



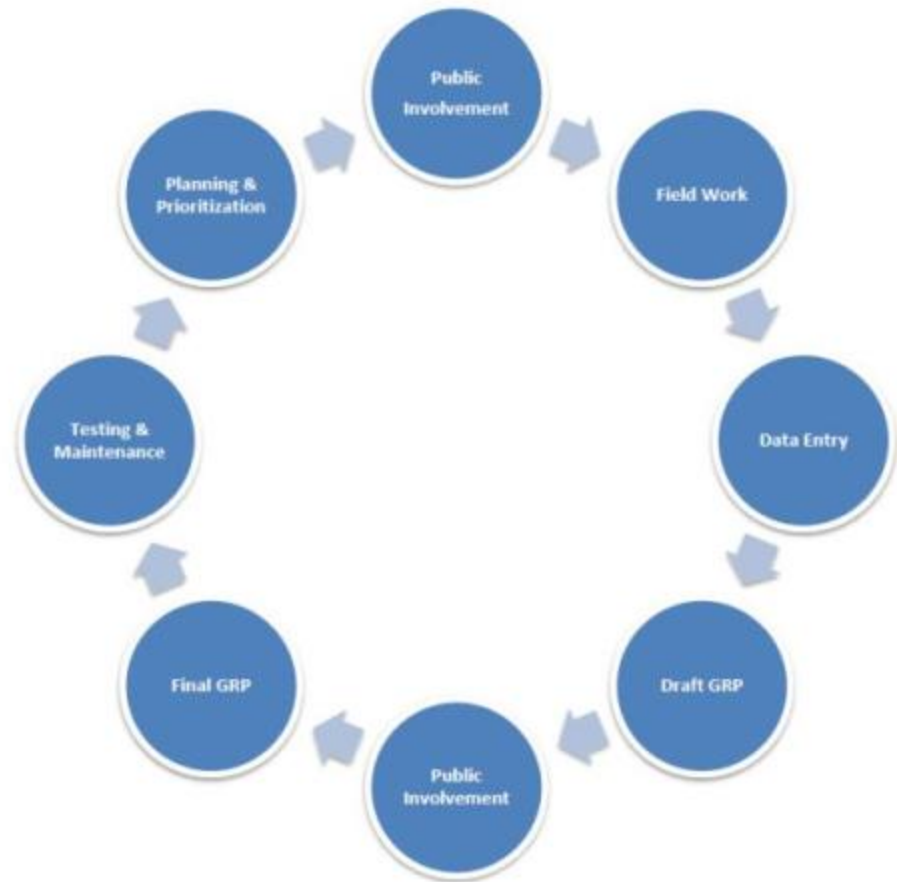
# Spokane River

## Geographic Response Plan - Update

Spokane River - Latah Creek - Marshall Creek - Spring Creek - Chamokane Creek  
Little Spokane River - Dartford Creek - Dregon Creek

# Geographic Response Plans

- More than just Oil Spill Response Strategies
- Designed for the initial/emergency phase of a response but contain information that can be used throughout a response
- 27 such plans in the Northwest, including 19 in Washington State
- Number of plans will grow!



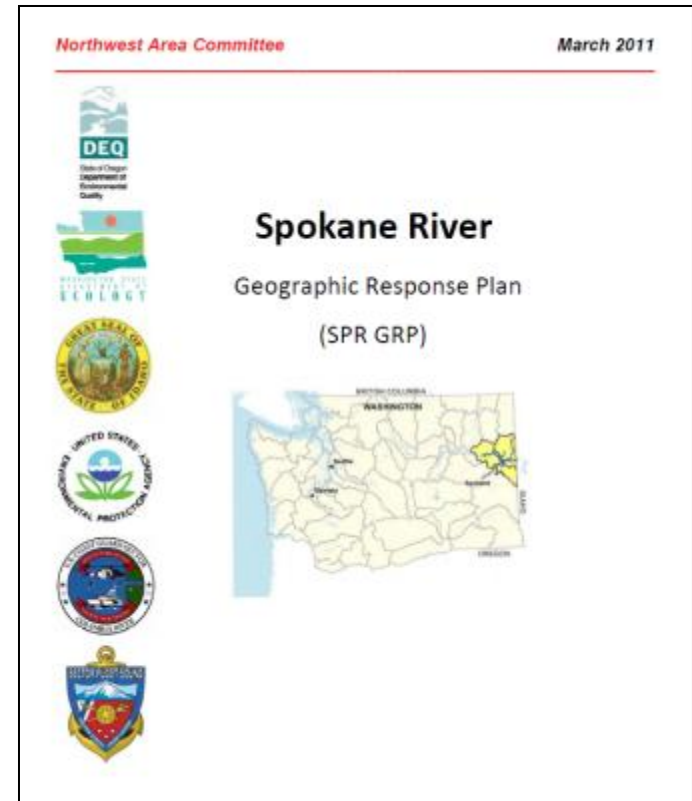
# Spokane River GRP - Update

- Joint Effort between EPA, Washington, & Idaho
- First Update to plan, published in Feb 2006
- Workshop & Public Meeting in Spokane in June 2009
- Field Work: Summer 2009 to Spring 2010



# Draft Updated Spokane River GRP

- Made available for Public Comment on May 15<sup>th</sup>
- Comments will be compiled at the end of this month
- Final Plan will hopefully be released by mid-July along with a responsiveness summary for comments submitted but not incorporated into the final version of the plan



- On Ecology's Web Site at:

<http://www.ecy.wa.gov/programs/spills/preparedness/GRP/Spokane.html>

About  
the

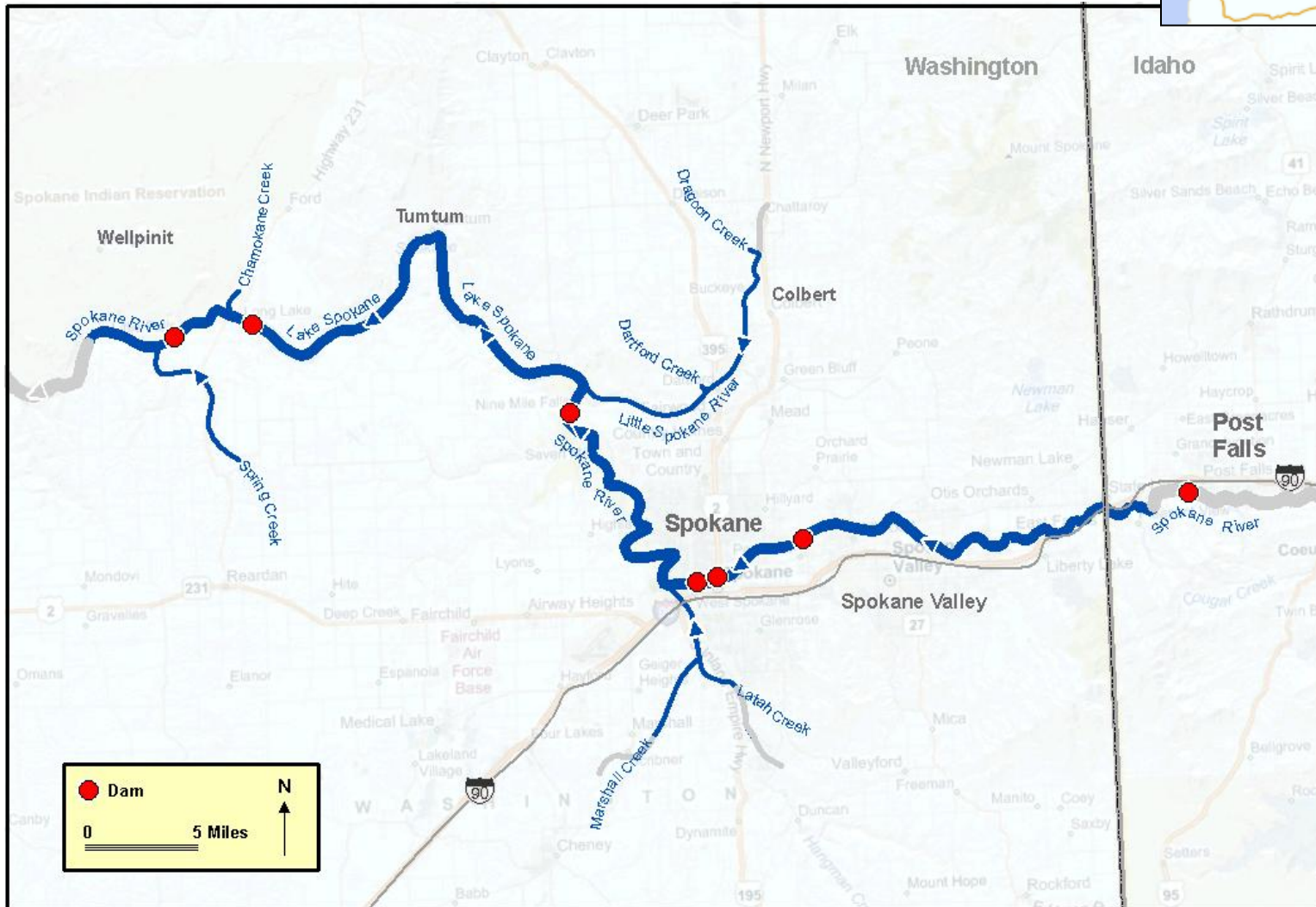
## Spokane River GRP

Provides coverage of the greater Spokane River subbasin, downstream of the Post Falls Dam in Idaho, through and beyond the city of Spokane, to the Spokane arm of Lake Roosevelt

- 76 miles of the Spokane River
- Over 7 miles of Spring Creek
- 1/2 mile of Chamokane Creek (aka Tshimikain Creek)
- 21 miles of the Little Spokane River
- 1/4 mile of Dartford Creek,
- 1/4 mile of Dragoon Creek
- 5 miles of Marshall Creek
- Over 7 miles of Latah Creek (aka Hangman Creek)



About  
the **Spokane River GRP**



# Spokane River GRP - Update

Currently Published Version: February 2006, 175 Pages

## Existing Plan Chapters & Appendices:

- Chapter 1 – Introduction
- Chapter 2 – Site Description
- Chapter 3 – Reference Maps
- Chapter 4 – General Protection/Collection Strategies
- Chapter 5 – Shoreline Countermeasures
- Chapter 6 – Sensitive Resource/Wildlife Flight Restriction Information
- Chapter 7 – Logistical Information
- Appendix A – Protection Techniques
- Appendix B – Geographic Response Plan Contributors
- Appendix C – Geographic Response Plan Comments/Corrections/Suggestions

# Spokane River GRP - Update

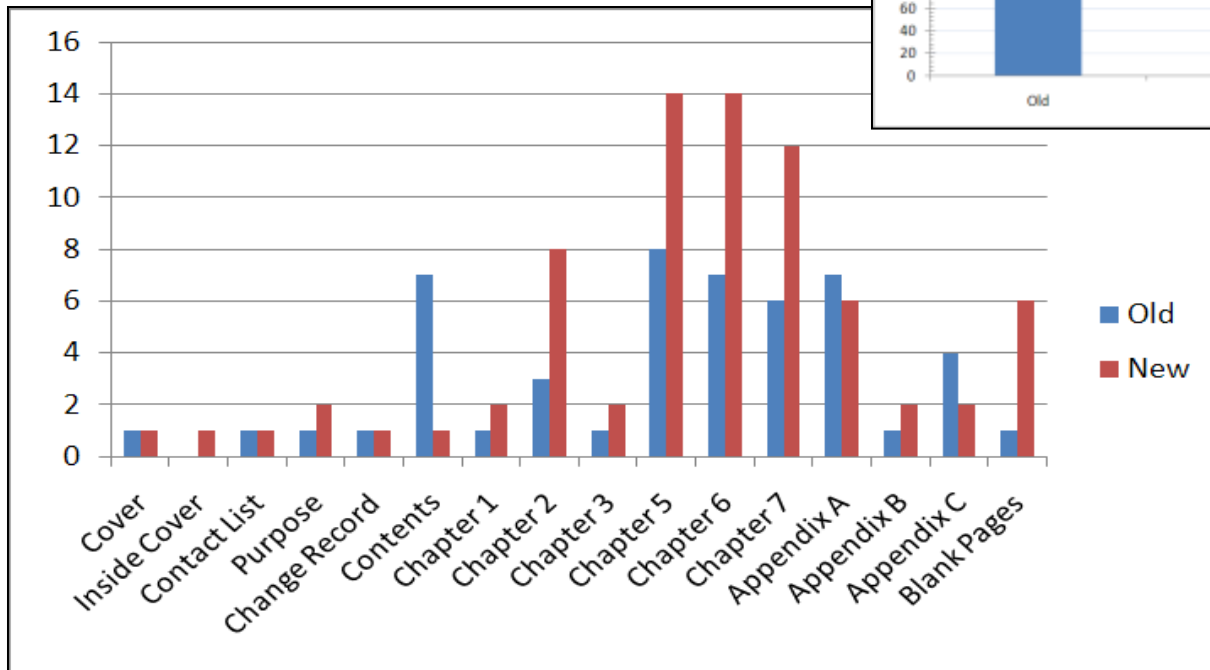
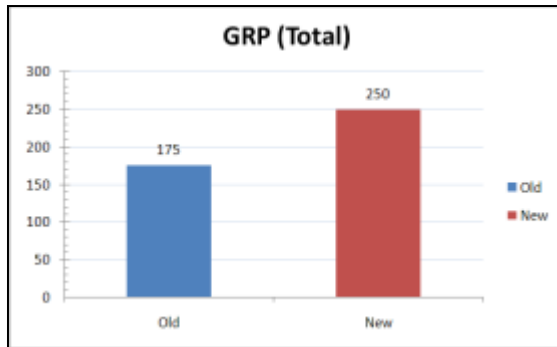
Draft Updated Version: May 2011, 250 Pages

## Updated Plan Chapters & Appendices:

- Chapter 1 - Introduction
- Chapter 2 - Site Description
- Chapter 3 - Reserved
- Chapter 4 - Response Strategies & Priorities (& Appendices 4A, 4B, & 4C)
- Chapter 5 - Shoreline Information
- Chapter 6 - Resources at Risk (& Appendix 6A)
- Chapter 7 - Logistical Information
- Appendix A - Protection Techniques
- Appendix B - GRP Contributors
- Appendix C - GRP Comments, Corrections, Suggestions



# Page Count Comparison – Existing vs. Updated

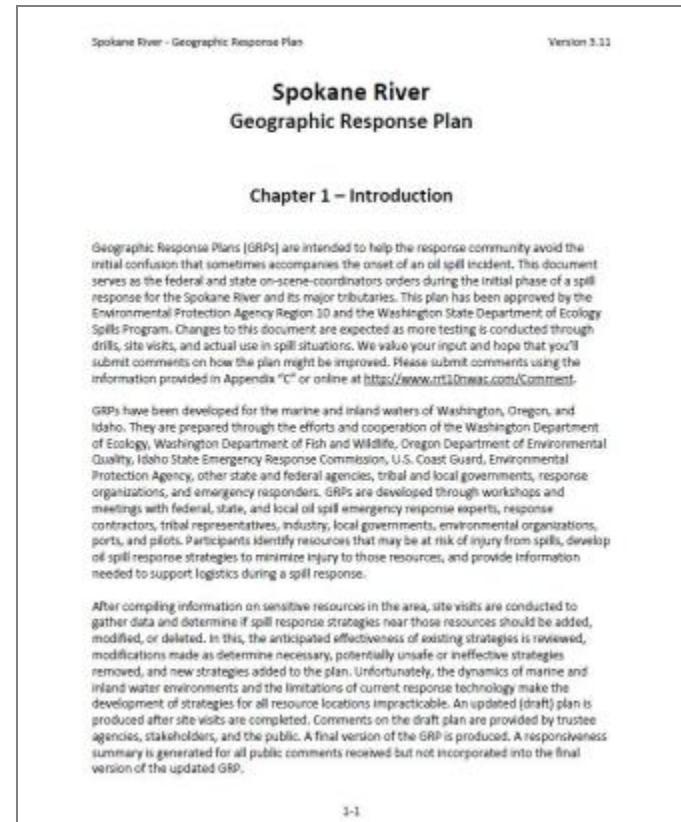


# Chapter 1 - Introduction

What's  
New?

## Simple Rewrite

Movement away from “protection” type language that sets up unrealistic expectations of what the GRP and GRP strategies can & cannot do.



## Chapter 2 – Site Description

*What's  
New?*

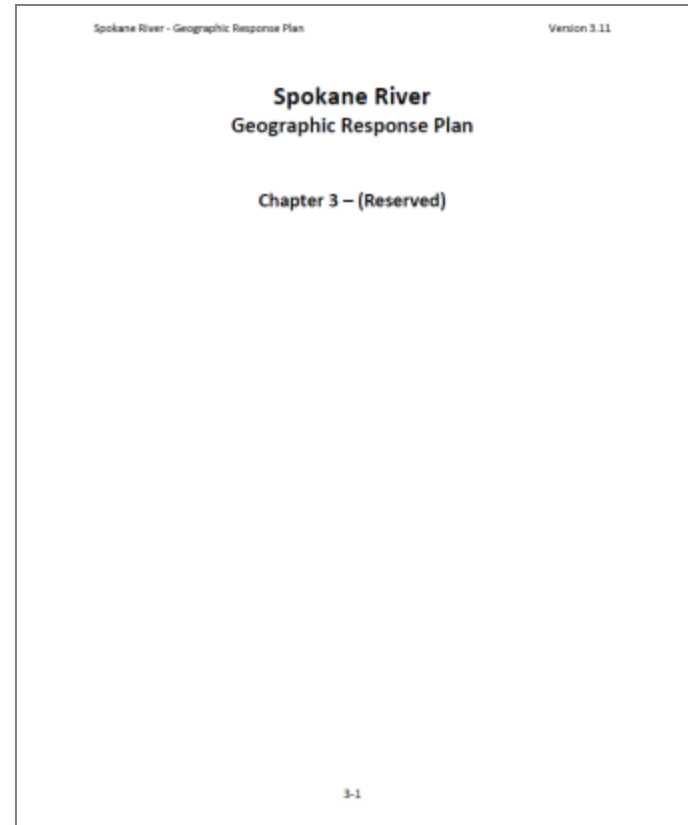
### Rewritten, Content Updated

- Site Description, Physical Features, Hydrology, Climate, Risk Assessment, and References updated, expanded, and rewritten.
- Hydrology of the area described by Water Resource Inventory Area rather than Rivers & Creeks alone
- Risk Assessment greatly expanded, and used to identify potential oil spill source points (Spill Origin Points)

# Chapter 3 (Reserved)

*What's  
New?*

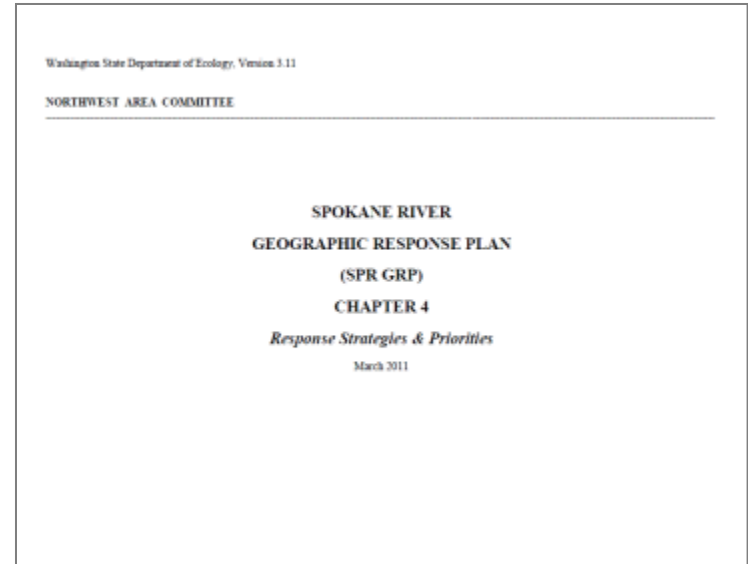
- Chapter re-titled “Reserve”
- Reference Map in Chapter 3 relocated to Area Maps in Chapter 4
- Outdated Reference Maps in Chapter 3 of many of the GRPs conflict with information in Chapter 4
- Better to have all area & sector maps in one Chapter



# Chapter 4 – Response Strategies & Priorities

What's  
New?

- Existing Plan - 52 Response Strategies  
26,750ft of boom
- Updated Plan - 58 Response Strategies  
26,550ft of boom
- 16 Response Strategies Added  
(including six dam notification strategies)
- 10 strategies were removed,
- 29 strategies changed in some way
- 13 strategies unchanged.



# Chapter 4 – Response Strategies & Priorities

*What's  
New?*

## Rewritten & Reformatted

- Chapter Overview rewritten in a style similar to that found in the Outer Coast GRP.
- Area reference map in (old) Chapter 3 moved into section for Area Maps in (new) Chapter 4.
- Added area maps showing Dam, Response Strategy, Staging Area, Boat Launch, & Spill Origin Point Locations
- General response priorities added along with information on historical river velocity ranges
- Priority tables updated to reflect response priorities from locations at or near potential spill origin points, rather than priorities based on sector.

# Chapter 4 – Response Strategies & Priorities

*What's  
New?*

- Spill Origin Points derived from the risk assessment in Chapter 2
- Sector Maps are contained in a separate section rather than being intermingled with response strategy information
- Response matrices have their own section now; strategies listed in alpha- numeric order
- The “resources protected” heading in the matrices of the existing version has been changed to “resources at risk.”
- Detailed 2-Page strategy information provided in Appendix 4A
- Detailed 2-Page Staging Area information provided in Appendix 4B
- Detailed 2-Page Boat Launch information provided in Appendix 4C



# Appendix 4A – Response Strategies

What's New?

Spokane River		SPR 56.7
Site Lat/Long:	N 47.788255, W 117.53338	
Strategy Objective:	Deflection – Deflect oil moving downstream on the Spokane River away from river right	
Implementation:	On river right at Spokane House boat launch, secure end of 450ft length of boom to shore near downstream side of dock. Using workboat, tow remaining boom end downstream to mid-river and anchor in place. Ensure deflection angle is appropriate for stream flow/conditions - cascade boom configuration may be required. Use line & anchoring systems as needed to keep boom secure in river. Use anchor posts, existing structures, or trees to secure boom to bank.	
Site Safety Note:	Slippery banks when wet or icy, trip & fall hazards; uneven surfaces; parking lot/pedestrian hazards; water hazard.	
Staging Area:	Spokane House Parking Area (near 14400 N Shoemaker Lane, Nine Mile Falls, WA)	
Field Notes:	Notify Spokane County Fire Dispatch before implementation (509-535-6710) & Washington State Parks – Riverside Park Manager (509-465-5064 or 509-290-3239)	
Resources Targeted:	Downstream habitat, freshwater wildlife	
Watercourse Description:	River below a dam - Spokane River - Width 550ft - Depth (no information)	

**Spokane River Geographic Response Plan**

General | Area Maps | Priorities | Sector Maps | Matrices | **Strategy Details** | Staging Areas | Boat Launch Locations

Suggested Equipment	
Quantity	Description
1000ft	1/2" dbil braided propylene line w safety clasps
450ft	B3 – River Boom, or other appropriate type (9 x 50ft)
1 each	Workboat
3 each	Shoreside anchoring post
1 each	Post driver
5 each	Anchor systems (anchor, lines, floats)
1 each	Towing bridle (appropriately sized for boom)

Suggested Personnel	
1	Supervisor
3	Laborers
1	Boat Operator

Status: Visited and Test Tested 10/2009

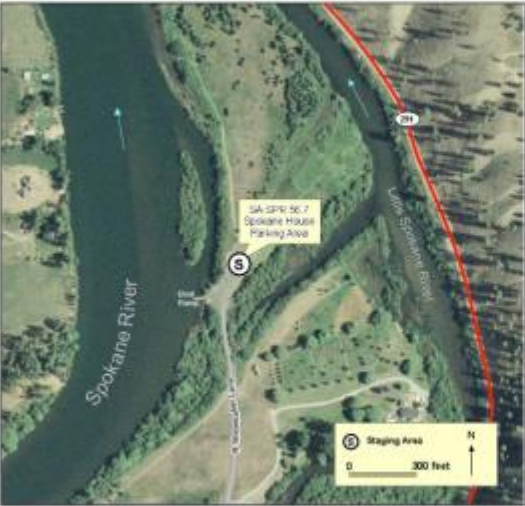
SPR 56.7	
<p>Boat Ramp right. Deflection of oil moving in side channel.</p>	<p>Staging Area</p>
<p><b>Driving Directions</b></p> <ul style="list-style-type: none"> <li>Take Exit 281 on Interstate 90 in Spokane</li> <li>Travel North on Division Street (Hwy 2/Hwy 395) - (Note 13'3" Height Restriction)</li> <li>After approximately 4.4 Miles turn left onto W Francis Avenue (Hwy 291)</li> <li>After 3.1 Miles stay right onto W 9 Mile Road (Hwy 291)</li> <li>After 6.8 Miles turn left onto N Shoemaker Lane</li> <li>After 0.4 Miles you have reached the Spokane House Boat Launch</li> <li>Stage in Parking Area – Ensure River Side Park Manager has been notified</li> </ul>	
<p><b>Closest Address</b> 14400 N Shoemaker Lane Nine Mile Falls, WA 99026</p>	

# Appendix 4B – Staging Areas

What's New?

Staging Area – Spokane House Parking Area
SA-SPR 56.7

<b>Site Lat/Long:</b>	<a href="#">N 47.789111, W 117.531553</a>
<b>Comments:</b>	Contact Washington State Parks – Riverside Park Manager before staging equipment at the Spokane House Parking Area (509-465-5064 or 509-290-3239)



Location Information		
Asset	Type /Status	Amount
Boat Ramp	Yes	1
Boat Ramp Type	Concrete	N/A
Boat Dock?	Yes	1
Restrooms	Yes	1
Power	Unknown	N/A
Water	Unknown	N/A
Parking (Car)	Yes	Unknown
Parking (Trailer)	Yes	Unknown
Waste Disposal	Unknown	N/A
Telephones	Unknown	N/A
Cell Phone Coverage	Unknown	N/A
Estimated Lot Size	Sq Ft	40,000
Lot Cover (Primary)	Black Top	100%
Covered Spaces	None	N/A
Covered Space Total Area	Sq Ft	N/A
User Fee	Unknown	N/A


Response Strategies Served:		
SPR 56.75	SPR 56.0	LSR 0.5
SPR56.7	SPR 55.5	LSR 0.75
SPR 56.5	LSR 0.0	

Last Visited: 10/2005

**Spokane River Geographic Response Plan**

[General](#)
[Area Maps](#)
[Priorities](#)
[Sector Maps](#)
[Matrices](#)
[Strategy Details](#)
Staging Areas
[Boat Launch Locations](#)

House Parking Area
SA-SPR 56.7



**Driving Directions**

Take Exit 281 on Interstate 90 in Spokane

Travel North on Division Street (Hwy 2/Hwy 395) - [Note 13'3" Height Restriction]

After approximately 4.4 Miles turn left onto W Francis Avenue (Hwy 291)

- After 3.1 Miles stay right onto W 9 Mile Road (Hwy 291)
- After 6.8 Miles turn left onto N Shoemaker Lane
- After 0.4 Miles you have reached the Spokane House Boat Launch
- Stage in Parking Area – Ensure River Side Park Manager has been notified

**Closest Address**

14400 N Shoemaker Lane  
Nine Mile Falls, WA 99026

**Spokane River Geographic Response Plan**

[General](#)
[Area Maps](#)
[Priorities](#)
[Sector Maps](#)
[Matrices](#)
[Strategy Details](#)
Staging Areas
[Boat Launch Locations](#)

# Appendix 4C – Boat Launch Locations

*What's New?*

Boat Launch Location – Upriver Dam
BL-SPR 80.0

<b>Site Lat/Long:</b>	<a href="#">N 47.684567, W 117.328277</a>
<b>Comments:</b>	Contact City of Spokane Water Department Upriver Dam Operations for access (509-742-8141)

Location Information		
Asset	Type /Status	Amount
Boat Ramp	Yes	1
Boat Ramp Type	Gravel	N/A
Boat Dock?	No	N/A
Restrooms	No	N/A
Power	No	N/A
Water	No	N/A
Parking (Car)	Yes	Unknown
Parking (Trailer)	Yes	Unknown
Waste Disposal	No	N/A
Telephones	No	N/A
Cell Phone Coverage	Unknown	N/A
Estimated Lot Size	Sq Ft	9,500
Lot Cover (Primary)	Dirt/Gravel	100%
User Fee	No	N/A

Response Strategies Served:	
SPR 80.0	SPR 81.5

Last Visited: 11/2009

**Spokane River Geographic Response Plan**

[General](#)
[Area Maps](#)
[Priorities](#)
[Sector Maps](#)
[Matrices](#)
[Strategy Details](#)
[Staging Areas](#)
Boat Launch Locations

Upriver Dam
BL-SPR 80.0

**Driving Directions**

- Take Exit 286 on Interstate 90 in Spokane, WA
- Travel West on E Broadway Avenue for approximately 0.6 Miles
- Turn right onto N Fancher Road and travel North for 0.8 Miles
- Turn left onto E Trent Avenue, and travel West for 0.7 Miles
- Turn (sharp) right onto N Waterworks Street and travel Northwest for 0.7 Miles
- Turn Left onto Felts Field – stay to the right – and pass over waterway at power generation station
- Follow road to boat ramp, 1000ft after power generation station

**Spokane River Geographic Response Plan**

[General](#)
[Area Maps](#)
[Priorities](#)
[Sector Maps](#)
[Matrices](#)
[Strategy Details](#)
[Staging Areas](#)
Boat Launch Locations

What's New?

# Chapter 5 – Shoreline Countermeasures

## Simple Changes

Countermeasures Matrices for oils provided in 2-page format so it is easier to select the matrix for a particular oil type and easier to read.

Spokane River - Geographic Response Plan Version 3.11

5.3.1 - Shoreline Countermeasures Matrices: Table 5-2

### Light Oils

Diesel, No. 2 Fuel Oils, Light Crude Oils

- Moderately volatile; will leave residue (up to 1/3 of spilled amount)
- Moderate concentrations of toxic (soluble) compounds
- Long-term contamination of intertidal resources possible
- Potential for subtidal impacts (dissolution, mixing, sorption onto suspended sediments)
- No d
- Clea

Spokane River - Geographic Response Plan Version 3.11

COUNTERMEASURES	1	2	3	4	5	5A	5B	5C	7	8A	8B	8C	10	
<b>CONVENTIONAL METHODS</b>														
Ice action	R	R	C	C	C	C	C	C	R	C	C	R	C	R
Manual removal of oil			C	C	C	C	C	C		R	R		C	
Passive collection of oil	C	R	R	R	R	R	R	R	C	R	R	C	R	R
Oiled debris removal	C	C	R	R	R	R	R	R	C	R	R	C	C	C
Trawling/recovery walls			C	C	C									
Oiled sediment removal			C	C	C	C								
Ambient water flooding (deluge)			C	C	C	R	R	R				C		C
Ambient water flush <100 psi			C			C	C	C				R	C	C
Ambient water flush >100 psi														
Warm water flush <100°F														
Hot water flush >100°F														C
Vacuum removal of oil								C	C					
Sediment reworking			C	C	C	C								
Sediment removal - cleaning - replacement			C	C	C									
Cutting oiled vegetation			C	C	C			C	C		C	C		C
<b>ALTERNATIVE METHODS*</b>														
In situ burning on shore														
Chemical stabilization, protection, or cleaning														
Ballast emplacement														C
Inoculator addition														

R = Recommend (May be Preferred Alternative)  
 C = Conditional (Refer to NW Shoreline Countermeasures Manual)  
 Items not marked "R" or "C" are not applicable or not generally recommended  
 Labels marked \* require you to follow approved process defined in National Contingency Plan (NCP) and NW Area Contingency Plan  
 HPA Permit Requirements: In Washington State, any construction that affects the bed or flow of the waters of the state or has the potential to cause habitat damage, including the installation of underflow dams or anything beyond the hand cutting of vegetation requires a Hydraulic Project Approval (HPA) permit from Washington Department of Fish and Wildlife. An emergency HPA may be obtained from WDFW by calling 360-334-6233 (24-hr pager). For more information on HPA permits see: <http://wdfw.wa.gov/licensing/lpca/>

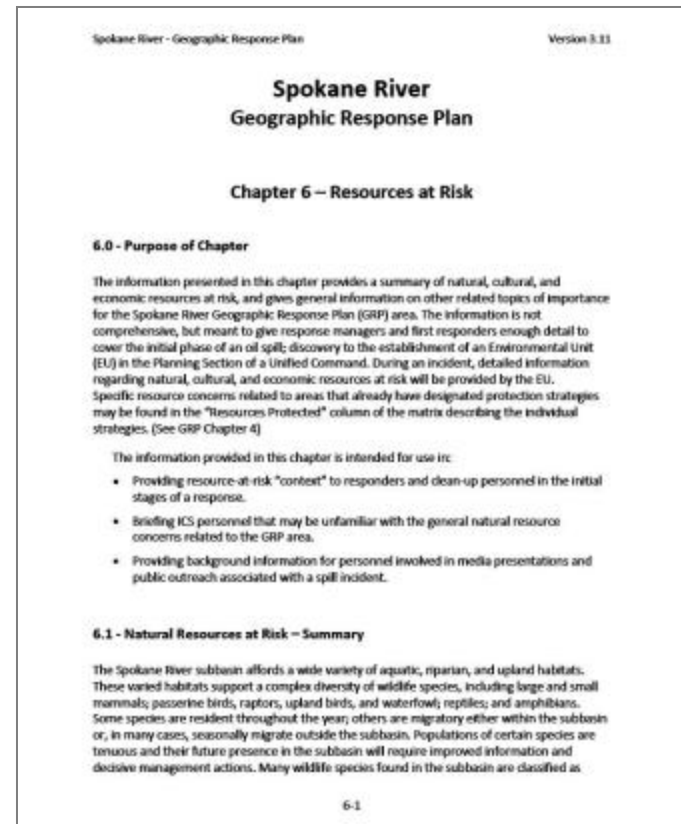


# Chapter 6 – Resources at Risk

What's New?

## Rewritten & Reformatted

- Chapter includes summary information on Natural, Cultural, and Economic Resources at Risk (Sensitive Resources)
- Content of Chapter made more general in nature, consistent with purpose of GRPs, but detailed enough to support initial EU functions after UC established
- Appendix 6A provides listing of Economic Resources at Risk



# Appendix 6A – Economic Resources at Risk

Appendix - 6A  
 List of Economic Resources at Risk  
 March 2011 (Version 3.11)

## Spokane River Geographic Response Plan Socio-Economic Resources at Risk

### A. Critical Infrastructure

A1 - Drinking Water Intakes				
Name	Location/Address	Lat/Long	Contact	Phone

A2 - Energy/Power Generation Water Intakes (Lock & Dams Included)				
Name	Location/Address	Lat/Long	Contact	Phone
Post Falls Dam	Spokane River (RM100.8), Post Falls, ID	47.709047, -116.961082	Avista Utilities	(509) 495-4624
Upriver Dam	Spokane River (RM80.2), Spokane, WA	47.685701, -117.328609	City of Spokane	(509) 625-7800
Upper Falls Dam	Spokane River (RM76), Spokane, WA	47.662829, -117.415041	Avista Utilities	(509) 495-4624
Monroe Street Dam	Spokane River (RM74), Spokane, WA	47.661605, -117.425088	Avista Utilities	(509) 495-4624
Nine Mile Falls Dam	Spokane River, (RM58), Deer Park, WA	47.774868, -117.543776	Avista Utilities	(509) 495-4624
Long Lake Dam	Spokane River (RM34), Tumtum, WA	47.837185, -117.839162	Avista Utilities	(509) 495-4624
Little Falls Dam	Spokane River (RM29), Spokane Reservation, WA	47.829766, -117.918481	Avista Utilities	(509) 495-4624

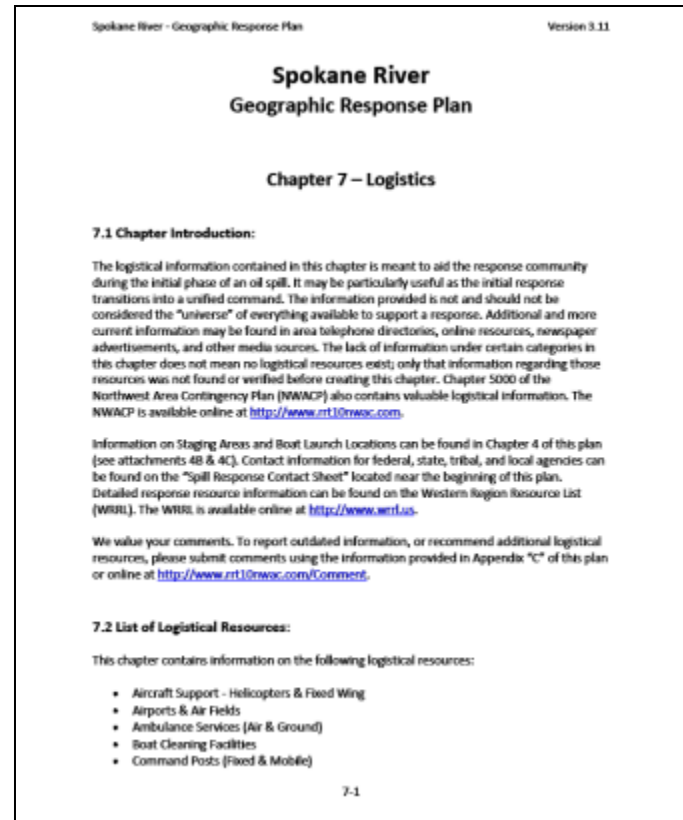
A3 - Federal or State Water Projects or Irrigation Channels for Agriculture				
Name	Location/Address	Lat/Long	Contact	Phone

What's  
New?

# Chapter 7 – Logistical Information

## Rewritten & Reformatted

- Logistical Resource Categories Expanded
- Contact information in existing plan relocated, as appropriate, into Spill Response Contact Sheet near beginning of plan
- Additional information on logistical resources can be added to categories as it is discovered
- Update format and categories should make maintenance of chapter more manageable





# Chapter 7 - Logistical Categories

- Aircraft Support - Helicopters & Fixed Wing
- Airports & Air Fields
- Ambulance Services (Air & Ground)
- Boat Cleaning Facilities
- Command Posts (Fixed & Mobile)
- Communications
- Cultural Resource Support
- Environmental & Conservation Organizations
- Fire Departments
- Food Services/Catering
- Hospitals & Medical Centers
- Hotels/Motels, Berthing Accommodations
- Marinas, Ports, Docks
- Military Bases/Installations
- Office Equipment Supply & Rental
- Oil Spill Response Contractors
- Outdoor Recreation Groups, Companies, & Organizations
- Park Facilities
- Rental Equipment - Industrial/Commercial
- Response Equipment Cache Locations
- River Guides
- Security Services
- Support Personnel - Local/Emergency
- Tribal Resources
- Transportation
- Wildlife Rehab Facilities & Cleaning

What's New?

# Appendix A – Protection Techniques

## No Significant Changes

- Re-typed & touched up, but no substantial changes were made to text or format

Spokane River GRP Appendix A Version 3.11

**Appendix A**  
**Protection Techniques**

**Table A-1: 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	Factors
Current speed dependent Vessel traffic dependent	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 booms for sensitive areas Encircle and divert to collection area
Sufficient room to maneuver	Skimmers for collection
No vessels available	Boom vans, Flaw diverters
Special conditions	Air and water jets
Isolated areas	Sorbents and pump-poms

Source: "Oil Spill Response in Fair Currents: A Field Guide," US Coast Guard, October 2003.

**Table A-2: Summary of Protection Techniques for small Streams, Creeks, & Culverts**  
Where water depth is less than boom skirt depth.

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

Source: "Oil Spill Response in Fair Currents: A Field Guide," US Coast Guard, October 2003.

A-1

What's  
New?

# Appendix B – Original Contributors

## No Significant Changes

- Re-typed but no substantial changes were made to text or format

Spokane River GRP Appendix B	Version 3.11
<b>Appendix B</b>	
<b>Spokane River Geographic Response Plan – Original Contributors</b>	
<b>Local Representatives:</b>	<b>Federal Representatives:</b>
<u>Spokane County</u> Mr. Bill Hanson Mr. Rob Lindsay Ms. Bea Lackoff Mr. John Bottelli	<u>U. S. Environmental Protection Agency</u> Mr. Calvin Torada Ms. Beth Sheldrake
<u>Lincoln County</u> Mr. Jason Guthrie	<b>State Representatives:</b>
<u>Stevens County</u> Mr. Bruce Garcia	<u>Washington State Department of Ecology</u> Ms. Rebecca Post Mr. Keith Holliday Mr. Mark Stephens
<u>City of Spokane</u> Mr. Scott Mullernix Mr. Lloyd Brewer	<u>Washington State Department of Fish and Wildlife</u> Mr. Andy Carlson
<u>Spokane County Conservation District</u> Mr. Daniel Ross	<b>Industry and Response Contractors:</b>
<u>Spokane Aquifer Joint Board</u> Ms. Julia McHugh	Herrera Environmental Consultants, Inc. Ecology & Environment, Inc. Yellowstone Pipeline Company NRC Environmental Services Marine Spill Response Corporation Chevron Corporation Northwest Archaeological Associates, Inc. Clean Sound Cooperative
<b>Tribal Representatives:</b>	
<u>Spokane Tribe of Indians</u> Mr. Lam Chan Mr. Bill Matt	
B-1	

What's  
New?

# Appendix C – Comments/Corrections/Suggestions

## No Significant Changes

- Re-typed and Comment Form re-crafted, but no substantial changes were made to text or format
- Use of RRT/NWAC comment page promoted

Spokane River GRP Appendix C Version 3.11

**Appendix C**

**Spokane River - Geographic Response Plan**

**Comments/Corrections/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.rtt10nwac.com/Comment> or mail comments to the following agencies:

Environmental Protection Agency Region 10  
Emergency Response Branch  
1200 Sixth Avenue  
Seattle, WA 98101

Washington State Department of Ecology  
Spill Prevention, Preparedness, and Response (GRP Lead)  
P.O. Box 47600  
Olympia, WA 98504-7600  
(360) 407-7202

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.

For field visits or the testing of GRP Strategies, please use the GRP Field Report Form to submit comments by mail. It is on the RRT10/NWAC website at <http://www.rtt10nwac.com/Files/WorkGroup/090601033205.doc>.

C-1

# Draft Updated Spokane River GRP

*Once  
Again!*

- Comments will be compiled at the end of this month
- Final Plan will hopefully be released by mid-July
- Responsiveness Summary will be provided for comments submitted but not incorporated into the final version of the plan
- The draft plan is posted on Ecology's Web Site at:  
<http://www.ecy.wa.gov/programs/spills/preparedness/GRP/Spokane.html>

# GRP Work Continues...

## Active Ecology GRP Projects and Priorities

- Lower Columbia River GRP Update
- Grays Harbor GRP Update
- Skykomish portion of WRIA 7
- Ecology's GRP Database Upgrade by ESRI



## Upcoming Ecology GRP Projects

- Middle Columbia River GRP Update
- Snohomish portion of WRIA 7
- Update of all GRP Chapters not recently updated
- Creation of Addendum to Chapter 4

## Ecology GRP Contacts...

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Sonja Larson

360/407-6682

[slar461@ecy.wa.gov](mailto:slar461@ecy.wa.gov)

Linda Pilkey-Jarvis

360/407-7447

[jpil461@ecy.wa.gov](mailto:jpil461@ecy.wa.gov)





Thank You!