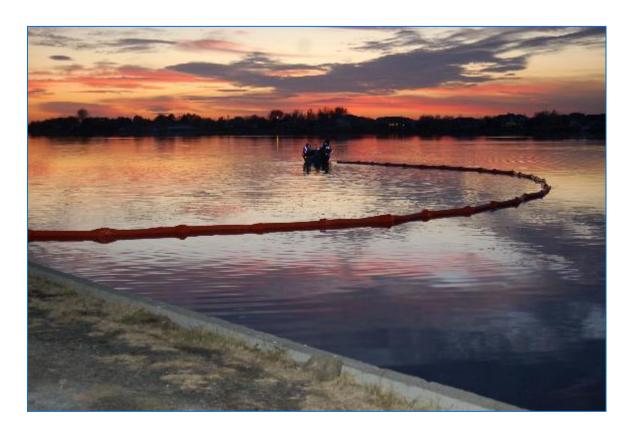
Geographic Response Plans (GRPs)





Key Messages

- Ecology is a Response Resource.
- Geographic Response Plans (GRPs) are one of the tools we use to respond to oil spills on or near the water.
- GRPs are developed with input from communities; it's an inclusive process.







Questions to Answer

- Why are Geographic Response Plans (GRPs) important?
- What are they? What's in them?
- How are they developed?
- How might they be used during an oil spill?
- Admiralty Inlet GRP Update & Timeline
- How you can help?

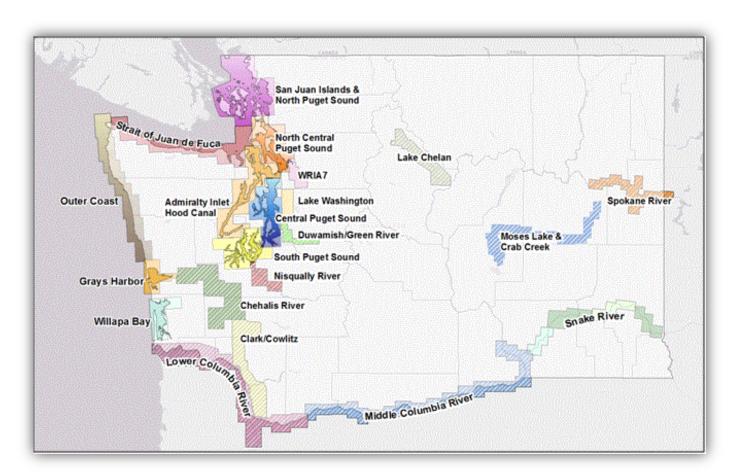


Why are GRPs Important?

- Part of the regional & area plan for spill response called the Northwest Area Contingency Plan (NWACP)
- Focused on the protection of sensitive resources during a spill;
 those on or near the water.
- Goes beyond efforts to control and contain a spill at or near the source.
- Helps ensure consistency and coordination in the way we protect sensitive resources during oil spills (federal, state, tribal, & local).
- Provides trustees and the public a voice on areas of concern or importance to them.



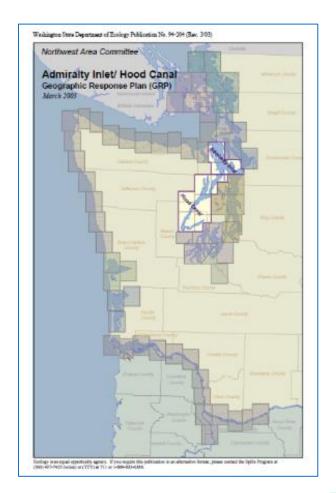
Currently, 27 GRP Areas in Washington State





What are Geographic Response Plans (GRPs)?

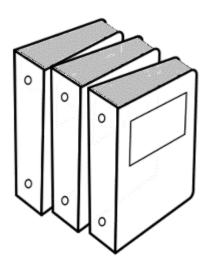
- One of several plans used during early hours of an oil spill and beyond.
- Spills on or near the water
- Are deployed to protect sensitive resource during initial phase (early hours) of a spill response.
- Plans that focus on the protection of natural, cultural, and economic resources; not spill control and containment.
- Sensitive resources and strategies for protection are pre-identified





What is in the Plan?

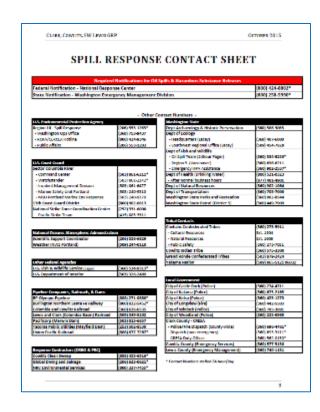
- Spill Response Contact Sheet
- Chapter 1 Introduction
- Chapter 2 Site Description
- Chapter 3 Response Options & Considerations
- Chapter 4 Response Strategies & Priorities
- Chapter 5 Shoreline Countermeasures or "Reserved"
- Chapter 6 Resources at Risk





Spill Response Contact Sheet

- Federal and State required notifications (NRC & WEMD)
- Federal Agencies
 (USCG, EPA, USDOI, NOAA, USFWS)
- State Agency Contacts
 (Ecology, WDFW, DNR, Health, WDAHP, Parks)
- Tribal Governments
- Local Governments
 (County & Municipal)
- Response Contractors
- Regulated Industry and Others (Facilities, Vessel Companies, Pipeline, Rail)





Chapter 1 - Introduction

- Answers What & Why
 (What the plan is and why it exists)
- Describes Area Covered (planning area)
- Describes GRP Development Process
- Language Used (NIIMS ICS terminology)
- Terminology & Definitions (Reference back to NWACP)

CLASS, CONCUES SWILDING GRP

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CHAPTER 1

INTRODUCTION

The plan boson consists we make principles and application is recently as the federal and state on scene continuation' vedera during the initial phase of an other frequency in the GIP planning one. It has been approved by Repende Repende From 10 and the thorn and do-thates of the both level from Committee, though to this down and are expected as more testing to consistent disready drifts the matter and actual use in spill intention. We waite your layer and hope that you fill in a base has the planning in the improved. These solution committee orders of him Proposed Committee and the Committee of the Committee o

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The bulk of this plan is contained in Coopter 4.8, give who information as faction in appears strategies and the unifer they should be amplemented, based on presental upill onign powers and their processing to executive restource. Amount or other maps and information on slaging error and book based in authors are nice convoked to that chariter.

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

Bits the responsive is both degrees in course hand continues not an oil upid at or near the neares of a poil in a financial or if the course is controlled and continued but of his or speed out beyond initial containment than the priorities had not in Serious 4.3 of this pin should have precedence until a lithing decreased in terms of its importants notes that upid response priorities, beyond those downshed in the layer, chealth of byte one and absentious and upid response priorities, beyond those downshed in the layer, chealth of byte one and absentious and upid response priorities, a becoming strategy break as a large priority in Section 4.3 would not necessarily be implemented if a upid superiory of the treatment action in that near however, the greating tables chealth be followed until upid impriving information becames weakfely. Desiring as unificial confidences to the objection of the polyment.

CHAPTERL

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Chapter 2 – Site Description

- Physical Features (Geography & Geology)
- Hydrology
- Climate & Winds
- Tides & Currents
- Risk Assessment
 (Oil spill risks present in planning area)

CLASSE COMPLITE OW LINES GROVE

OCTOBER 2015

CHAPTER 2

SITE DESCRIPTION

2.1 CHAPTER INTRODUCTION

This chapter precision a fascription of the area's physical southers, hydrology, chapter and order, it and after an overview of oil spill make in volune bills excitone of Cardenaud Covolita Countries, and a periodic of seathwestern Leves Countries. The periodic of the South Section of the South Section of Whitelet (Indianothera) to Solid to Countries of the Lower Columbia River from a Whitelet (Indianothera) to Solid towards in the mendian half of the planning serve for Cardenau Section Se

2.2 PHYSICAL FEATURES

The peramphic feature of the hand in the Carle, Cordin, and SW Lever planning area are defined by their location between the center hashe of the Walleys Hills/Colambia Store and the western featuritie of the Canada S Mentan Range. This peoprophic deprecation is a portion of the larger contribution of the Larger area from the Walleys Page. Though that was such to Straight Carles and S

The Pager Loveland was shaped by the Cortillians: for Short, of which the Paget Lobe stretched to just south of Olympia. Since the notion of the plactic was located surth of the planning area, the begand of placing better more of a distinguishing surch between the planning area and the Paget.

CHAPTER 2

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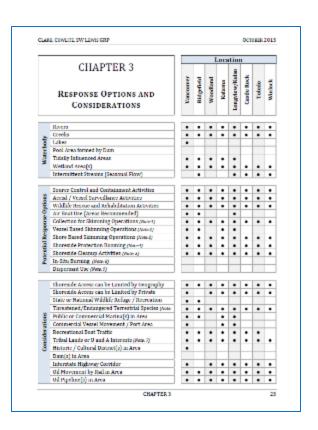


Mobiliagum State Department of Memoril Recourses, Geology of Watchington, Sectioned from https://www.docsve.gov/Sections/Sections/Option/Geologyof/Watchington/Fugas/geolofys.aspc

Chapter 3 – Response Options & Considerations

- Cities/Towns in Planning Area
- Waterbody Types

 (at or near those cities or towns)
- Potential Response Options
 (wildlife recover, skimming, dispersant use, burning)
- Considerations for those Locations (access issues, ownership of lands, T&E species, risks)
- Map of Locations Mentioned





Chapter 4 – Response Strategies & Priorities

- Bulk of the Plan is in this chapter
- Area & Sub-Area (Sector) Maps
- Priority Tables
 (order response strategies should be deployed based on the location where an oil spill occurs)
- Matrix/Tabular Information
- Detailed 2-Page Information Sheets
 - Response Strategies
 - Notification Strategies
 - Staging Areas
 - Boat Launch Locations

CLARK / COWLITZ

GEOGRAPHIC RESPONSE PLAN

(CCSWL GRP)

CHAPTER 4

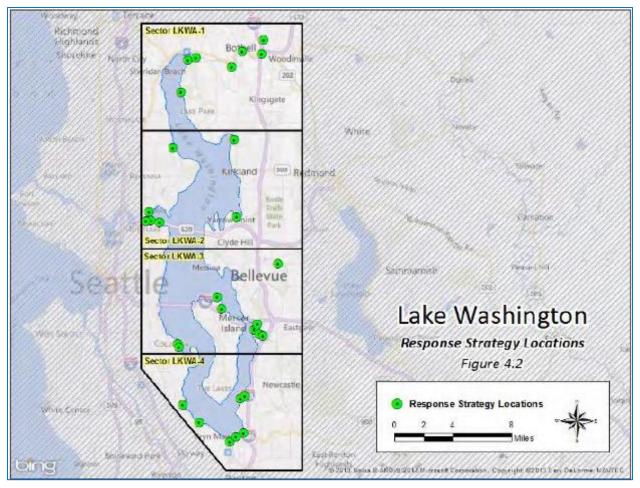
RESPONSE STRATEGIES AND PRIORITIES

October 2015

CHAPTER 4



Chapter 4 – Area Maps





Chapter 4 – Sector Maps





Chapter 4 – Priority Tables

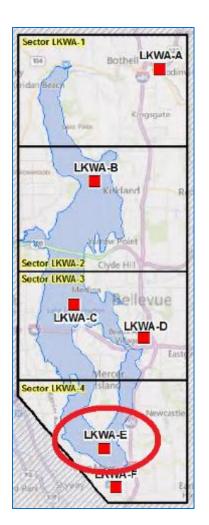


Table 4.7											
"LKWA-E" (Lake Washington - South)											
Priority	Strategy Number	Sector Map	Str., ngy Matrix	Strategy Details		Priority	Str~'_6y Number	Sector Map	Strategy Matrix	Strategy Details	
N - Winds from the NORTH							S - Winds f	rom the SOl	JTH		
1	LKWA-46.1	4-24	4-29	4A-21		1	MAYC-0.0	4-24	4-32	4A-37	
2	JHNSC0.0	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	
NW - Winds from the NORTHWEST						SE - Winds from the SOUTHEAST					
1	LKWA-46.1	4-24	4-29	4A-21	1 [1	LKWA-51.2	4-24	4-29	4A-23	
2	JHNSC-0.0	4-24	4-27	4A-11	1 [2	TYLRC-0.0	4-24	4-36	4A-59	
3	CEDRR-0.1	4-24	4-25	4A-3			E - Winds	from the EA	ST		
	W - Winds from the WEST					1	TYLRC-0.0	4-24	4-36	4A-59	
1	JHNSC0.0	4-24	4-27	4A-11	1 [2	LKWA-51.2	4-24	4-29	4A-23	
2	LKWA-46.1	4-24	4-29	4A-21		NE - Winds from the NORTHEAST					
3	MAYC-0.0	4-24	4-32	4A-37	1 [1	TYLRC-0.0	4-24	4-36	4A-59	
	SW - Winds from the SOUTHWEST					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	1						



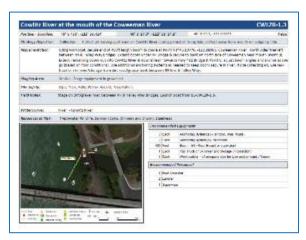
Matrix/Tabular Information

Strategy Number	Location	Strategy Type	Boom Length	Boat Req?	StagingArea	Resources at Risk	Comments	Sector Map (Page#)	Strategy Details (Page#)
KWA-73.4	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
MAYC-0.0	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
MAYC-0.4	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



Detailed 2-Page Information Sheets

- Location & Nearest Address
- Objective
- Site Contact
- How to Implement
- Staging (on-site or off-site)
- Site Safety/Hazards
- Field Notes (additional information of value)
- Equipment & Personnel
- Driving Directions & Map
- Strategy Diagram & Site Photograph







CLARK, COWLITZ, SW LEWIS GRP OCTOBER 2015

Cowlitz River at north end of Gerhart Gardens Park

CWLZR-1.65

Position - Location:	46 6.698, -122 53.758	46" 6" 41.9", -122" 53" 45.5"	40.11103, -122.89597	Longview

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

Implementation: Using workboat, set anchor systems every 100ft, or as needed based on flow, in relatively straight line between Point A and Point B.

After anchors are set, tow boom upstream and secure to anchor at Point B, then all remaining anchor points between Points A & B. At Point A secure boom to bank using anchoring posts or existing structures. Use vac-truck or skimmer with storage for collection at Point

Staging Area: Onsite: Stage equipment at Gerhart Gardens Park

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

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

Watercourse: River - Cowlitz River

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



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

Recom	commended Personnei					
1	Boat Operator					
2	Laborer					
1	Supervisor					

CLARK, COWLITZ, SW LEWIS GRP OCTOBER 2015

Cowlitz River at north end of Gerhart Gardens Park

CWLZR-1.65



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

Bear Sharitaner Strangy Toolds Sources Entitle Res

Site Contact

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

Nearest Address

200 Freedom Way Longview, WA 98632

Driving Directions

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

Chapter 6 – Resources at Risk

- Natural Resources at Risk Summary (T&E, birds, mammals, fish, shellfish, amphibians, plants)
- General Natural Resource Concerns (habitat, fish, shellfish, wildlife)
- Specific Areas of Concern (descriptions & maps showing those areas)
- Cultural Resources at Risk Summary (no site specific information, discovery requirements)
- Economic Resources at Risk Summary (critical infrastructure, commercial & recreational water dependent resources)

CLASS, CONCERN SWILLIAMS GREAT

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CHAPTER 6

RESOURCES AT RISK

6.1 CHAPTER EVERODUCTION

The dispite provides a constancy of astand, calculated and commune resources in tail article table. Weathington area. It provides prevail information in laborat, this, and widthly resources, and limitation this area where similarly estimated providers for the factoristy of calcular astandards and formation article resources. It is unded charlessmall providers for the factoristy of calcular attained and formation about the resource of calculated and formation about the resource on the area to provided in the chapter's consequence.

This chapter is purposedy broad in proper and wholld not be countdored comprehensive. Some of the sentime resource generals of in this chapter are listed because they could not be addressed in Chapter 4 (Borgons Strateges and Friedrice). Additional information from private experimental or fielded, state, tribul, and local government agreements add also be cought throughy the and constituted.

The information provided in this chapter out he used in:

- According the Ensurance and Unit (EU) and Operations in the chaping additional response strategies beyond those found in Chapter 4.
- Providing resource ab risk "costed" to responders, clean-up workers, and others during the metal phase of a gulf response in the GRP ones.
- Briting responders and incident command staff that may be unfamiliar with sensitive recorder concerns in the GRP area.
- Providing background information for personnel involved in media presentations and public extremts during expell modern.

6.2 NATURAL RESOURCES AT RISK SUMMARY

Next backgrad communities are neceptable to the effects of slippils. Must temmentate on bank, edigman and marris granted in estimated, and help held in the center, informaticple plants and neterain and larger information, must as this, neephalistics and reptiles, hidds maximals, and a wide content of insertainment, are all as potentially at rick from machineting, amentmaticy, and/or the choruse long term effects their user greath from banking approach to policy of all constitutions began are

CHAPTER 6

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Information on Sensitive Resource Locations

(including and beyond locations that have response strategies developed)

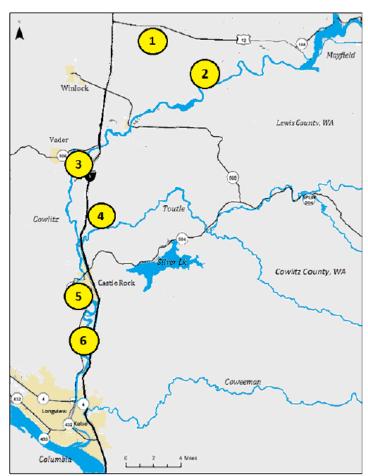


Figure 6-1: Specific geographic areas of concern within the Cowlitz River system

6.2.3 Specific Geographic Areas of Concern - Maps and Descriptions

Cowlitz River (See: Figure 6-1)

- Lewis and Clark State Park: Boone Creek, a salmonid spawning stream, runs through the
 park and is tributary to Lacamas Creek. This 621-acre park is in one of the last major stands
 of old-growth forests in the state. Coniferous trees, streams, wetlands, dense vegetation,
 and wet prairie comprise the park environment along with a vast stand of rare old-growth
 forest.
- Mouth of Blue Creek and vicinity (Cowlitz ~RM 42-47): Waterfowl concentration area. Cavity nesting Wood ducks and Mergansers in old river channels, beaver dams and flooded willow areas. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 3) Mouth of Olequa and Lacamas Creeks and vicinity (Cowlitz River ~RM 24.5 to RM 30): Pastures and emergent wetlands in the Cowlitz River floodplain and nearby ponds support regular large concentrations of wintering waterfowl, geese, and osprey nesting. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- 4) Toutle River (Cowlitz River ~RM 20/Toutle RM 3 to RM 4.5): Snag rich area used by Bald eagles. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels. Resident fish.
- 5) Arkansas, Delameter, and Whittle Creeks (Cowlitz River ~RM 17): Wetlands across from town of Castle Rock provide habitat for cavity nesting ducks. Emergent and scrub shrub wetlands and flood plains provide regular large concentrations of wintering waterfowl including Canada geese. Salmonid spawning stream and juvenile salmonid rearing habitat in off-river channels.
- 6) Pleasant Hill (Cowlitz River ~RM 8.5): An unnamed stream and associated wetland complex between I-5 and Pleasant Hill Road near the town of Lexington. Wood ducks and other cavity nesting ducks regularly inhabit these areas.



Listing of Economic Resources in Area

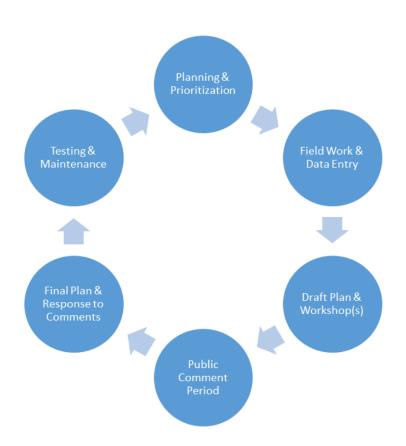
Appendix 6A - List of Economic Resources

Category	Resource	Location	Latitude	Longitude	Contact	Phone	Email
A1 - Drinking Water Intakes	Castle Rock Water Intakes	Cowlitz River - City of Castle Rock	46.33403	-122.93194	City of Castle Rock - Public Works	360-703-0167	
A1 - Drinking Water Intakes	Kalama Ranney Collector (Water Intakes)	Kalama River - City of Kalama	46.04361	-122.83902	City of Kalama - Public Works	360-673-3707	
A1 - Drinking Water Intakes	Kelso Ranney Collector	Cowlitz River - City of Kelso	46.14238	-122.91383	City of Kelso- Public Works	360-577-3360	
A1 - Drinking Water Intakes	Longview Water Intakes	Cowlitz River - City of Longview	46.15037	-122.91448	City of Longview - Stormwater	360-442-5299	
A1 - Drinking Water Intakes	Vader Water Intakes	Cowlitz River - City of Vader	46.40608	-122.93336	Lewis County - Public Works	360-740-1123	
A1 - Drinking Water Intakes	Woodland Ranney Collector	Lewis River - City of Woodland	45.91006	-122.73998	City of Woodland - Public Works	360-225-7999	
A2 - Energy/Power Generation Water	Mayfield Dam	Cowlitz River - Silver Creek, WA	46.502592	-122.58813	Tacoma Public Utilities	253-502-8530	
A2 - Energy/Power Generation Water	Merwin Dam	Lewis River - Ariel, WA	45.956807	-122.55577	Pacificorp	503-813-6078	
B6 - Fish Hatcheries	Coweeman River - Rearing Pond	Coweeman River - Kelso Area	46.15566	-122.78136	Coweeman Rearing Pond Manager	360-577-0602	
B6 - Fish Hatcheries	Cowlitz River Salmon and Trout	Cowlitz River - Salkum, WA	46.51134	-122.62946	WDFW - Cowlitz River Hatcheries	360-864-6135	



GRP Update & Development Process

- Identify and evaluate sensitive resource locations and determine if a strategy can be developed to protect it.
- Efforts and input from:
 - U.S. Coast Guard
 - U.S. Environmental Protection Agency
 - Other State and Federal Agencies
 - Tribal Governments
 - Local Governments
 - Response Organizations
 - Emergency Responders
 - Environmental Groups/NGOs
 - Persons that live, work, or play in the communities covered by the plans
- Goal is to update plans every 5 years.

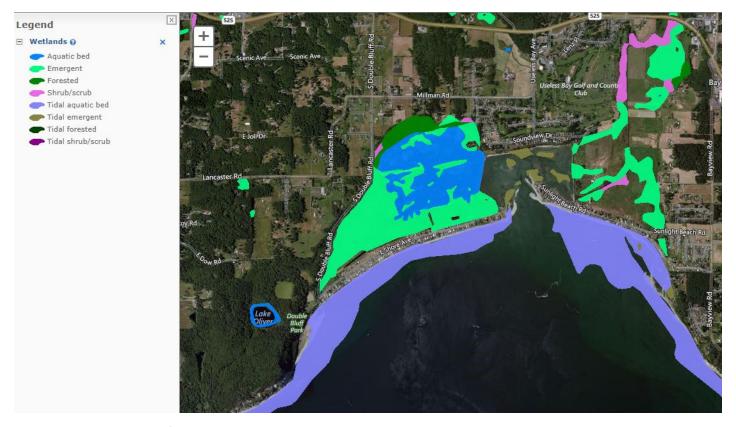




Spill Event Happens During an Incoming Tide





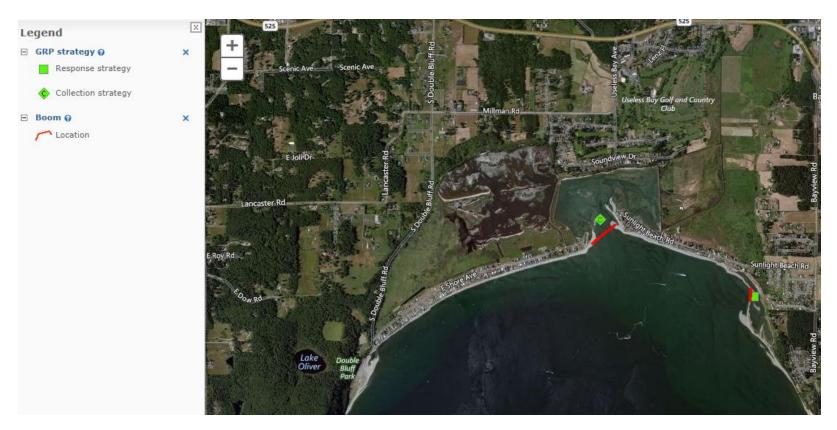


....but long before the spill ever happened the sensitivity of Useless Bay was acknowledged by Ecology & others during the GRP update & development process





Useless Bay was visited during the GRP process to see if there might be something we could do to protect it if there was ever an oil spill in the area.



Based on the results of field work (& established criteria), two sites for Useless Bay were developed into GRP response strategy locations (AI-29 & AI-30)



Detailed 2-Page Response Strategy Information Sheets were created for both sites so Contractors knew where to go, what to bring, and what to do when they got there.

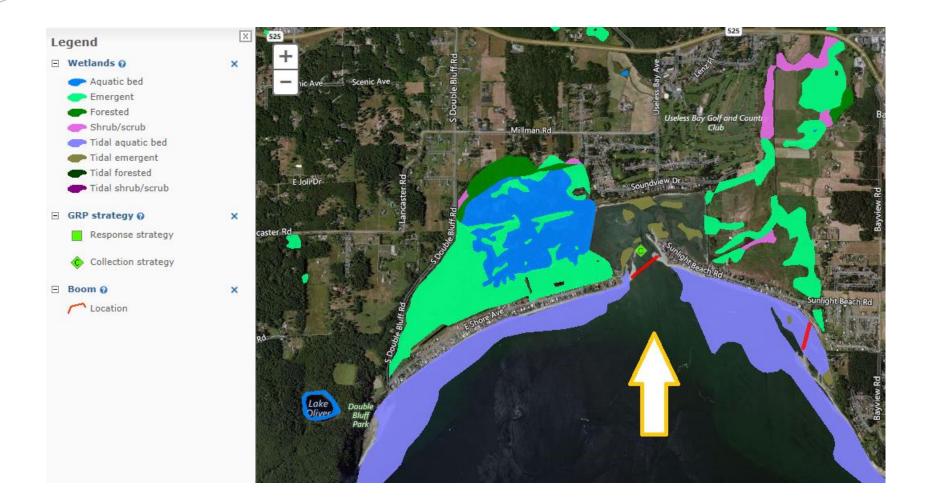




Because of this, the response contractors knew about Useless Bay and were able to quickly put boom in place to protect sensitive natural resources in the area.









Caveats about GRPs

- Response Strategy Implementation Priorities are set by Federal, State, and Tribal Trustees (ideally).
- Changes to priorities can be made by if aerial observations or spill trajectory modeling show that such changes are warranted.
- Not all sensitive resources can be protected. Limited by access, worker safety, geography, tides/currents, and potential to do more harm to a resource than good.
- GRPs don't represent the universe of everything that could, should, or would be done in a response to protect sensitive resources.



What the Updated Admiralty Inlet GRP will Provide

- Stand alone plan for Admiralty Inlet (no longer combined with Hood Canal); north of Hood Canal Bridge.
- Expansion of the number of GRP Response Strategies for Admiralty Inlet
- Detailed 2-Page tactical response strategy information sheets along with tabular/matrices information.
- Information sheets for critical notifications to resource owners.
- Potential Oil Spill Origin Points for Admiralty Inlet, and a listing of the response priorities table for each of those points will be included.
- Listing of Economic Resources in the area; including on/near water critical infrastructure, water dependent commercial areas, and water dependent recreational areas as appropriate.
- Updated narrative chapters/sections and GIS-based maps



Admiralty Inlet GRP Update - Timeline

- <u>May/June 2016</u> Pre-draft plan reviewed by Trustees. Initial response strategy priority tables (one for each potential oil spill origin point) populated through Trustee consensus.
- <u>June/July 2016</u> Draft plan published and available for public comment. GRP Workshop held. Public comment period will be at least 30 days.
- <u>August 2016</u> Pre-final plan developed. Changes to plan based on comments received. Additional field work/site evaluations may be required. Additional response strategies might be added to the plan if needed, based on comments received. Priority tables finalized. Final review by Ecology and U.S. Coast Guard Sector Puget Sound.
- <u>September/October 2016</u> Final Plan Published. Old plan removed/retired. Responsiveness Summary (for all public comments received) also published.

How You Can Help Us Help Admiralty Inlet

- Let us know about areas of special concern to you (something known by you but may not be known by others outside your communities)
- Review and provide comment on the Draft GRP (once released)
- Attend and help promote public participation at GRP workshop (Dates/locations to be decided prior to release of the draft Admiralty Inlet GRP)
- Open communication between Ecology, County, and Tribal Planners (so those who write emergency plans might all know and have met each other long before anything happens)
- Participate in oil spill drills when invited including drills that test the response strategies in the updated Admiralty Inlet GRP



Max Gordon

Admiralty Inlet GRP Project 360-407-7238

maxg461@ecy.wa.gov GRPs@ecy.wa.gov

Washington Department of Ecology

Spills Program – GRPs PO Box 47600 Olympia, WA 98504-7600

More Information:

http://www.ecy.wa.gov/programs/spills/preparedness/GRP/index.html



Useful Links

Ecology's GRP Website:

http://www.ecy.wa.gov/programs/spills/preparedness/GRP/index.html

Ecology's Spills Story Map:

https://fortress.wa.gov/ecy/coastalatlas/storymaps/spills/spills_sm.html

Washington Coastal Atlas:

https://fortress.wa.gov/ecy/coastalatlas/

Oil Spills 101

http://www.oilspills101.wa.gov/

Northwest Area Contingency Plan (NWACP):

http://www.rrt1onwac.com/NWACP/Default.aspx

