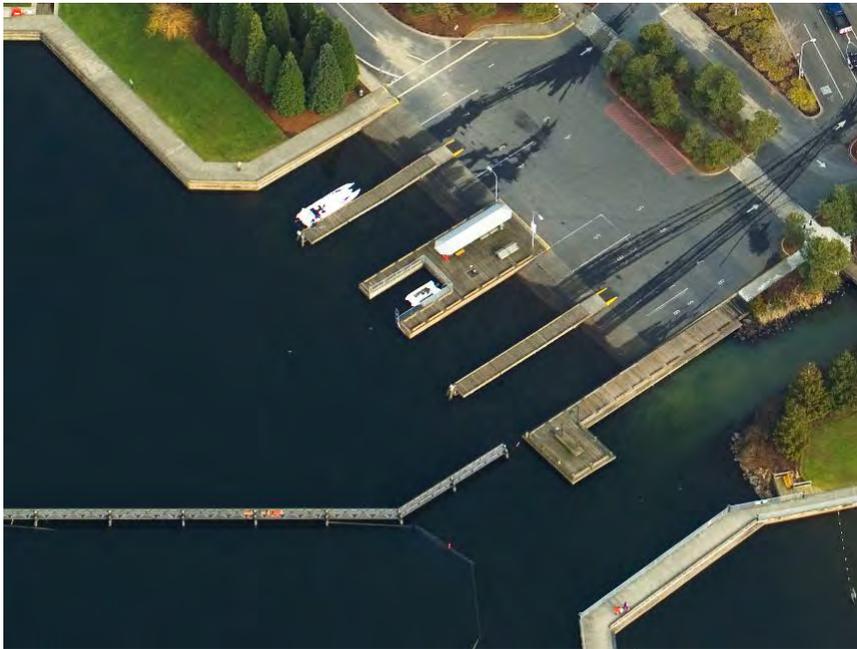
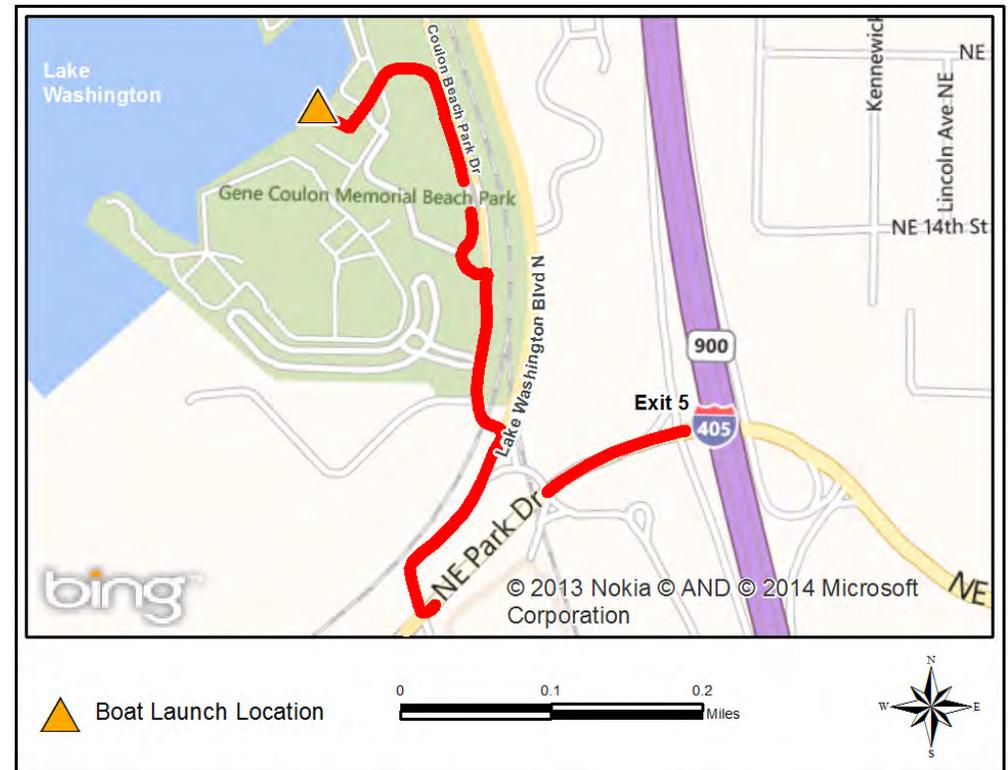


Photo BL-LKWA-45.5: Aerial photo, looking NE towards boat ramp lanes. Mouth of Johns Creek in center right of photograph.



### Site Contact Information:

City of Renton - Parks Division  
 1055 S. Grady Way  
 Renton, WA 98057  
 (425) 430-6600 or (425) 235-2121

### Nearest Address:

1201 Lake Washington Blvd N  
 Renton, WA 98057

### Driving Directions:

FROM- Interstate 405 (Northbound):

1. Take Exit 5 and travel towards the southwest on NE Park Drive (stay in far right lane).
2. After ~0.2 miles, take right turn and follow curve of road onto Lake Washington Blvd N.
3. After ~0.1 mile, enter left hand turn lane and turn left onto Coulon Beach Park Drive; follow roadway towards the right immediately after the turn.
4. After ~0.1 mile, turn left into the park complex; follow road to the right immediately after turn. Travel on road around parking area for ~0.2 miles to the boat ramp location on Lake Washington.

# Beer Sheva Park - Atlantic City Boat Ramp

BL-LKWA-51.0

## Boat Launch Location

**Position - Location:** 47.52281 -122.2632 Seattle (King County)

**Comments:** Wide ramp with plenty of dock space that can accommodate up to six launches and/or retrievals at a time. Park closed from 11PM to 4AM; call Seattle Parks (duty pager) at (206) 982-4583 for afterhours access assistance. For more information about this location see: [https://www.seattle.gov/parks/park\\_detail.asp?ID=4081](https://www.seattle.gov/parks/park_detail.asp?ID=4081). Notify Seattle Parks if site used for staging; call (206) 982-4583.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	6 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	2 Docks
Restrooms	Unknown	
Power	Unknown	
Water	Unknown	
Parking (car)	Yes	15 Marked
Parking (trailer)	Yes	32 Marked
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	SqFt	89,000
Lot Cover (primary)	Asphalt	65%
Covered Spaces	No	
User Fee	Yes	\$12/day (boat ramp)

## GRP Response Strategies Served:

LKWA-51.2, TYLRC-0.0

## Boat Launch Location

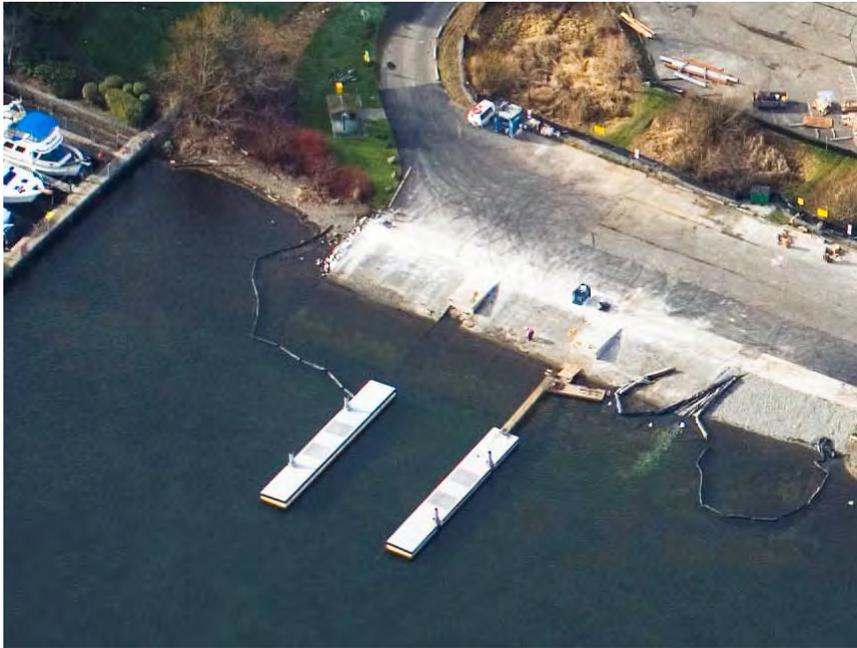
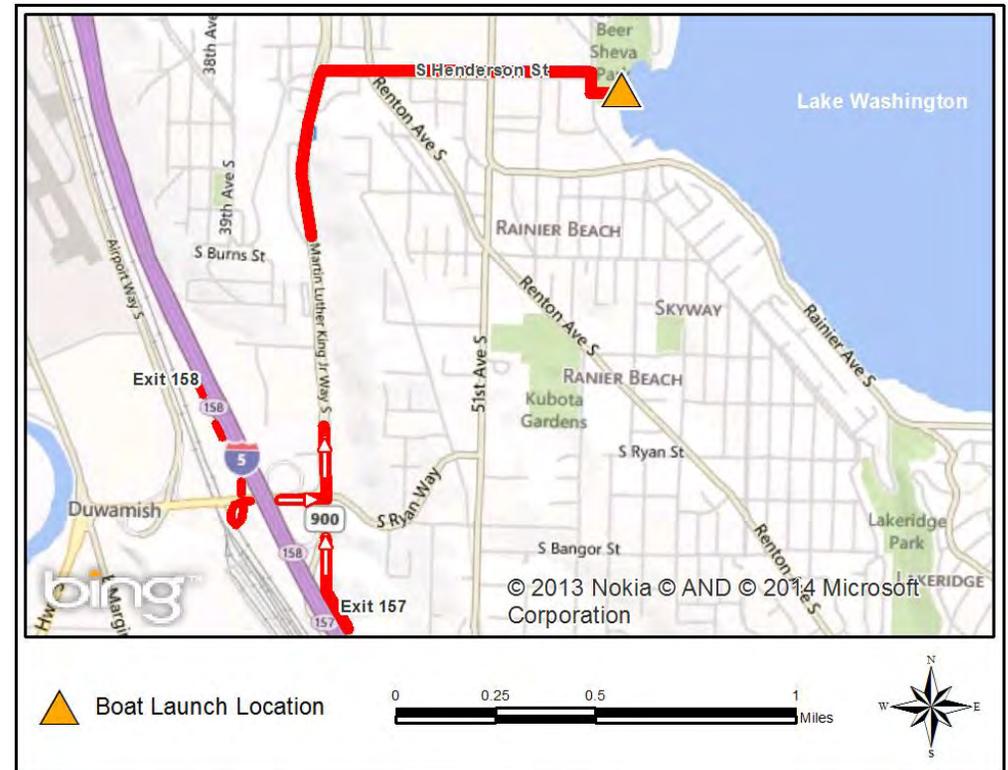


Photo BL-LKWA-51.0: Aerial photo, looking SW towards Atlantic City Boat Ramp and docks. Construction work at site noted.



## Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

## Nearest Address:

9017 Seward Park Ave S  
 Seattle, WA 98118

## Driving Directions:

FROM Interstate-5 (Northbound):

1. Take Exit 157 (M L King Way) and within exit take ramp to right for M L King Way. At traffic light at intersection of M L King Way with Boeing Access Road, stay straight to remain on M L King Way.
2. Go to step 4 below.

FROM Interstate-5 (Southbound):

1. Take Exit 158 (Boeing Access Rd, E Marginal Way) and stay in the left lane.
2. At traffic light, turn left onto the Boeing Access Road.
3. Travel east on the Boeing Access Road for ~0.2 miles, turning left onto M L King Way.
4. Travel ~1.0 miles north on M L King Way and turn right onto S Henderson Street.
5. Travel east on S Henderson Street for ~0.7 miles, and turn right onto Seward Park Avenue S.
6. Travel south on Seward Park Avenue S for ~300ft and turn left into the entrance for the boat ramp and parking area.

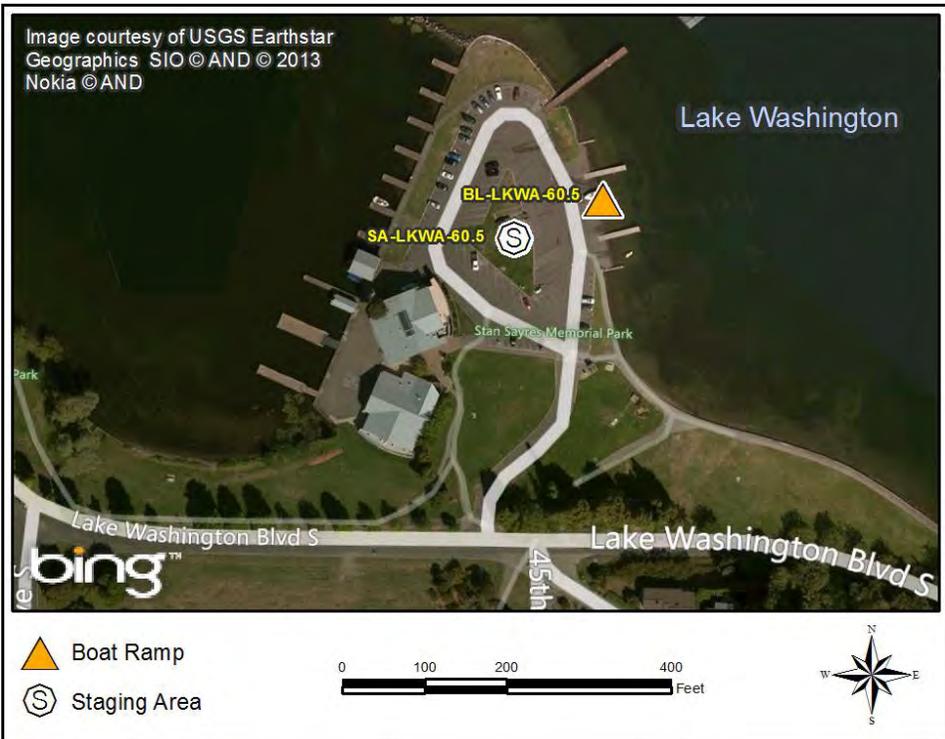
# Stan Sayres Memorial Park - Boat Launch

BL-LKWA-60.5

## Boat Launch Location

**Position - Location:** 47.57117 -122.27681 Seattle (King County)

**Comments:** Boat launch at site provides four wide launching lanes usually protected from rough water. Notify Seattle Parks if site used for staging; call (206) 982-4583



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	4 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	2 Docks
Restrooms	Yes	6 Portable Toilets
Power	Unknown	
Water	Unknown	
Parking (car)	Yes	60 (Marked)
Parking (trailer)	Yes	30 (Marked)
Waste Disposal	Unknown	
Telephones	Unknown	
Cell Phone Coverage	Unknown	
Estimated Lot Size	SqFt	62,000
Lot Cover (primary)	Asphalt	68% Cover
Covered Spaces	No	
User Fee	Yes	\$12/day (boat ramp)

## GRP Response Strategies Served:

LKWA-59.3a, LKWA-59.3b

## Boat Launch Location



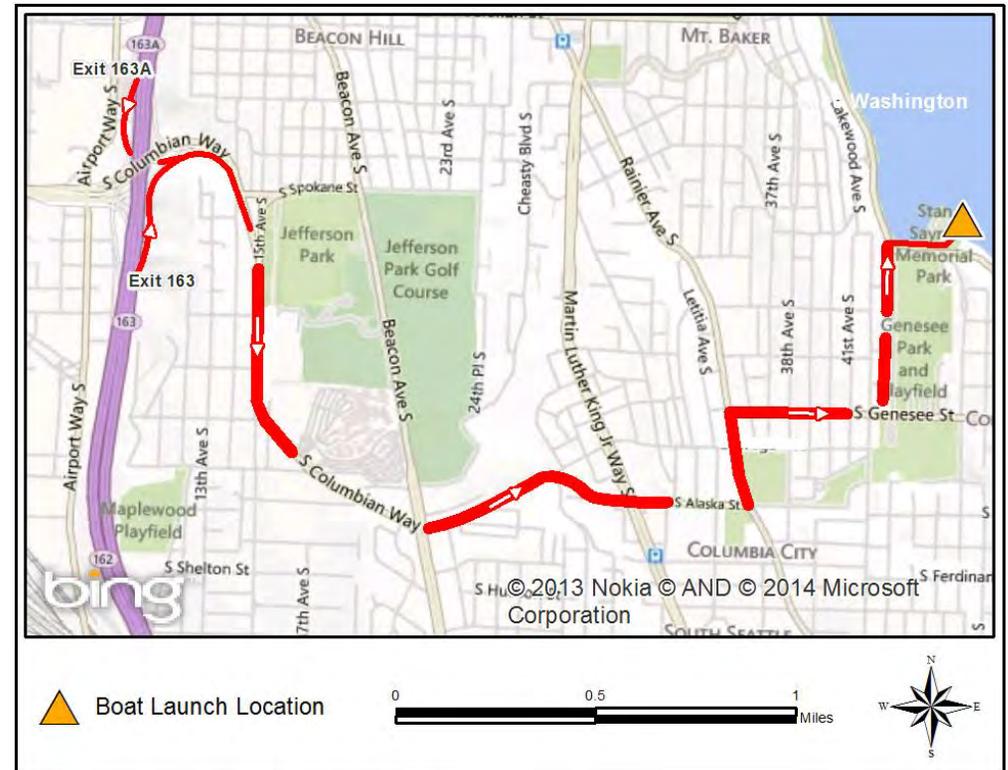
Photo BL-LKWA-60.5: Aerial of Stan Sayres Memorial Park, taken from altitude looking west toward boat launch and parking/staging area, both noted in photograph.

### Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### Nearest Address:

3800 Lake Washington Blvd S  
 Seattle, WA 98118



### Driving Directions:

FROM - Interstate 5 (Northbound):

- (1) Take Exit 163 (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the right (Columbia Way); roadway will curve to the right (get in right lane). (3) Go to step 3 below.

FROM - Interstate 5 (Southbound):

- (1) Take Exit 163A (W Seattle Br, Columbia Way). (2) Within exit, take ramp to the left (Columbia Way, 15th Ave S). Ramp will curve left over I-5, then back to the right (get in right lane). (3) At first stop light, stay straight to remain on S Columbia Way. Stay on S Columbia Way for 2.0 miles (becomes 15th Ave S and later becomes S Alaska Street). (4) Turn left onto Rainier Avenue S. (5) After 0.2 miles turn right onto S Genesee Street. (6) After 0.4 miles, turn left onto 43rd Avenue S. After 0.4 miles turn right onto Lake Washington Blvd S. After 0.1 miles, turn left into Stan Sayres Park; boat ramp and parking/staging area are 400ft ahead on right and left.

# Warren G. Magnuson Park - Boat Launch

BL-LKWA-79.1

## Boat Launch Location

<b>Position - Location:</b>	47.67687	-122.25009	Seattle (King County)
<b>Comments:</b>	Gates locked between 10PM & 4AM; call Seattle Parks (duty pager) at (206) 982-4583 for afterhours access assistance. Notify Seattle Parks if site used for staging; call (206) 982-4583. The two south lanes are for launching and two north lanes for retrieval. For more info see: <a href="https://www.seattle.gov/parks/magnuson/boating.htm">https://www.seattle.gov/parks/magnuson/boating.htm</a> .		



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	4 Lanes
Boat Ramp Type	Concrete	
Boat Dock	Yes	3
Restrooms	Yes	2 Portable Toilets
Power	Yes	1 Outlet
Water	No	
Parking (car)	Yes	70 Spaces (Marked)
Parking (trailer)	Yes	50 Spaces (Marked)
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	3 Bars +
Estimated Lot Size	SqFt	200,000
Lot Cover (primary)	Asphalt	50%
Covered Spaces	No	
User Fee	Yes	\$12/day (boat ramp)

## GRP Response Strategies Served:

LKWA-4.3, LKWA-11.0, LKWA-17.2, LKWA-68.6, LKWA-70.7, LKWA-71.1  
LKWA-73.4, THORC-0.0

## Boat Launch Location



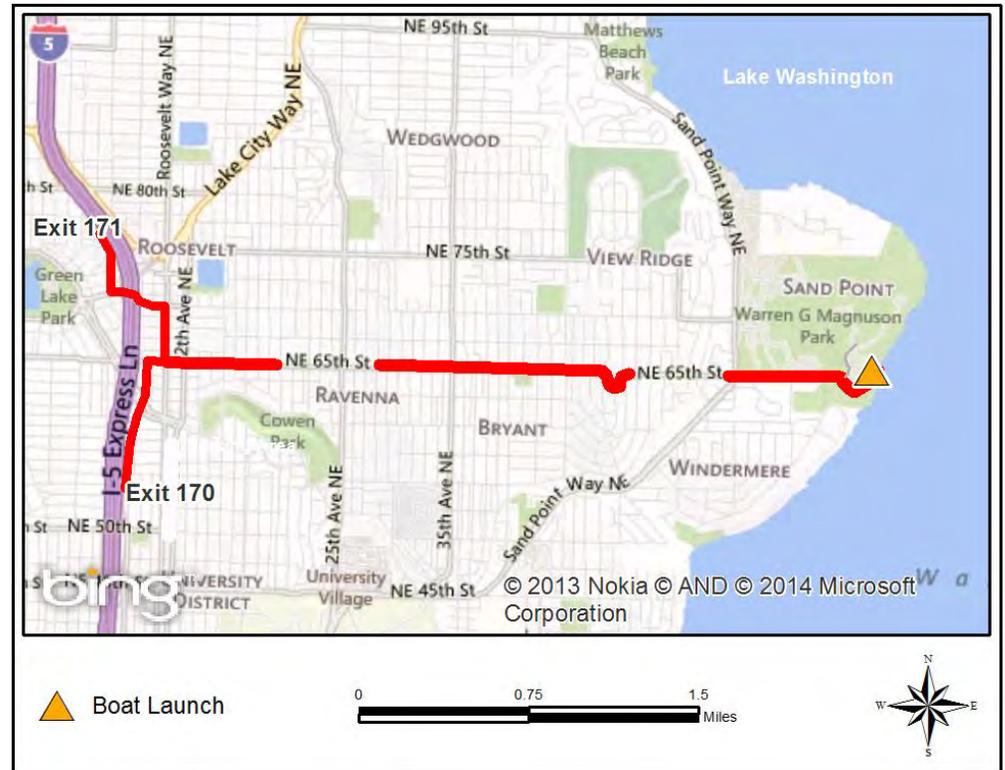
Photo BL-LKWA-79.1: Aerial of boat launch at Warren G. Magnuson Park, taken from lake (at altitude) looking west. Boat launch is in center right of photo; parking areas in middle and left center.

### Site Contact Information:

Seattle Parks and Recreation  
 100 Dexter Ave N Seattle, WA 98109  
 Boat Ramp Supervisor: (206) 684-7249  
 Park Rangers: (206) 615-0387  
 Afterhours Pager: (206) 982-4583

### Nearest Address:

7400 Sand Point Way NE  
 Seattle, WA



### Driving Directions:

FROM Interstate-5 (Northbound):

1. Take Exit 170 (Ravenna Blvd, NE 65th Street). At Stop Sign, cross Ravenna Blvd, staying straight onto 8th Avenue NE.
2. After 0.1 miles turn right (at light) onto NE 65th Street. After 0.1 miles, NE 65th Street meets Roosevelt Way NE.
3. Continue on NE 65th Street for 3.1 miles to park.
4. Immediately after park gate, take right at fork (off the main road) and follow road for 0.2 miles lakeside of parking lots.

# Mercer Island - Boat Launch

BL-MRCRI-4.4

## Boat Launch Location

**Position - Location:** 47.5779 -122.20203 Mercer Island (King County)

**Comments:** Boat Launch open from 5AM until 10:30PM. For afterhours access assistance contact Mercer Island Police or Fire (via dispatch); call (425) 577-5656. Notify Mercer Island Parks and Recreation if site used for staging; call (206) 275-7609.



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	1
Boat Ramp Type	Concrete	< 7° Grade
Boat Dock	Yes	1 Dock
Restrooms	Yes	2 Portable Toilets
Power	No	
Water	No	
Parking (car)	No	
Parking (trailer)	Yes	60 Marked
Waste Disposal	Yes	Trash
Telephones	No	
Cell Phone Coverage	Multiple	5 bars
Estimated Lot Size	SqFt	40,000
Lot Cover (primary)	Asphalt	
Covered Spaces	Yes	Under I-90 Bridge
User Fee	Yes	\$11/day (boat ramp)

## GRP Response Strategies Served:

MRCRI-1.6, MRCRI-2.4

## Boat Launch Location



Photo BL-MRCRI-4.4: From Parking Area of Mercer Island Boat Launch, looking NE toward ramp and underside of Interstate-90 Bridge.



## Site Contact Information:

City of Mercer Island  
 Parks & Recreation  
 2040 84th Ave SE  
 Mercer Island, WA 98040  
 (206) 275-7609, miparks@mercergov.org

## Nearest Address:

3600 East Mercer Way (Frontage Road)  
 Mercer Island, WA 98040

## Driving Directions:

**FROM - Interstate 90 (Eastbound - Away from Seattle):**

(1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn right onto E Mercer Way (use middle lane and stay straight on E Mercer Way). (3) After 0.1 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

**FROM - Interstate 90 (Westbound - Towards Seattle):**

(1) Take Exit 8 (E Mercer Way). (2) At traffic light (at end of exit ramp) turn left onto E Mercer Way (stay in left lane). (3) After 0.2 Miles, turn left onto Frontage Road (at the "Herzel-Ner Tamid Conservation Congregation" sign on your left). (4) Follow Frontage Road for 0.3 miles (under I-90 Bridge) to the end of road. Boat launch will be on your right and parking/staging on your left.

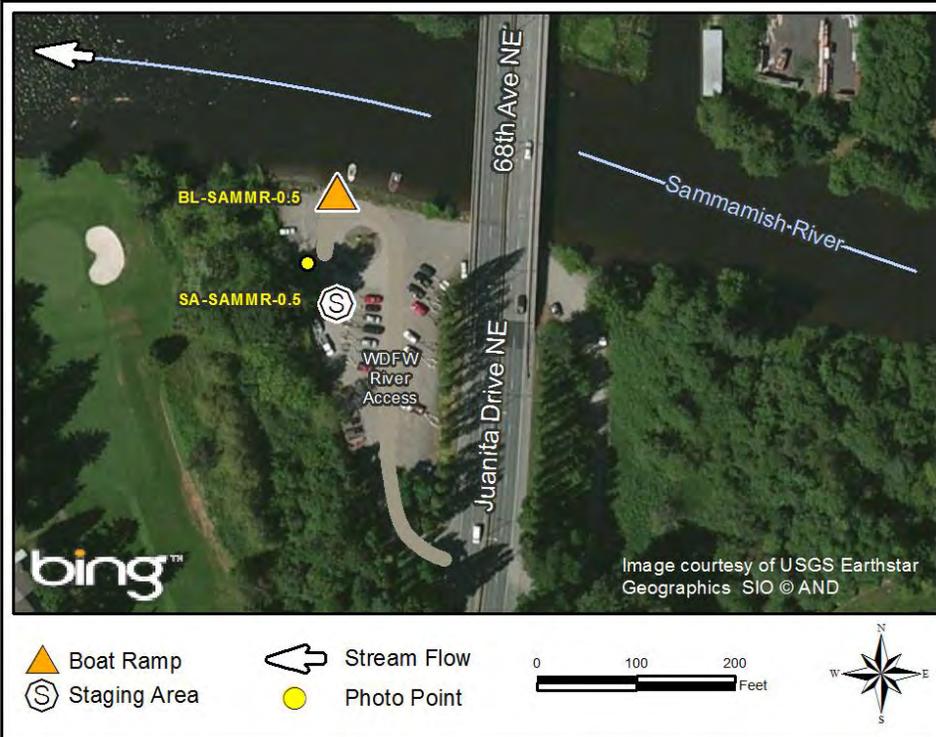
# Sammamish River - Boat Launch (WDFW Water Access)

BL-SAMMR-0.5

## Boat Launch Location

**Position - Location:** 47.75437 -122.25057 Kenmore (King County)

**Comments:** Located at Washington Department of Fish and Wildlife (WDFW) Water Access Site on Sammamish River. Discovery Pass Required unless other arrangements have been made with WDFW. Notify WDFW if site used for staging; call (425) 775-1311. For more information see: [http://wdfw.wa.gov/lands/water\\_access/30250/](http://wdfw.wa.gov/lands/water_access/30250/).



## Location Information:

<u>Asset</u>	<u>Type/Status</u>	<u>Amount/Number</u>
Boat Ramp	Yes	1 lane
Boat Ramp Type	Concrete	
Boat Dock	No	
Restrooms	Yes	
Power	No	
Water	No	
Parking (car)	Yes	~30 (vehicle & trailer)
Parking (trailer)	Yes	~30 (not marked)
Waste Disposal	No	
Telephones	No	
Cell Phone Coverage	Yes	Multiple
Estimated Lot Size	SqFt	37,000
Lot Cover (primary)	Dirt/Gravel	90%
Covered Spaces	No	
User Fee	Yes	Discover Pass Req'd

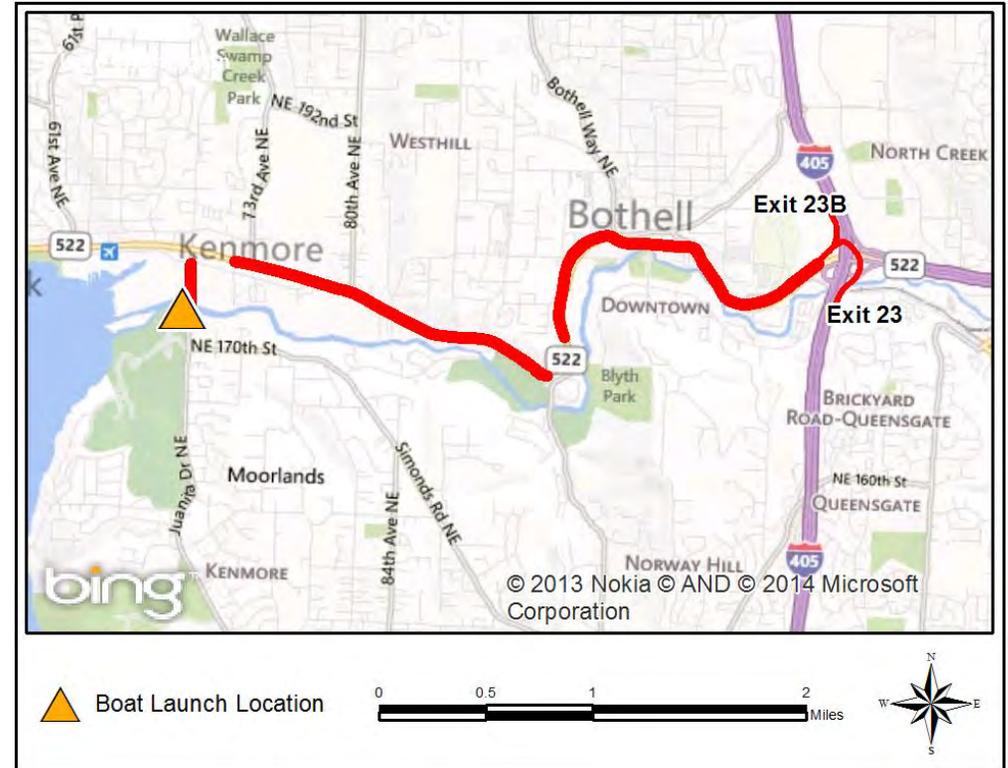
## GRP Response Strategies Served:

SAMMR-0.0, SAMMR-0.6, SAMMR-2.3, SAMMR-3.4

## Boat Launch Location



BL-LKWA-1 Photo: In parking area of Sammamish River Boat Launch (WDFW Water Access Point) looking north towards river and 68th Avenue NE bridge.



### Site Contact Information:

WDFW Region 4  
 16018 Mill Creek Blvd  
 Mill Creek, WA 98012-1296  
 Ph: (425) 775-1311

### Nearest Address:

17181 Juanita Drive NE  
 Kenmore, WA 98028

### Driving Directions:

From - Interstate 405 (Northbound)  
 Take Exit 23 (Hwy 522 West, Bothell/Seattle)

From - Interstate 405 (Southbound)  
 Take Exit 23B (Hwy 522 West, Bothell)

1. Travel west on Hwy 522 (aka Woodinville Drive and later Bothell Way NE)
2. After ~3.2 miles, turn left onto 68th Avenue NE
3. After ~0.3 miles, just after the bridge over the Sammamish River, turn right into the WDFW Water Access Point. Stage equipment in parking area near boat ramp.

# **Lake Washington Geographic Response Plan**

## **Chapter 5 – (Reserved)**

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# Lake Washington Geographic Response Plan

## Chapter 6 – Resources at Risk

### 6.1 – Chapter Introduction

This chapter provides a summary of natural, cultural, and economic resources at risk in the Lake Washington area. It provides general information on habitat, fish, and wildlife resources, and locations in the area where sensitive natural resource concerns exist. It offers a summary of cultural resources that include fundamental procedures for the discovery of cultural artifacts and human skeletal remains. General information about flight restrictions, hazing, and oiled wildlife can be found near the end of this chapter. A list of economic resources in the area is provided in the chapter's appendix.

This chapter is purposely broad in scope and should not be considered comprehensive. Some of the sensitive resources provided in this chapter are listed because they could not be addressed in Chapter 4 (Response Strategies and Priorities). Additional information from private organizations or federal, state, tribal, and local government agencies should also be sought during spills and considered.

The information provided in this chapter can be used in:

- Assisting the Environmental Unit (EU) and Operations in developing additional response strategies beyond those found in Chapter 4.
- Providing resource-at-risk “context” to responders, clean-up workers, and others during the initial phase of a spill response in the GRP area.
- Briefing responders and incident command staff that may be unfamiliar with sensitive resource concerns in the GRP area.
- Providing background information for personnel involved in media presentations and public outreach during a spill incident.

## 6.2 Natural Resources at Risk - Summary

The Lake Washington basin includes a wide variety of aquatic, riparian, and upland habitats. The area provides habitat to all of Washington's salmonid species and affords a variety of habitat to many bird species as well. These varied habitats support a complex diversity of wildlife species, including large and small mammals; passerine birds, raptors, upland birds, and waterfowl; reptiles; and amphibians. Some species are resident throughout the year; others are migratory either within the sub basin or, in many cases, seasonally migrate outside the sub basin. Populations of certain species are fragile and their future presence in the sub basin will require improved information and decisive management actions. Many wildlife species found in the sub basin are classified as threatened, endangered, sensitive, or of special concern under the federal Endangered Species Act or Washington State guidelines. 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:***

- Bald Eagle [FCo/SS]
- Common Loon [SS]
- Great Blue Heron [SM]
- Marble Murrelet [FT/ST]
- Peregrine Falcon [FCo/SS]
- Pileated Woodpecker [SC]

**Mammals:**

*No information*

**Fish:**

- Bull trout [FT/SC]
- Puget Sound Chinook Salmon [FT/SC]
- Puget Sound Coho Salmon [FCo]
- Puget Sound Steelhead [FT]
- River Lamprey [FCo/SC]

**Reptile:**

- Western Pond Turtle (aka Pacific Pond Turtle) [FCo/SE]

**Amphibians:**

- Oregon Spotted Frog [FC/SE]

**6.2.1 - General Resource Concerns**

**6.2.1a - Habitats:**

- **Brackish Sloughs and Backwater Channels** provide feeding and resting areas for waterfowl and herons and are rearing areas for juvenile fish.
- **Human-made structures** such as pilings, rock jetties or log rafts may be used as roosting or nesting areas for a variety of marine birds and raptors.
- **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.
- **Riparian vegetation** is heavily used by a variety of wildlife and may also improve nearshore fish habitat.

- **River and Stream Mouths** are concentration areas for anadromous fish and are feeding areas for a variety of marine birds.
- **Wetlands** in this region include freshwater areas such as the Mercer Slough with forested fresh water swamps and marshes along the edges and upper end of the estuary. All wetland types support a diverse array of bird, insect and fish and wildlife species.

#### **6.2.1b Fish & Shellfish:**

- **Freshwater Shellfish (including Oregon Floaters and Western Floaters)** have been documented in the vicinity of Mercer Slough and the Gene Coulon Memorial Beach Park.
- **Salmonids** including all Washington's salmonid species for Chinook, Coho, Sockeye, and Steelhead occur in this region, with most spawning occurring in the Sammamish and Cedar River systems.

#### **6.2.1c Wildlife:**

- **Bald eagles [ST] and Great Blue Heron [SM]** nests throughout the region and are present year-round.
- **Peregrine Falcons [FCo/SS] and Osprey** also nest and forage in this region.
- **Migratory and Wintering Waterfowl** - Large concentrations occur in the vicinity of Saint Edward State Park, Denny Park, Juanita Bay, and Union Bay.
- **Marbled Murrelets [FT/ST]** occur throughout the region and have been observed on Lake Washington.
- **Western Pond Turtles [FCo/SE] and Oregon Spotted Frogs [FC/SE]** are historically documented, particularly in the shallow bays and wetland complexes of Lake Washington.

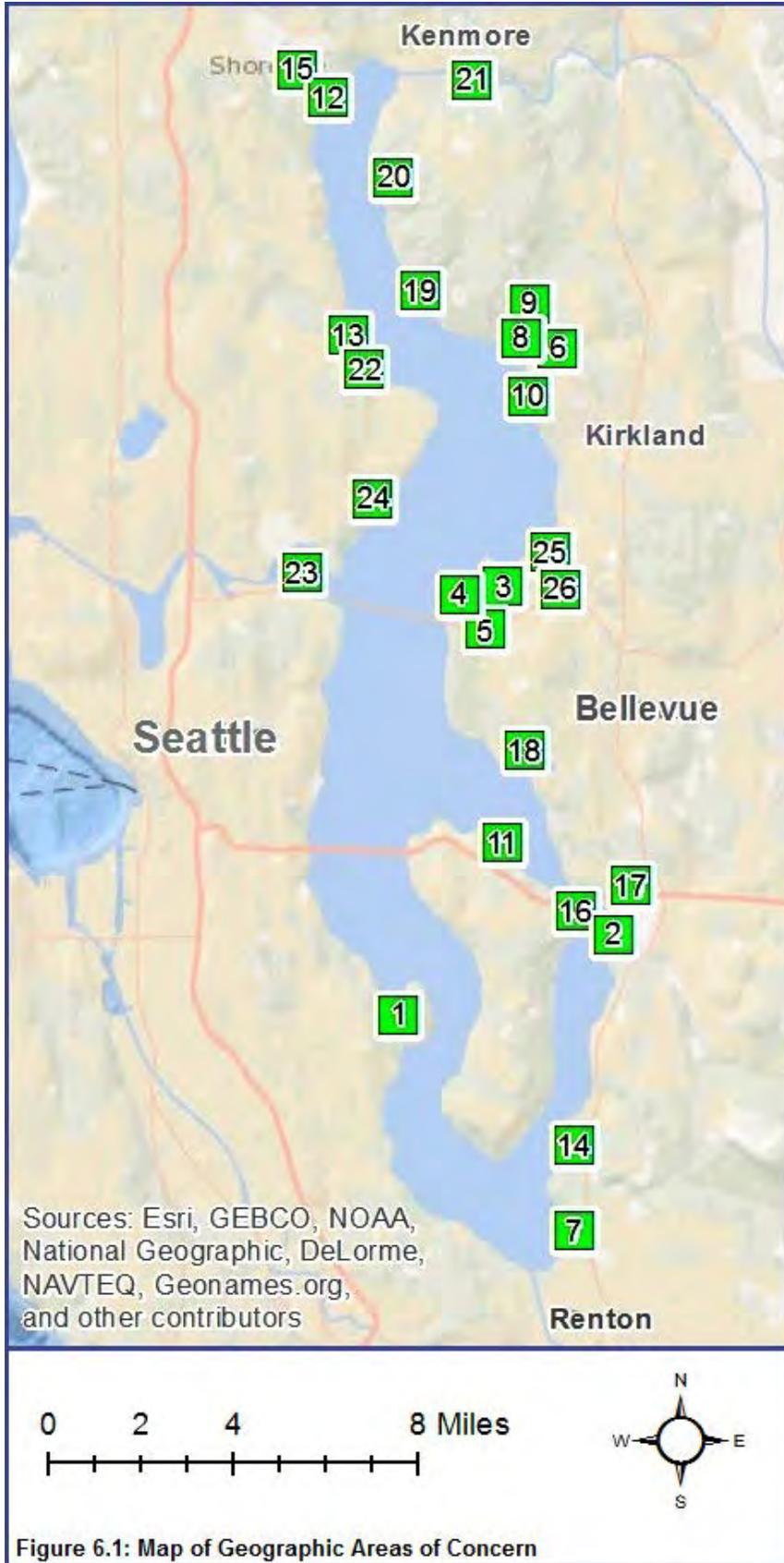
#### **6.2.2 - Specific Geographic Areas of Concern.**

The lower sections of tributaries that drain to Lake Washington are usually sensitive. They provide good habitat for the rearing of juvenile salmonids and support concentrations of migratory and wintering birds. Upstream areas are home to a large variety of wildlife, including

fish and waterfowl. They contain wetlands within heavily developed urban areas. Public parks, private lands, and recreational areas surround the lake. Specific areas of concern are listed below and depicted on the map in Figure 6.1 (near the end of this section). The number that precedes the area name in the list (below) directly relates to the numbered area on the map.

- 1) **Andrew's Bay:** Marbled Murrelets, Bald Eagles, and Osprey.
- 2) **Coal Creek:** Coho and Sockeye Salmon, Winter Steelhead, Resident Cutthroat Trout, and Western Brook Lamprey.
- 3) **Cozy Cove:** Bald Eagles and Wetlands (associated with the lake or smaller tributary streams). Area is heavily developed as urban housing and industrial. Some of these have an open water component.
- 4) **Fairweather Bay:** Bald Eagles.
- 5) **Fairweather Bay (Tributary to Bay):** Coho Salmon
- 6) **Forbes Creek:** Coho Salmon.
- 7) **Gene Coulon Park:** Bald Eagles, Osprey, and Freshwater Mussels.
- 8) **Juanita Bay:** Pacific Lamprey, Bald Eagles, Trumpeter Swans, and Waterfowl Concentrations.
- 9) **Juanita Creek:** Summer and Fall Chinook, Coho, and Sockeye Salmon.
- 10) **Kirkland Beach Park:** Bald Eagles.
- 11) **Luther Burbank Park:** Bald Eagles, Common Loon, and Wetlands (associated with the lake or smaller tributary streams). Area is heavily developed as urban housing and industrial. Some of these have an open water component.
- 12) **Lyon Creek:** Coho and Sockeye Salmon.
- 13) **Matthews Beach Park:** Great Blue Heron.
- 14) **May Creek (Confluence):** Purple Martin, Osprey, Scrub-Shrub, Forested and Emergent Marsh Wetlands along May Creek and tributaries including Lake Boren.

- 15) **McAleer Creek:** Western Brook Lamprey, Summer and Fall Run Chinook Salmon, Coho and Sockeye Salmon, and Resident Cutthroat Trout.
- 16) **Mercer Island Boat Launch:** Peregrine Falcons.
- 17) **Mercer Slough:** Green Heron and Freshwater Mussels. Large and Mixed Wetland, Open Water, Scrub Shrub, Emergent and Forested. Coho and Sockeye Salmon, Beach Spawning Sockeye Salmon, Resident Cutthroat Trout, Rainbow Trout, and Western Brook Lamprey.
- 18) **Meydenbauer Bay:** Bald Eagles, Osprey, Common Loon, Western Pond Turtles, and Peregrine Falcons.
- 19) **OO Denny Park (Stream through Park):** Resident Cutthroat Trout and Coho Salmon
- 20) **Saint Edward State Park:** Bald Eagles, Pileated Woodpeckers, Waterfowl Concentrations.
- 21) **Sammamish River:** Coho and Sockeye Salmon, Winter Steelhead, and Beach Spawning Sockeye Salmon.
- 22) **Thornton Creek:** Summer and Fall Chinook Salmon, Coho and Sockeye Salmon, and Resident Cutthroat Trout
- 23) **Union Bay and University Slough:** Bald Eagles, Green Herons, Common Loons, Western Pond Turtles, River Lamprey, and Waterfowl Concentrations. The wetlands at the mouth of University Slough, along the Union Bay Natural Area, marsh, Foster Islands, and shoreline associated with the University of Washington Arboretum provide nesting and loafing opportunities for Urban Dabbler Species, including Wood Ducks.
- 24) **Windermere Park:** Bald Eagles.
- 25) **Yarrow Bay:** Bald Eagles and Wetlands (associated with the lake or smaller tributary streams). Area is heavily developed as urban housing and industrial. Some of these have an open water component.
- 26) **Yarrow Bay (Tributary to Bay):** Coho Salmon



1. Andrew’s Bay
2. Coal Creek
3. Cozy Cove
4. Fairweather Bay
5. Fairweather Bay (Tributary)
6. Forbes Creek
7. Gene Coulon Park
8. Juanita Bay
9. Juanita Creek
10. Kirkland Beach Park
11. Luther Burbank Park
12. Lyon Creek
13. Matthews Beach Park
14. May Creek (Confluence)
15. McAleer Creek
16. Mercer Island Boat Launch
17. Mercer Slough
18. Meydenbauer Bay
19. OO Denny Park (Stream)
20. Saint Edward State Park
21. Sammamish River
22. Thornton Creek
23. Union Bay & University Slough
24. Windermere Park
25. Yarrow Bay
26. Yarrow Bay (Tributary to Bay)

### 6.3 - Cultural Resources at Risk - Summary

Culturally sensitive sites are present within the Lake Washington area. Due to the sensitive nature of this information, details regarding the location and type of cultural resources present are not included in this document. However, in order to ensure that tactical response strategies do not inadvertently harm historical and culturally sensitive sites, Washington Department of Archeology and Historic Preservation (WDAHP) should be consulted before disturbing any soil or sediment during a response action. WDAHP may assign a person to monitor cleanup operations, or provide a list of professional archeologists that can be contracted to monitor response activities.

Information on the location of culturally sensitive sites is maintained by WDAHP and made available to Washington Department of Ecology for oil spill preparedness and response planning. The Muckleshoot Indian Tribe, Samish Indian Nation, Snoqualmie Tribe, Suquamish Tribe, and Tulalip Tribes may also be able to provide information on cultural resources at risk in this GRP area and should be consulted. After the Unified Command is established, information related to specific archeological concerns will be coordinated through the Environmental Unit.

<i>WDAHP:</i>	<i>(360) 586-3065</i>	<i>Rob.Whitlam@dahp.wa.gov</i>
<i>Muckleshoot Indian Tribe:</i>	<i>(253) 876-3272</i>	<i>laura.murphy@muckleshoot.nsn.us</i>
<i>Samish Indian Nation:</i>	<i>(360) 293-6404</i>	<i>samish@samishtribe.nsn.us</i>
<i>Snoqualmie Tribe:</i>	<i>(425) 888-6551</i>	<i>Snoqualmie1855@snoqualmiation.com</i>
<i>Suquamish Tribe:</i>	<i>(360) 394-8459</i>	<i>aflemming@suquamish.nsn.us</i>
<i>Tulalip Tribes:</i>	<i>(360) 651-4000</i>	<i>terrywilliams@tulaliptribes-nsn.gov</i>

**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.

- All work must be stopped immediately and the Incident Commander and Cultural Resource Specialist notified if any person monitoring work activities or involved in spill response believes that human skeletal remains have been discovered.
- The Incident Commander is responsible for taking appropriate steps to protect the discovery. The immediate area of discovery should be flagged. Vehicles and equipment must not be permitted to traverse the discovery site. In no case should further disturbance be performed prior to consultation with WDAHP. Exposed human remains should not be left unattended.

- The Incident Commander (or representative) must immediately report the discovery to WDAHP, local law enforcement (with jurisdiction), and the local coroner (with jurisdiction). The coroner (or medical examiner) will determine whether the discovery site is a crime scene or human burial.
- If the remains are determined to be non-Native American, or connected with criminal activity, local law enforcement will take charge of the discovery site and remains.
- If the remains are determined to be Native American, not related to a crime scene, a tribal archaeologist, state archaeologist, and the Incident Commander will confer on a treatment plan for the remains.

**6.3.2 - Procedures for the Discovery of Cultural Resources:** All work must be stopped immediately and the Incident Commander and Cultural Resource Specialist notified if any person monitoring work activities or involved in spill response believes that they have encountered cultural resources. The area of work stoppage must be adequate to provide for the security, protection, and integrity of the material or artifact(s) discovered.

Prehistoric Cultural Resources:

*(May include but not limited to any of the following items)*

- Lithic debitage (stone chips and other tool-making byproducts)
- Flaked or ground stone tools
- Exotic rock, minerals, or quarries
- Concentrations of organically stained sediments, charcoal, or ash
- Fire-modified rock
- Rock alignments or rock structures
- Bone (burned, modified, or in association with other bone, artifacts, or features)
- Shell or shell fragments
- Petroglyphs and pictographs
- Fish weirs and traps
- Culturally modified trees
- Physical locations or features (traditional cultural properties)

Historic cultural material:

*(May include any of the following items over 50 years old)*

- Bottles, or other glass
- Cans
- Ceramics

- Milled wood, brick, concrete, metal, or other building material
- Trash dumps
- Homesteads, building remains
- Logging, mining, or railroad features
- Piers, wharves, docks, bridges, dams

If WDAHP believes that the discovery is a cultural resource, the Incident Commander will take appropriate steps to protect the discovery site:

- The immediate area of the discovery site should be flagged. Vehicles or equipment must not be permitted to enter the discovery site. Work in the immediate area can not resume until treatment of the discovery has been completed.
- The Incident Commander (or representative) must contact WDAHP and arrange for the discovery to be evaluated by a professional archaeologist. The archaeologist will determine whether the discovery is potentially eligible for listing on the National Register of Historic Places. (36 CFR 60.4)
- The professional archaeologist will consult with WDAHP on the eligibility of the discovery for entry into the National Register. If WDAHP determines that the discovery is eligible, they will consult with the Incident Commander to determine an appropriate treatment for the discovery.
- If adverse impacts to an eligible site cannot be avoided, a treatment plan will be developed and implemented.

The *Secretary of the Interior's Standards for Archaeological Documentation* must be followed; including provisions for research design, reporting, and curation of recovered material and samples. The particular data recovery measures applied to any given historic property will depend on the development of research questions, and the design of excavation strategies to acquire the data needed to answer those questions. Field notes, maps, plans, profiles, and photographs will document the process. The final report will follow style guidelines of the professional archaeological journal *American Antiquity*; it will synthesize the data collected and address the research questions posed.

Refer to [Section 9403 of the Northwest Area Contingency Plan](#) for National Historic Preservation Act Compliance Guidelines during an emergency response.

## 6.4 – Economic Resources at Risk Summary

Socio-economic sensitive resources are facilities or locations that rely on a body of water to be economically viable. Because of their location, they could be severely impacted if an oil spill were to occur. Economically sensitive resources are separated into three categories: critical infrastructure, water dependent commercial areas, and water dependent recreation areas. Appendix “6A” of this chapter provides a list of economic resources for this GRP area.

## 6.5 - General information

**6.5.1 - Flight restriction zones:** Flight restriction zones may be recommended by the Environmental Unit (Planning Section) for the purpose of minimizing disturbance that could result in injury to wildlife during an oil spill. By keeping a safe distance or altitude from identified sensitive areas, pilots can minimize the risk of aircraft/ bird collisions, prevent the accidental hazing of wildlife into oiled areas, and avoid causing abandonment of nests or marine mammal pupping areas. Implementation of Flight Restriction Zones will take place within the Air Operations Branch (Operations Section) after a Unified Command is formed. The Planning Section’s Environmental Unit will work with the Air Ops Branch Director to resolve any potential conflicts with flight activities that are essential to the spill response effort. Typically, the area within a 1,500 ft radius and below 1,000 ft in altitude is restricted to flying in areas that have been identified as sensitive. However, some areas have more restrictive zones. In addition to restrictions associated with wildlife, Tribal authorities may also request notification when overflights are likely to affect culturally sensitive areas within reservations. See [Section 9301.3.2](#) and [Section 9301.3.3 of the Northwest Area Contingency Plan](#) for more information on the use of aircraft and helicopters in open water and shoreline responses.

**6.5.2 - Hazing:** The use of boats and watercraft are usually restricted within 200 yards of offshore National Wildlife Refuge sites or other sensitive areas. Response organizations should immediately request a waiver from National Marine Fisheries Service [NMFS] and/or U.S. Fish and Wildlife Service regarding the inadvertent approach or hazing of marine mammals that may be encountered during open water response operations. After a Unified Command is formed, the Wildlife Branch (Operations Section) in consultation with the appropriate trustee agencies and the Environmental Unit will evaluate and recommend hazing options for the purpose of keeping un-oiled birds and marine mammals away from oil during a spill. Hazing options might include the use of acoustic or visual deterrent devices, boats, aircraft or other situation-appropriate tools.

For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#) and [Northwest Area Wildlife Deterrence Resources \(NWACP Section 9311\)](#).

**6.5.3 - Oiled Wildlife:** Attempting to capture oiled wildlife can be hazardous to both the animal and the person attempting the capture the animal. Response personnel should not approach or attempt to recover oiled wildlife. Responders should report their observations to the Wildlife Branch so appropriate action can be taken. Information provided should include the location, date, and time of the sighting, and the estimated number and kind of animals observed. Early on in the response, before a Unified Command is established, oiled wildlife sightings should be reported to Washington Emergency Management Division. For more information see the [Northwest Wildlife Response Plan \(NWACP Section 9310\)](#).

**Appendix - 6A**

List of Economic Resources at Risk

Lake Washington GRP

August 2014

## Lake Washington Socio-Economic Resources at Risk

### **A. Critical Infrastructure**

<b>A1 - Drinking Water Intakes</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>A2 - Energy/Power Generation Water Intakes (Lock &amp; Dams Included)</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>A3 - Federal or State Water Projects or Irrigation Channels for Agriculture</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

### **B. Water Dependent Commercial Areas**

<b>B1 - Industrial Intakes</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

**Appendix - 6A**

List of Economic Resources at Risk

Lake Washington GRP

August 2014

<b>B2 - Agricultural Irrigation Intakes</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>B3 - Aquaculture</b>				
<b>Name</b>	<b>Location</b>	<b>Company Address</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>B4 - Marinas</b>				
<b>City</b>	<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Phone</b>
Seattle	Rainier Beach Parkshore Marina	9050 Seward Park Ave S	47.521633,-122.262520	206-725-3330
Seattle	Seward Park Andrews Bay moorage	5902 Lake Washington Blvd S	47.549507,-122.257553	206-684-4396
Seattle	Leschi Marina	320 Lake Washington Blvd E	47.603878,-122.284116	206-325-3730
Seattle	University of Washington boat docks	Montlake Blvd E and NE Pacific Pl	47.651070,-122.303892	206-543-9433
Seattle	Magnuson Park boat moorage	7400 Sand Point Way NE	47.651070,-122.303892	206-684-4946
Seattle	Lakewood Marina	4500 Lake Washington Blvd	47.568390,-122.259117	206-722-3887
Seattle	Magnuson Park North Shore Boat House	7400 Sand Point Way NE	47.682287,-122.263712	206-684-4946
Seattle	Leschi Park & South Moorage	201 Lakeside Ave S	47.602269,-122.285063	206-325-3730
Seattle	Lakewood Moorage	4400 Lake Washington Blvd S	47.563723,-122.268782	206-722-3887
Seattle	Harbor Village Marina	6155 NE 175th St	47.757320,-122.259621	425-485-7557
Seattle	Stan Sayres Park	3808 Lake Washington Blvd S	47.570048,-122.275873	206-684-4075
Renton	Gene Coulon moorage	1201 Lake Washington Blvd N	47.503190,-122.199605	425-430-6700
Kirkland	City Marina	25 Lakeshore Plaza Dr	47.675880,-122.208860	425-587-3900
Kirkland	Yarrow Bay Marina	5207 Lake Washington Blvd NE	47.653996,-122.206810	425-587-3900
Kirkland	Homeport Marina	221 1st St	47.676567,-122.208633	425-587-3900
Kenmore	Harbor Village Marina	6155 NE 175th St	47.756084,-122.261581	425-485-7557
Kenmore	North Lake Marina	6201 NE 175th St	47.757320,-122.259621	425-482-9465
Kenmore	Log Boom Pier	6100 NE 175th St	47.757320,-122.259621	206-296-8687
Bellevue	Meydenbauer Bay	99th Avenue NE, #2	47.610077,-122.209297	425-454-3231
Bellevue	Newport Shores Marina	3911 Lake Washington Blvd SE	47.568339,-122.272885	206-267-2535

**Appendix - 6A**

List of Economic Resources at Risk

Lake Washington GRP

August 2014

<b>B5 - Commercial Fishing and Shellfish Harvest Areas</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>B6 - Fish Hatcheries (Federal, State, and Private)</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

<b>B7 - Specially Designated Residential, Commercial, &amp; Industrial Areas (Includes Floating Homes &amp; Live Aboard Marinas)</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
No Information				

**C. Water Dependent Recreational Areas**

<b>C1 - Boating Areas</b>		
<b>General Location</b>	<b>Remarks</b>	<b>Lat/Long (Approximate Center Point)</b>
Lake Washington	All waters of Lake Washington	

<b>C2 – Public Recreation Areas</b>				
<b>Name</b>	<b>Location/Address</b>	<b>Lat/Long</b>	<b>Contact</b>	<b>Phone</b>
Lake Washington	All waters of Lake Washington			

<b>C3 – Sport Fishing Areas</b>	
<b>Name</b>	<b>General Location/Remarks</b>
Lake Washington	All waters of Lake Washington

**Appendix - 6A**

List of Economic Resources at Risk

Lake Washington GRP

August 2014

<b>C4 – Parks &amp; Beaches (National, State, &amp; Local)</b>				
<b>City</b>	<b>Park Name</b>	<b>Address</b>	<b>Contact</b>	<b>Phone</b>
Yarrow Point	Morningside Park	4030 95th Ave NE	Town of Yarrow Point	425-454-6994
Yarrow Point	Wetherill Nature Preserve	3000 Hunts Point Rd	Town of Yarrow Point	425-455-1834
Seattle	Beer Sheva Park & Boat Launch	8650 55th Ave South	Seattle Parks	206-684-4075
Seattle	Chinook Beach Park	9281 56th Ave S	Seattle Parks	206-684-4075
Seattle	South Day Street Park	South Day St	Seattle Parks	206-684-4075
Seattle	East Montlake Park	2802 E Park Drive E	Seattle Parks	206-684-4075
Seattle	Martha Washington Park	6700 57th Ave S	Seattle Parks	206-684-4075
Seattle	Seward Park	Seward Park Rd	Seattle Parks	206- 455-0299
Seattle	Lake Washington Boulevard from Seward to Mt. Baker Park	Seward Park Rd Seattle, WA 98118 to 2521 Lake Park Dr S, Seattle, WA 98144	Seattle Parks	206-684-4075
Seattle	Mt. Baker Beach Park (Swimming Beach)	2521 Lake Park Dr S	Seattle Parks	206-684-4075
Seattle	Leschi Park	201 Lakeside Avenue S	Seattle Parks	206-684-4075
Seattle	Madrona Park	796 Lake Washington Blvd	Seattle Parks	206-684-4075
Seattle	Denny Blaine Park	Denny Blaine Place E	Seattle Parks	206-684-4075
Seattle	Madison Park North Beaches and Union Bay Natural Areas	E Madison St & E Howe St.	Seattle Parks	206-684-4075
Seattle	University of Washington Park Arboretum	3501 41st St NE	UW Botanic Gardens HQ	206-543-8616
Seattle	Belvoir Place Park	3659 42nd Ave NE	Seattle Parks	206-684-4075
Seattle	Washington Park & Aboretum & Foster Island	2300 Arboretum Dr E	Seattle Parks	206-543-8800
Seattle	Andrews Bay – Seward Beach Park (Swimming Beach)	5835 Lake Washington Blvd S	Seattle Parks	206-684-4396
Seattle	Martha Washington Park (Wading Beach)	6612 57th Ave S	Seattle Parks	206-684-4075
Seattle	Mount Baker Beach Park (Swimming Beach)	2521 Lake Park Dr S	Seattle Parks	206-684-4075
Seattle	Pritchard Island Beach Park (Swimming Beach)	8400 55th Ave S	Seattle Parks	206-684-4075
Seattle	Magnuson Park (Dog Park & Beach)	7400 Sand Point Way NE	Seattle Parks	206-684-4946
Seattle	Magnuson Park (Swimming Beach)	7400 Sand Point Way NE	Seattle Parks	206-684-4946
Seattle	Magnuson Park Boat Launch	7400 Sand Point Way NE	Seattle Parks	206-684-4946
Seattle	Magnuson Park North Shore Boat House (Dock)	7400 Sand Point Way NE	Seattle Parks	206-684-4946

**Appendix - 6A**

List of Economic Resources at Risk  
Lake Washington GRP  
August 2014

<b>C4 – Parks &amp; Beaches (National, State, &amp; Local) (continued)</b>				
<b>City</b>	<b>Park Name</b>	<b>Address</b>	<b>Contact</b>	<b>Phone</b>
Seattle	Magnuson Park	7400 Sand Point Way NE	Seattle Parks	206-684-4946
Seattle	Sail Sand Point	7777 62nd Ave NE #101	Seattle Community Boating Center	206-525-8782
Seattle	Madrona Park & Moorage	853 Lake Washington Blvd	Seattle Parks	206-684-4075
Seattle	Madrona Beach Park	853 Lake Washington Blvd	Seattle Parks	206-684-4075
Seattle	Matthews Beach Park	49th Ave NE & NE 93rd St	Seattle Parks	206-684-4075
Seattle	May Creek (restoration area)	148th Avenue SE and Coal Creek Pkwy	King County DNRP	206-296-6500
Seattle	Sayres Memorial Park (staging, boat launch)	3808 Lake Washington Blvd S	Seattle Parks	206-684-4075
Renton	Gene Coulon Park	1201 Lake Washington Blvd N	Renton Community Center	425-430-6700
Renton	Kennydale Beach Park	3601 Lake Washington Blvd N	Renton Community Center	425-430-6700
Mercer Island	Luther Burbank Park	84th Ave SE	Mercer Is Parks & Rec	206-236-3545
Mercer Island	Clarke Beach Park	7724 E Mercer Way	Mercer Is Parks & Rec	206-236-3545
Mercer Island	Groveland beach Park	58th St SE	Mercer Is Parks & Rec	206-236-3545
Medina	Medina Beach Park	End of Evergreen Point Rd S	City of Medina	425-233 -6414
Kirkland	OO Denny Park	11822 Holmes Point Dr NE Inglewood-Finn Hill, WA	City of Kirkland	425-587-3900
Kirkland	Juanita Beach Park	8700 Juanita Dr NE	City of Kirkland	425-587-3900
Kirkland	Juanita Bay Park (Forbes Creek wetland)	2201 Market Street	City of Kirkland	425-587-3900
Kirkland	Area connecting Brink and Marsh Parks	6708 Lake Washington Blvd NE	City of Kirkland	425-587-3900
Kirkland	Waverly Beach Park	5th Ave W and end of Waverly Way N	City of Kirkland	425-587-3900
Kirkland	Kiwanis Beach Park	1456 10th St W	City of Kirkland	425-587-3900
Kirkland	Houghton Beach Park	Lake Washington Blvd & NE 59th St	City of Kirkland	425-587-3900
Kirkland	Yarrow Bay wetland Park (habitat)	3878 97 <sup>th</sup> Ave NE	City of Kirkland	425-587-3900
Kenmore	Saint Edwards State Park	14445 Juanita Dr NE	WA Parks & Rec Commission	425- 823-2992
Kenmore	Logboom Pier Park	61st Ave NE	City of Kenmore	425-398-8900

**Appendix - 6A**

List of Economic Resources at Risk

Lake Washington GRP

August 2014

**C4 – Parks & Beaches (National, State, & Local) (continued)**

City	Park Name	Address	Contact	Phone
Kenmore	Inglewood Golf Club Park (Sammamish River mouth)	6505 Inglewood Road NE	City of Kenmore	425- 488-8900
Bellevue	Meydenbauer Beach park	419 98th Avenue NE	Parks & Community Services	425-452-6885
Yarrow Point	Wetherill Nature Preserve	3000 Hunts Point Rd	Town of Yarrow Point	425-455-1834

**C5 – National Seashore Recreation Areas**

General Location	Lat/Long (Approximate Center Point)	Remarks
No Information		

**C6 – National River Reach (Designated as Recreational)**

General Location	Lat/Long (Approximate Center Point)	Remarks
No Information		

# **Lake Washington Geographic Response Plan**

## **Chapter 7 – (Reserved)**

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# Appendix A

## Protection Techniques

**Table A-1: Summary of Protection Techniques for Onshore Areas**

Protection Technique	Description	Minimum Logistical Requirements	Limitations
Beach Berms	A berm is constructed along the top of the mid-intertidal zone from sediments excavated along the downgradient side. The berm should be covered with plastic or geo-textile sheeting to minimize wave erosion.	<ul style="list-style-type: none"> <li>· Bulldozer/Motor Grader (1)</li> <li>· Equipment Operators (1)</li> <li>· Support Personnel/Workers (1)</li> <li>· Plastic or Geotextile Sheeting</li> </ul>	<ul style="list-style-type: none"> <li>· High Wave Energy</li> <li>· Large Tidal Range</li> <li>· Strong Along Shore Currents</li> </ul>
Geotextiles	A roll of geotextile, plastic sheeting, or other impermeable material is spread along the bottom of the supra-tidal zone & fastened to the underlying logs or stakes placed in the ground.	<ul style="list-style-type: none"> <li>· Support Personnel/Workers (5)</li> <li>· Stakes &amp; Tie-Down Cord</li> <li>· Plastic/Geotextiles (3 meter width rolls)</li> </ul>	<ul style="list-style-type: none"> <li>· Low Sloped shoreline</li> <li>· High spring tides</li> <li>· Large storms</li> </ul>
Sorbent Barriers	A barrier is constructed by installing two parallel lines of stakes across a channel, fastening wire mesh to the stakes & filling the space between with loose sorbents.	<p><u>Per 30 Meters of Barrier:</u></p> <ul style="list-style-type: none"> <li>· Support Personnel/Workers (2)</li> <li>· Wire mesh (70 meters x 2 meters)</li> <li>· Sorbents (30 square meters)</li> <li>· Stakes (20)</li> <li>· Fasteners, Support Lines, Stakes</li> </ul>	<ul style="list-style-type: none"> <li>· Waves &gt; 25 cm (~ 9.8")</li> <li>· Currents &gt; 0.5 m/s (~ 1.6ft/s, ~1kt)</li> <li>· Tidal range &gt; 2 meters (~ 6.5ft)</li> </ul>
Inlet Dams	A dam is constructed across the channel using local soil or beach sediments to exclude oil from entering channel	<ul style="list-style-type: none"> <li>· Loader (1)</li> <li>· Equipment Operators (1)</li> <li>· Support Personnel/Workers (1+)</li> <li>· Shovels (1 for each worker)</li> </ul>	<ul style="list-style-type: none"> <li>· Waves &gt; 25 cm (~ 9.8")</li> <li>· Tidal range exceeding dam height</li> <li>· Freshwater Outflow</li> </ul>

Source: R. Miller, Clean Sound Cooperative

**Table A-2: Summary of Protection Techniques for Nearshore Areas**

Protection Technique	Description	Minimum Logistical Requirements	Limitations
Containment Booming	Boom is deployed in a "U" shape in front of the oncoming slick. The ends of the booms are anchored by work boats or drogues. The oil is contained within the "U" & prevented from reaching the shore.	<u>For 150 Meters Slick:</u> <ul style="list-style-type: none"> <li>· Work Boats (2)</li> <li>· Boom - 280 meters (~918ft)</li> <li>· Personnel/Boat Operators (2)</li> <li>· Personnel/Boat Crew (2)</li> <li>· Personnel/Boom Tenders (4)</li> <li>· Tow lines, drogues, connectors</li> </ul>	<ul style="list-style-type: none"> <li>· High winds</li> <li>· Swells &gt; 2 meters (~6.5ft)</li> <li>· Breaking Waves &gt; 50 cm (~19.6")</li> <li>· Currents &gt; 1.0 m/s (~ 3.3ft/s, ~2kts)</li> </ul>
Exclusion Booming	Boom is deployed across or around sensitive areas & anchored in place. Approaching oil is deflected or contained by boom.	<u>Per 300 meters of Boom:</u> <ul style="list-style-type: none"> <li>· Work Boat (1)</li> <li>· Boom - 300 meters (~984ft)</li> <li>· Personnel/Boat Operators (1)</li> <li>· Personnel/Boat Crew (1)</li> <li>· Personnel/Boom Tenders (3)</li> <li>· Anchors (6)</li> <li>· Anchor Lines, Buoys, etc.</li> </ul>	<ul style="list-style-type: none"> <li>· Currents &gt; 0.5 m/s (~ 1.6ft/s, ~1kt)</li> <li>· Breaking waves &gt; 50 cm (~19.6")</li> <li>· Water depth &gt; 20 meters (~65ft)</li> </ul>
Deflection Booming	Boom is deployed from the shoreline away from the approaching slick & anchored or held in place with a work boat. Oil is deflected away from shoreline.	<u>Single Boom</u> (0.75 m/s knot current) (~2.5ft/s)  <ul style="list-style-type: none"> <li>· Work Boat (1)</li> <li>· Boom - 60 meters (~197ft)</li> <li>· Personnel/Boat Operators (1)</li> <li>· Personnel/Boat Crew (1)</li> <li>· Personnel/Boom Tenders (3)</li> <li>· Anchors (3)</li> <li>· Anchor Lines, Buoys, Recovery Unit</li> </ul>	<ul style="list-style-type: none"> <li>· Currents &gt; 1.0 m/s (~ 3.3ft/s, ~2kts)</li> <li>· Breaking waves &gt; 50 cm (~19.6")</li> </ul>
Diversion Booming	Boom is deployed from the shoreline at an angle towards the approaching slick & anchored or held in place with a work boat. Oil is diverted towards the shoreline for recovery.	<u>Single Boom</u> (0.75 m/s knot current) (~2.5ft/s)  <ul style="list-style-type: none"> <li>· Work Boat (1)</li> <li>· Boom - 60 meters (~197ft)</li> <li>· Personnel/Boat Operators (1)</li> <li>· Personnel/Boat Crew (1)</li> <li>· Personnel/Boom Tenders (3)</li> <li>· Anchors (3)</li> <li>· Anchor Lines, Buoys, Recovery Unit</li> </ul>	<ul style="list-style-type: none"> <li>· Currents &gt; 1.0 m/s (~ 3.3ft/s, ~2kts)</li> <li>· Breaking waves &gt; 50 cm (~19.6")</li> </ul>

**Table A-2: Summary of Protection Techniques for Nearshore Areas (cont.)**

Protection Technique	Description	Minimum Logistical Requirements	Limitations
Skimming	Self-propelled skimmers work back & forth along the leading edge of a windrow to recover the oil. Booms may be deployed from the front of a skimmer in a "V" configuration to increase sweep width. Portable skimmers are placed within containment booms in the area of heaviest oil concentration.	<p><u>Self-propelled</u> (None)</p> <p><u>Towed</u></p> <ul style="list-style-type: none"> <li>· Boom - 200 meters (~656ft)</li> <li>· Work Boats (2)</li> <li>· Personnel/Boat Operators (2)</li> <li>· Personnel/Boat Crew (2)</li> <li>· Personnel/Boom Tenders (4)</li> <li>· Tow Lines, Bridles, Connectors</li> </ul> <p><u>Portable</u></p> <ul style="list-style-type: none"> <li>· Hoses - 30 meters discharge (~98ft)</li> <li>· Oil Storage - 2000 liters (~528 gal)</li> </ul>	<ul style="list-style-type: none"> <li>· High winds</li> <li>· Swells &gt; 2 m (~6.5ft)</li> <li>· Currents &gt; 1.0 m/s (~ 3.3ft/s, ~2kts)</li> <li>· Breaking waves &gt; 50 cm (~19.6")</li> </ul>

Source: R. Miller, Clean Sound Cooperative

**Table A-3: Summary of Protection Techniques for Harbors & Bays**

Where water depth is usually greater than typical boom skirt depth

Description	Tactics
Use river techniques in specific areas. Current speed dependent. Vessel traffic dependent.	Single diversion boom Current < 2 knots use boom skirt of 12 inches if no waves. Current > 2 knots use boom skirt of 6 inches or less if no waves
Currents over 2 knots	Cascade boom • Use short skirts, short boom lengths and sufficient overlap
Currents less than 2 knots and area is large	Encircling
Sufficient room to maneuver	Skimmers
Special conditions	Air and water jets
Isolated areas	Sorbents and pom-poms

Source: "Oil Spill Response in Fast Currents: A Field Guide." US Coast Guard, October 2001

**Table A-4: Summary of Protection Techniques for Rivers & Canals (Non-Tidal)**

Where water depth is greater than typical boom skirt depth and there may be tidal influence, but current always flows in the same direction.

Description	Tactics
Current speed dependent Vessel traffic dependant	Single diversion boom Current < 2 knots: Use boom skirt of 12 inches Current > 2 knots: Use boom skirt of 6 inches or less
Currents over 2 knots	Cascading diversion boom Use short skirts, short boom lengths and sufficient overlap
Collection areas available on both sides	Chevron booms Open for vessel traffic Closed if no traffic
Currents less than 2 knots and river is wide	Single diversion boom Exclusion boom for sensitive areas Encircle and divert to collection area
Sufficient room to maneuver	Skimmers for collection
No vessels available	Boom vane, Flow diverters
Special conditions	Air and water jets
Isolated areas	Sorbents and pom-poms

Source: "Oil Spill Response in Fast Currents: A Field Guide." US Coast Guard, October 2001.

**Table A-5: Summary of Protection Techniques for small Streams, Creeks, & Culverts**

Where water depth is less than boom skirt depth.

Description	Tactics
Dependent upon flow rate	Single diversion for volume greater than about 10 cubic ft/sec
Block for low volume flow	Sealing (Fill, Dams, Weirs)
Design for volume	Overflow / underflow dams
Low flow	Sorbents and pom-poms

Source: "Oil Spill Response in Fast Currents: A Field Guide." US Coast Guard, October 2001.

**Table A-6: Fast Water Booming Techniques  
Current Chip Log and Maximum Boom Deflection Angle**

The table uses the time for floating debris to drift 100 feet. This is accurately determined by anchoring a line with two floating buoy markers attached at a spacing 100 feet apart. Floating debris is then thrown into the water approximately 20 feet upstream of the first buoy marker. Determine the time it takes the debris to transit the distance between the two marker buoys in seconds. This assumes that the minimum escape velocity under a boom perpendicular to the current (90 degrees) is 1.2 feet per second. The table provides an estimate of the length of boom required for deflecting oil at a specified angle for a 110-foot profile (perpendicular length) to the current. It also provides an estimate of the number of anchors or shoreline tiebacks required for that length of boom assuming anchor points are required every 50 feet.

Time to Drift 100 Feet (seconds)	Velocity (ft/sec)	Max. Boom Deflection Angle (degrees)	Boom for 100 Foot Profile to Current (feet)	Anchors if Placed Every 50 Feet (number)
6	16.7	4.0	1,429	30
8	12.5	5.4	1,071	22
10	10.0	6.7	857	18
12	8.3	8.0	714	15
14	7.1	9.4	612	13
17	5.9	11.4	504	11
20	5.0	13.5	429	10
24	4.2	16.3	357	8
30	3.3	20.5	286	7
40	2.5	27.8	214	5
60	1.7	44.4	143	4
>86	<1.2	90.0	100	3

(1 Knot = 1.16 mile/hr, 6,080 ft/hr, or 1.7 ft/sec)

**Table A-7: Current Drag Force on One-Foot Boom Profile to Current**

The major force exerted on a boom is caused by the water drag on the skirt. Wave forces can increase the drag factor by two to three times depending upon the wave height, period, and loading dynamics. Wind force is less than current and waves, but is also a factor. In high current situations, drag is sometimes increased by water piling up on the boom, causing some submergence and increased drag forces, often resulting in mooring failure. In this situation, the 100-foot section of 4 X 6 diversion boom (4-inch floatation and 6-inch draft) should take the hydrodynamic load. A replacement section 50 feet long can withstand the reduced forces with submerging. The effects of current velocity and boom draft on boom drag force can be seen in

the table. Drag increases with draft in a linear fashion, while current increased drag more dramatically (to the square of the velocity).

Velocity (ft/sec)	Boom Drag Force (pounds)			
	Draft 0.5 Feet	Draft 1.0 Feet	Draft 1.5 Feet	Draft 2.0 Feet
0.8	0.7	1.3	2.0	2.7
1.7	2.7	5.3	8.0	10.7
2.5	6.0	12.0	18.0	24.0
3.4	10.7	21.3	32.0	42.6
4.2	16.7	33.3	50.0	66.6
5.1	24.0	48.0	72.0	95.9
5.9	32.6	65.3	97.9	130.6
6.8	42.6	85.3	127.9	170.6
7.6	54.0	107.9	161.9	215.9
8.4	66.6	133.3	199.9	266.5
9.3	80.6	161.2	241.8	322.5
10.1	95.9	191.9	287.8	383.8
11.0	112.6	225.2	337.8	450.4
11.8	130.6	261.2	391.8	522.3
12.7	149.9	299.8	449.7	599.6
13.5	170.6	341.1	511.7	682.2

**Table A-8: Approximate Safe Working Loads/Tensile Strength of New Rope**

Rope Diameter (inches)	Manila No. 1 (3 strand) (pounds)	Nylon (3-strand) (pounds)	Polyester (3-strand) (pounds)
5/16	200 / 1,000	500 / 2,500	500 / 2,500
3/8	270 / 1,350	700 / 3,500	700 / 3,500
7/16		1,140 / 5,700	
1/2	530 / 2,650	1,250 / 6,250	1,200 / 6,000
5/8	880 / 4,400	2,100 / 10,500	1,950 / 9,750
3/4	1,080 / 5,400	2,750 / 5,400	2,300 / 11,500

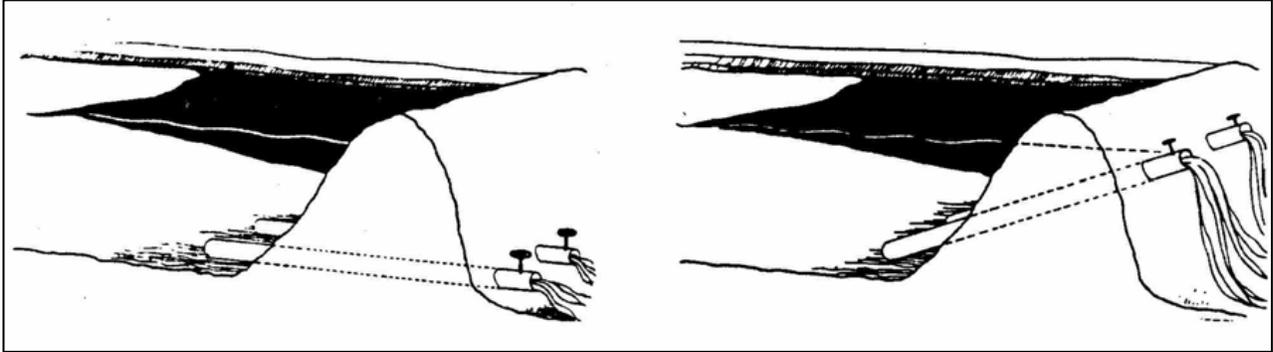
Towing load can be significant when a boom is anchored on one end and pulled against the current. Boats must have sufficient horsepower and be properly rigged to tow. Lines must be capable of withstanding the forces and the boom must have a tension member capable of high loads. If the boom is extended behind the tow boat and pulled free in the current, there is only the frictional drag along the boom. Because this drag is a function of the boat speed, proper motor size becomes a function of boom size and length, boat size, and water velocity. Although free towing drag is low, when one end of the boom is anchored to the shore, a small boat may be incapable of positioning the boom because of the high current drag exerted on the boom. The boom must be able to withstand the forces. The tension member must not become detached from the boom due to differential expansion.

Attempting to moor a boom in a straight line across a current (90 degrees) is not recommended. The result is a sag in the boom that will trap free floating oil at a point inaccessible to the shore. In swift currents, the resulting forces on moorings can cause large lines of break and present possible safety hazards. The current can be so swift that the boom may dip and become completely or partially submerged. If this happens, the boom's position should be adjusted. The total force on the mooring points will be a combination of the forces caused by current, wind, and waves.

Boom positioning is an important point. The first step is to decide where the boom should be located. It is likely that the boom will be placed on an angle to the current; therefore, the prime concern becomes the location of the upstream end. If the selected upstream location is inaccessible, a spot further upstream can be used for access and the boat and boom allowed to drift to the selected mooring site. The boom can be secured to trees, stakes, anchors, or other solid objects. Do not attach boom to vehicles of any type or size.

### **Figure A-1: Underflow Dams**

Dams can be built in shallow rivers, culverts, and inlets using hand tools or heavy machinery, as available. Pipes are used to form an underflow dam to allow water passage out while oil stays behind, as seen in first figure below. The inlet of the pipe is cut at an angle to permit a larger entrance area for the water in order to reduce the inlet velocities and the possibility of oil drawdown due to formation of vortices. Caution should be taken to prevent whirlpools from forming and pulling the oil down. Face the cut pipe opening down (or insert a 90 degree angle) to help eliminate this. This technique is effective for water bodies less than two feet deep where flow volume can be accommodated by pipe flow. This method can also be used in deep, narrow culverts.



Earth underflow dam (DOWCAR 1997).



Sandbag underflow dam

Figure A-2: Culvert block

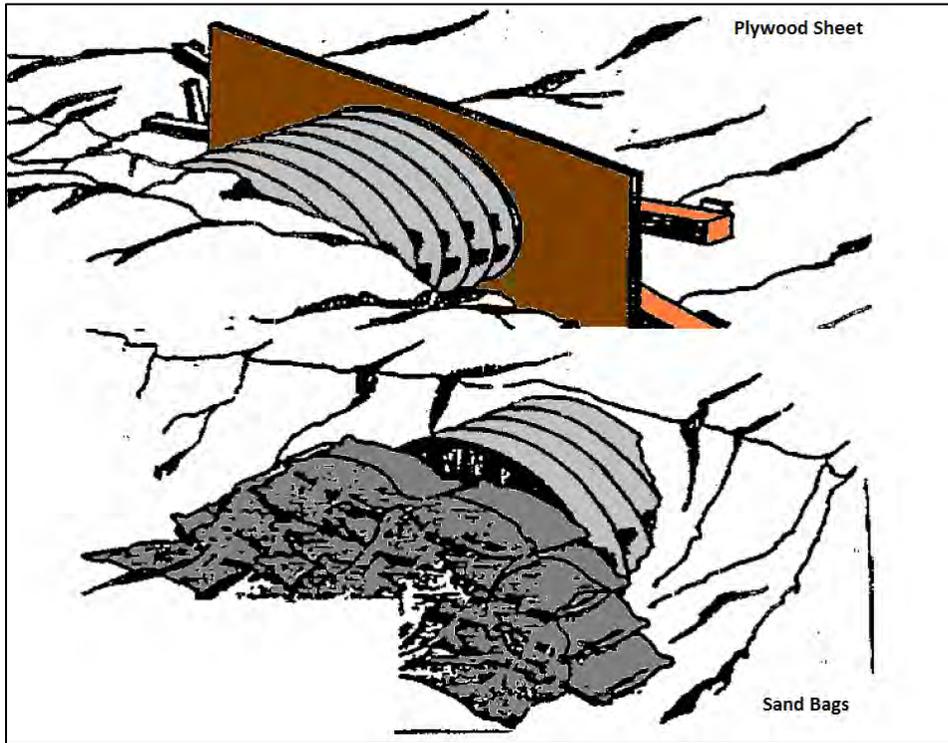
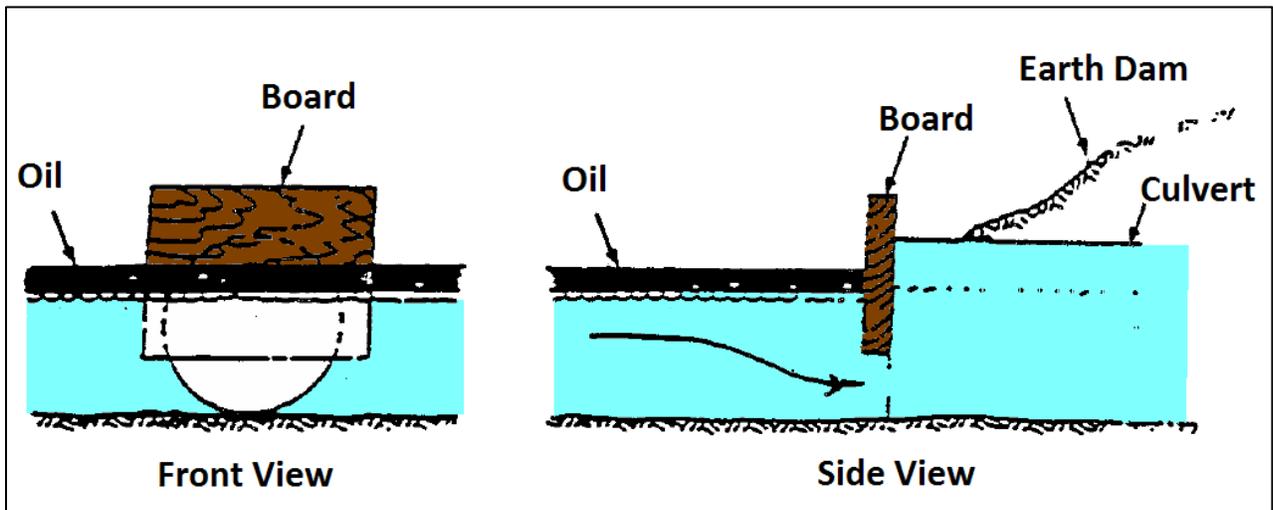


Figure A-3: Culvert weir



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## Appendix B

### Lake Washington Geographic Response Plan – Original Contributors

#### **Federal Representatives:**

U.S. Environmental Protection Agency

#### **State Representatives:**

Washington Department of Ecology

Washington Department of Fish and Wildlife

Washington Department of Transportation

Washington Department of Natural Resources

Washington State Parks and Recreation Commission

#### **Local Representatives:**

City of Seattle

King County

Seattle Public Utilities District

#### **Industry and Response Contractors:**

National Response Corporation Environmental Services

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## Appendix C

### Lake Washington - Geographic Response Plan 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](mailto: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: \_\_\_\_\_

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City: \_\_\_\_\_

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