# WENATCHEE

## Geographic Response Plan

## (WENA-GRP)

## CHAPTER 4

## Response Strategies and Priorities

**June 2017**

# Before you print this document

This chapter and its appendices, as well as the appendix at the end of Chapter 6, are provided in "landscape" page orientation. The detailed 2-page information sheets for response strategies, notification strategies, staging areas, and boat launch locations in appendices 4A though 4D (55-82) have been designed for duplex printing (front and back side of paper), "open to top" configuration.

## 4.1 CHAPTER INTRODUCTION

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

The GRP strategies provided in this chapter have been created to reduce spilled oil's impact on sensitive resources. They are not everything that should or could be done during a response to lessen the chance of injury to natural, cultural, and economic resources at risk from oil spills. Control and containment of an oil spill is always a higher priority than the implementation of GRP response strategies. 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, Unified Command, or the Environmental Unit.

### 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? Control and containment of the spill at or near the source are always higher priorities than the deployment of GRP response strategies, especially when concurrent response activities are not possible.
- How far downstream or out into the river environment is the spilled oil likely to travel before response personnel will be ready and able to deploy GRP response strategies?

- Are permits required? Consult the Northwest Area Contingency Plan Permit Summary Table (NWACP Section 9401) for information specific to your location and circumstance.
- Will equipment or vehicles need to be staged on or near a roadway? If so, traffic control may be required. Contact the Washington State Patrol, or local, county, municipality, or tribal police for assistance. At minimum, Washington Department of Transportation (WSDOT) guidelines for work zone traffic control should be followed when working on or near a roadway.
    - Chelan County Sheriff (509) 667-6851
    - Washington State Patrol - District 6 (509) 682-8090

### *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.
- 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. For information about non-floating oil spill response, refer to the *Non-Floating Oil Spill Response Tool* in the Northwest Area Contingency Plan (NWACP), Section 9412.

### *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.

### *Water Speed and Boom Deflection Angle*

Measure the speed that water is moving by anchoring a line with two floating markers/buoys attached that are spaced 100 feet apart. Time the movement of floating debris between the two buoys, and then use Table 4-1 to estimate the water speed based on the travel time of the debris between the two buoys. You can also measure 100 feet along a straight portion of river bank or shoreline, and time the movement of debris between those points, but this method is generally less accurate than using the buoys. The maximum boom deflection angle is also provided in the table, based on the water speed measurements.

**Table 4-1: Water Speed Drift Measurement Table**

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

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

### 4.1.2 Historical River Flow Ranges

Streamflow data from U.S. Geological Survey (USGS) was used to determine the mean monthly discharge for rivers and streams in the planning 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 local river velocities on-site, 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 for USGS gage stations in the planning area are provided below (hyperlinked column headers), and may include real-time or near real-time streamflow data. The USGS National Water System Mapper is useful for locating gage stations of interest, and is available online at http://maps.waterdata.usgs.gov/mapper/index.html.

**Table 4-2: Historical Streamflow for the Wenatchee River**

| *Monthly Average flow in Cubic Feet per Second (cfs)* | | |
|---|---|---|
| | **Wenatchee River at Peshastin** **USGS 12459000** (data from 1929 to 2016) | **Wenatchee River at Monitor** **USGS 12462500** (data from 1962 to 2016) |
| **Jan** | 1,580 | 1,870 |
| **Feb** | 1,620 | 1,990 |
| **Mar** | 1,910 | 2,410 |
| **Apr** | 3,760 | 4,020 |
| **May** | 7,820 | 7,990 |
| **Jun** | 8,460 | 8,670 |
| **Jul** | 4,320 | 4,310 |
| **Aug** | 1,430 | 1,410 |
| **Sep** | 806 | 785 |
| **Oct** | 1,140 | 1,100 |
| **Nov** | 2,010 | 2,280 |
| **Dec** | 1,810 | 2,000 |

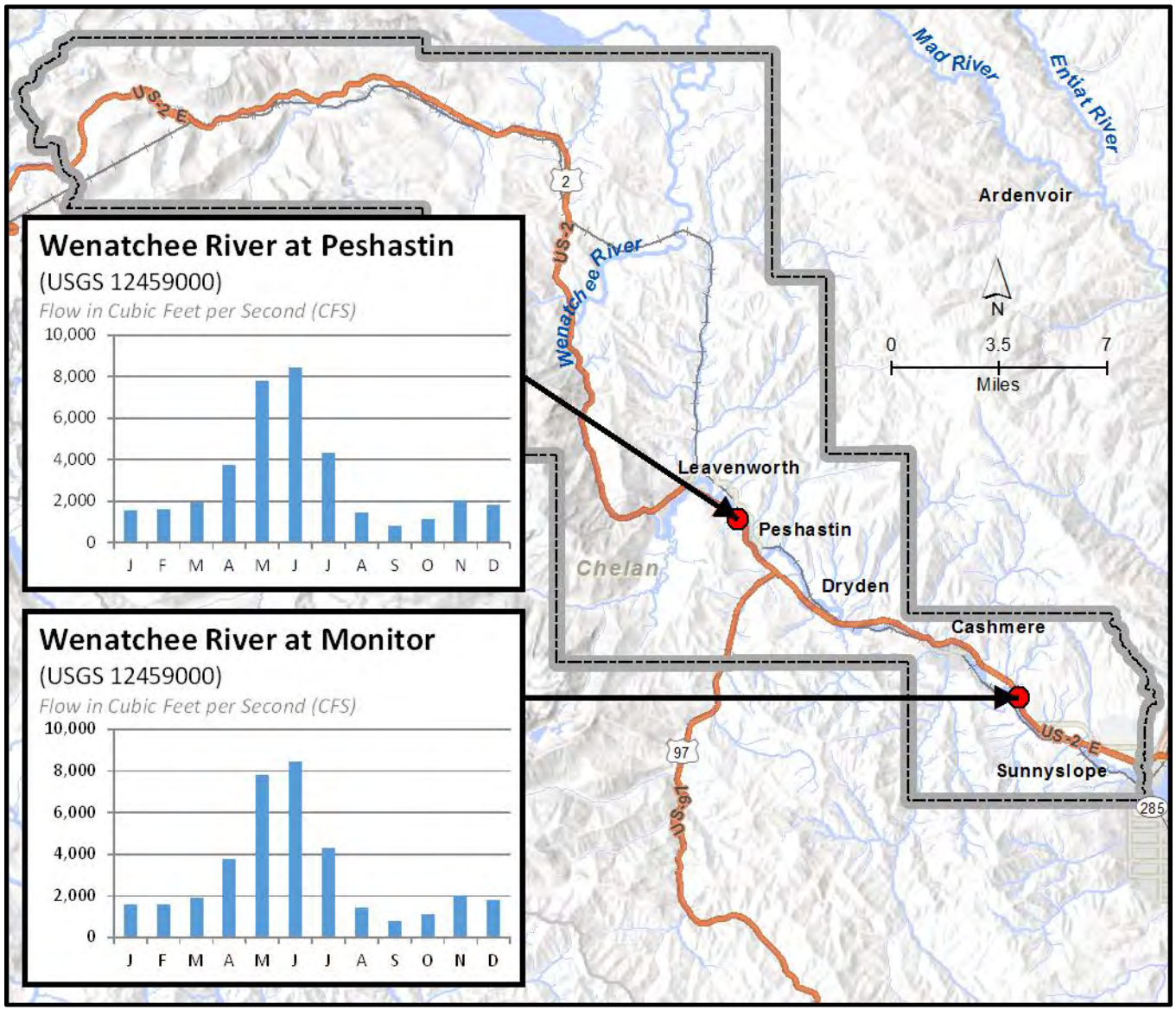



**Figure 4-1: Mean Monthly Discharge Measurements for the Wenatchee River**

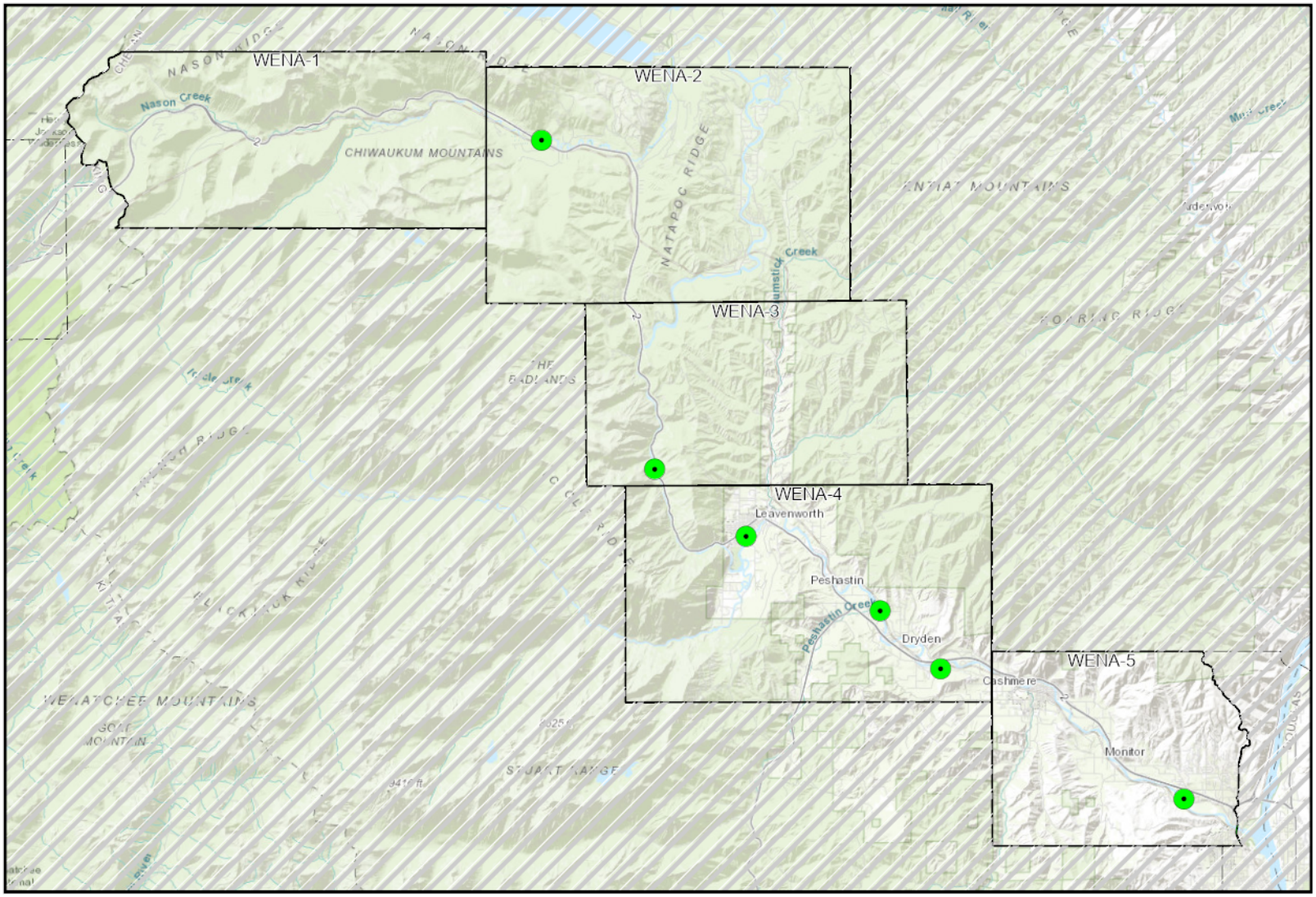
## 4.2 AREA OVERVIEW MAPS

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

The following area maps are provided for reference:

- Response Strategy Locations
- Notification Strategy Locations
- Staging Area Locations
- Boat Launch Locations
- Potential Oil Spill Origin Point Locations

<< Go Back




Response Strategy Locations

World Topographic Map: Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

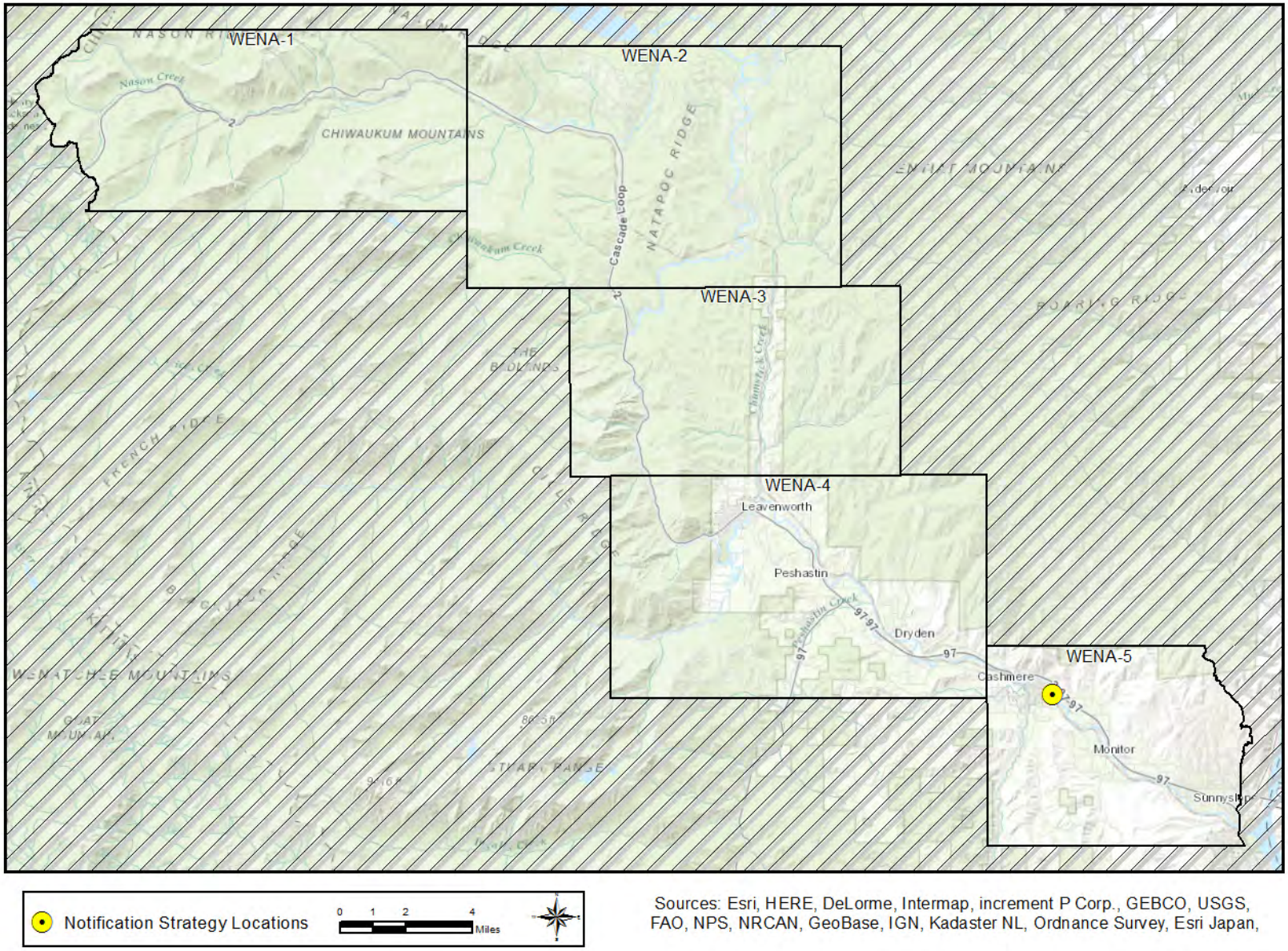



**Figure 4-3: Notification Strategy Locations**

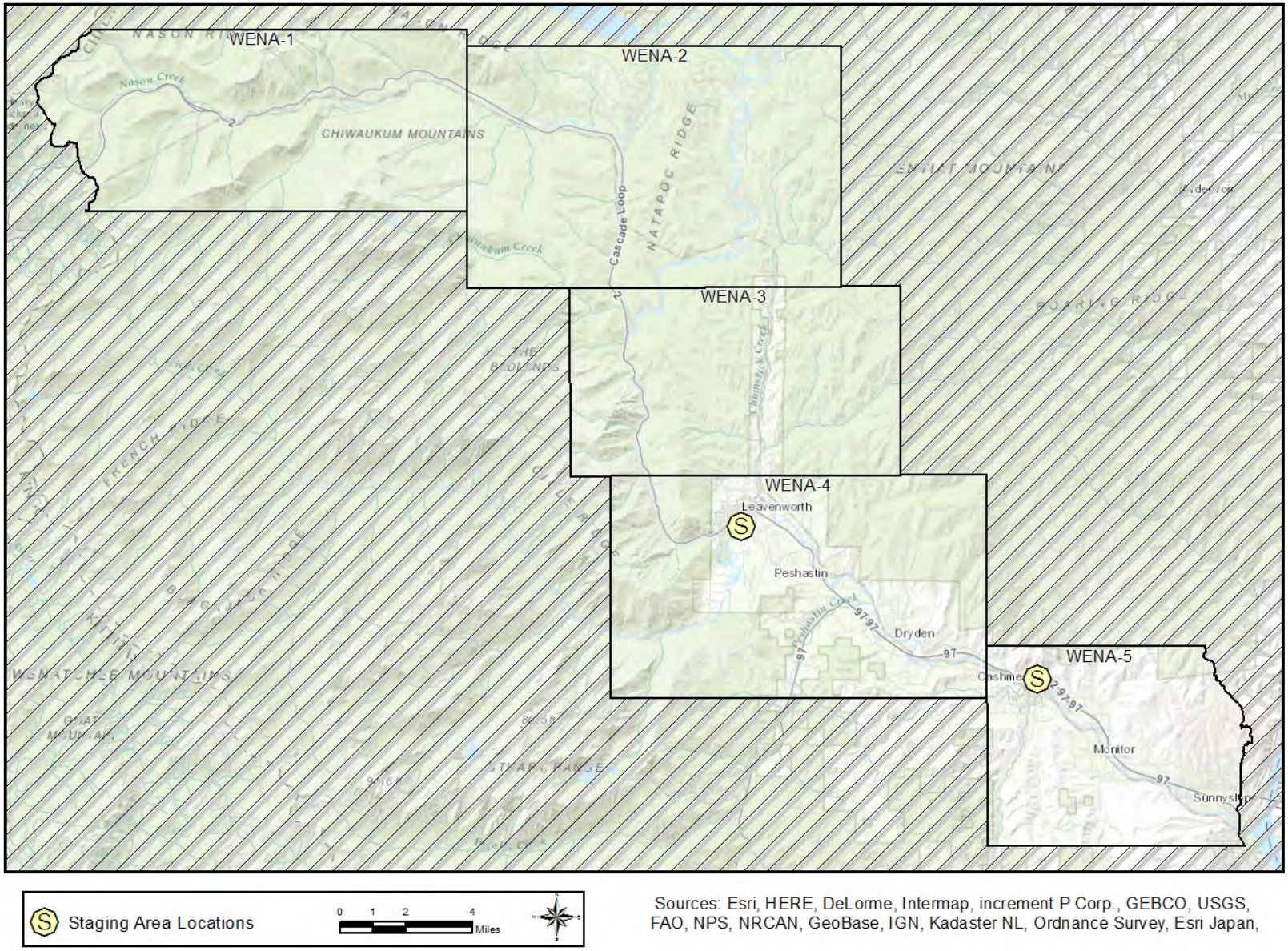



**Figure 4-4: Staging Area Locations**

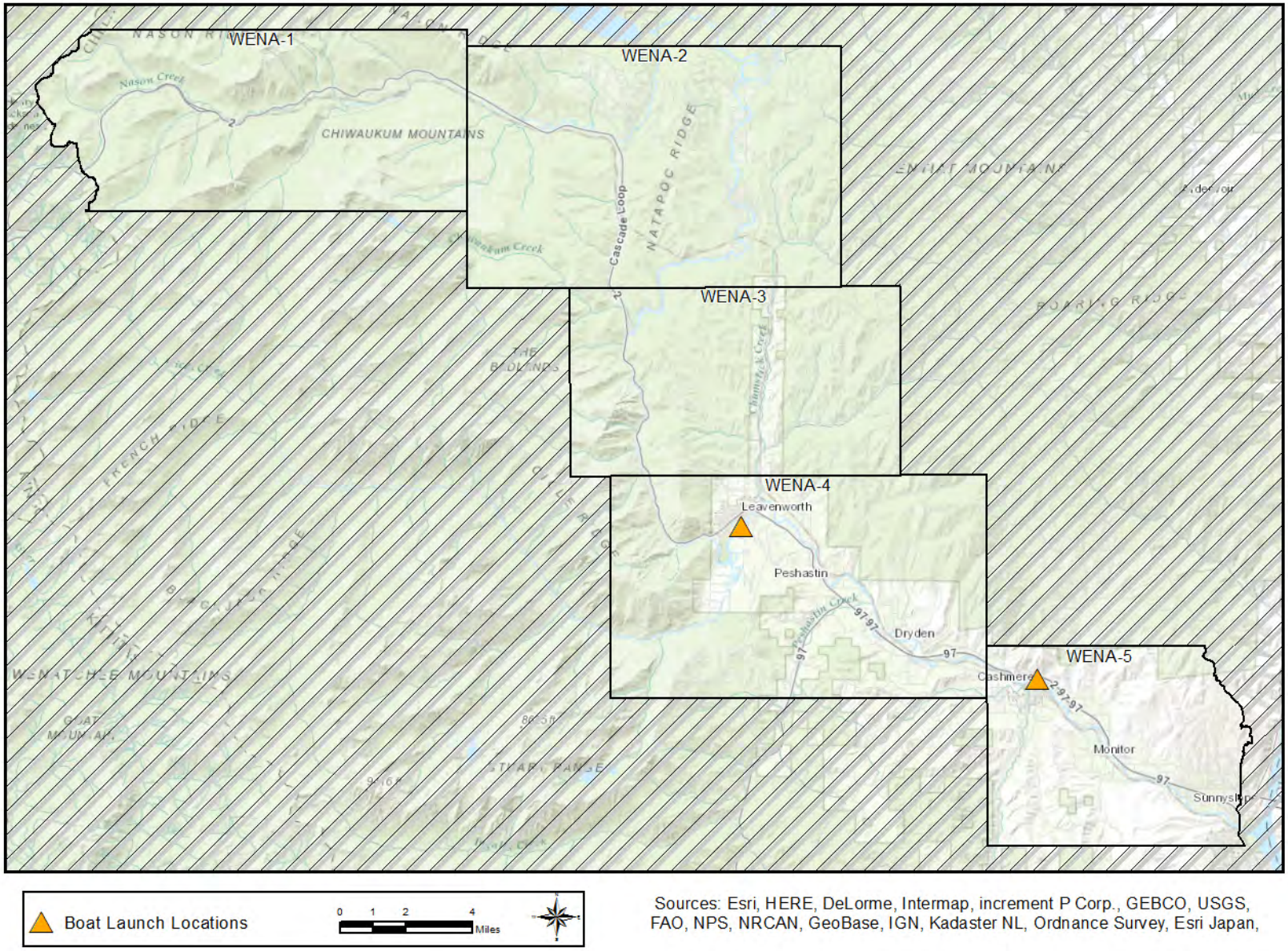



**Figure 4-5: Boat Launch Locations**

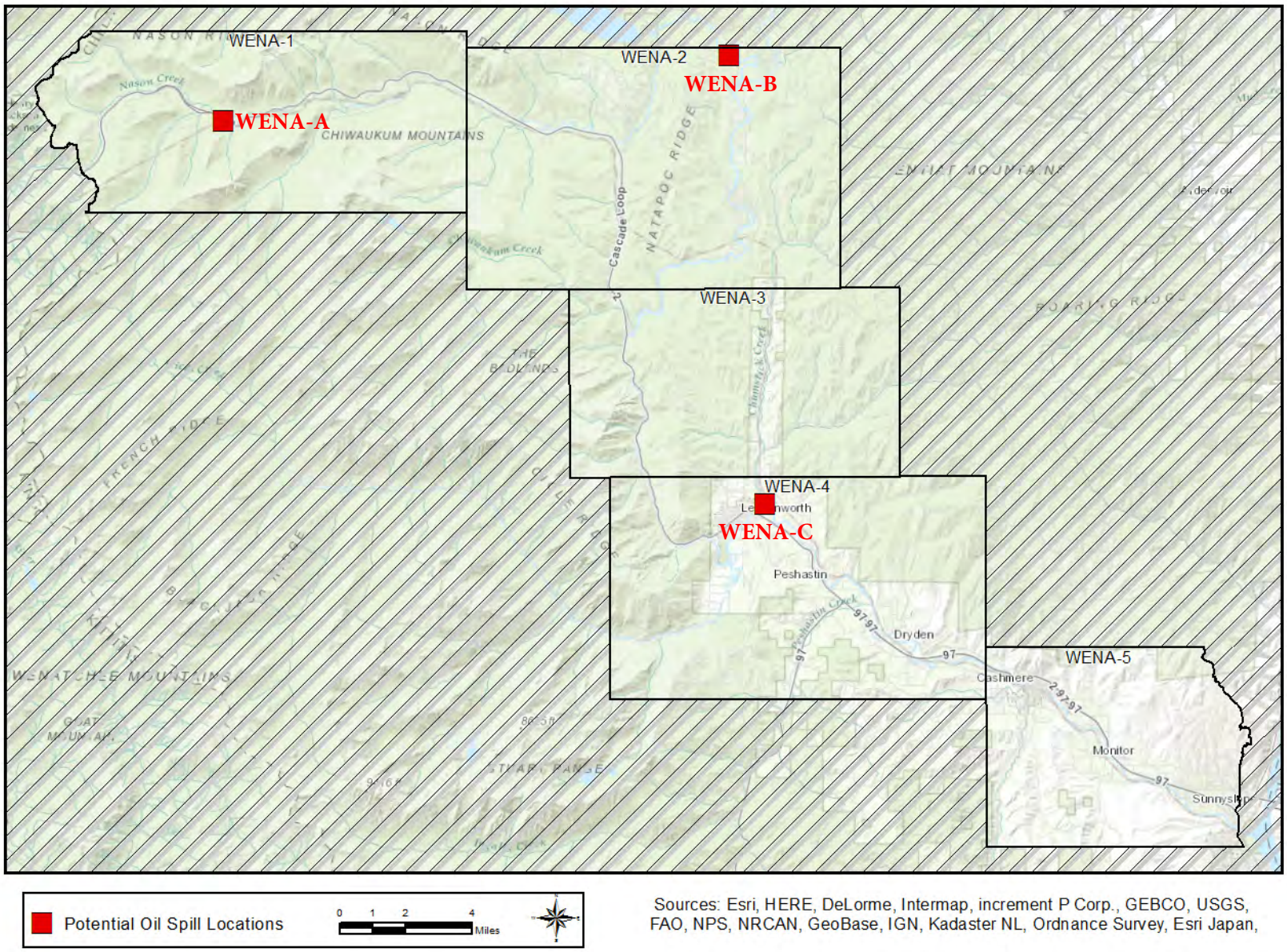



**Figure 4-6: Potential Oil Spill Origin Point Locations**

## 4.3 STRATEGY AND RESPONSE PRIORITIES

### 4.3.1 General Response Priorities

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

- Safety is always the number one priority. Do not implement GRP strategies or take actions that will unduly jeopardize public, worker, or personal safety.
- Notify local public health and safety personnel.
- Control and contain the source of the spill; mobilize resources to the spill location. Source control and containment are always a higher priority than the implementation of GRP strategies.
- Determine the priority or order GRP strategies should be implemented based on the location of the spill or affected area. Priorities based on POSOPs are included in this chapter and should be used unless the situation or circumstances dictate otherwise (see Section 4.3.2).
- As response resources become available, implement the GRP Strategies in order of priority or as necessary based on the scenario, trajectory, or conditions of the day.
- Permits may be required. Consult the Northwest Area Contingency Plan Permit Summary Table (NWACP Section 9401) for information.

### 4.3.2 Strategy Priorities based on Potential Oil Spill Origin Points

Potential Oil Spill Origin Points (POSOPs) are geographic locations that have a defined list of response strategy implementation priorities provided in a table within Section 4.3. The placement of each POSOP is often based on spill risks in the area. Occasionally POSOPs are generalized to ensure implementation priorities are developed throughout an entire planning area.

These points are displayed on area overview and sector maps as red boxes. In establishing priorities during a response, or selecting an appropriate POSOP, the downstream and/or tidal movement of spilled oil and the time it takes to mobilize and deploy response resources must be considered. Generally, on streams, creeks, and rivers, GRP strategies should first be implemented downstream, well beyond the furthest extent of the spill, with deployments continuing upstream towards the spill source and in some cases slightly beyond. POSOPs are alphabetically designated.

<< Go Back



The following tables provide the strategy implementation order for Potential Oil Spill Origin Points in the Wenatchee GRP: points WENA-A through WENA-C. The priority tables provided in this section were developed using a combination of variables, including: notification time, travel time for responders and equipment, average and seasonal flow rates, average winds, deployment time, proximity to the spill source, trustee input, the relative priority of the resources at risk, and other considerations.

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

**Table 4-3: WENA-A (Nason Creek)**

| WENA-A (Nason Creek) | | | | |
|---|---|---|---|---|
| Implementation Priority | Strategy Number | Sector Map | Strategy Matrix | Strategy Details |
| 1 | NASC-9.1 | 44 | 49 | 57 |
| 2 | WENA-31.2 | 45 | 50 | 65 |
| 3 | WENA-24.7 | 46 | 50 | 63 |
| 4 | WENA-13.9 | 46 | 49 | 61 |
| 5 | WENA-3.4 | 47 | 49 | 59 |

<< Go Back



**Table 4-4: WENA-B (Lake Wenatchee)**

| WENA-B (Lake Wenatchee) | | | | |
|---|---|---|---|---|
| **Implementation Priority** | **Strategy Number** | **Sector Map** | **Strategy Matrix** | **Strategy Details** |
| 1 | WENA-31.2 | 45 | 50 | 65 |
| 2 | WENA-24.7 | 46 | 50 | 63 |
| 3 | WENA-13.9 | 46 | 49 | 61 |
| 4 | WENA-3.4 | 47 | 49 | 59 |

<< Go Back



**Table 4-5: WENA-C (Chumstick Creek)**

| WENA-C (Chumstick Creek) | | | | |
|---|---|---|---|---|
| Implementation Priority | Strategy Number | Sector Map | Strategy Matrix | Strategy Details |
| 1 | WENA-13.9 | 46 | 49 | 61 |
| 2 | WENA-3.4 | 47 | 49 | 59 |

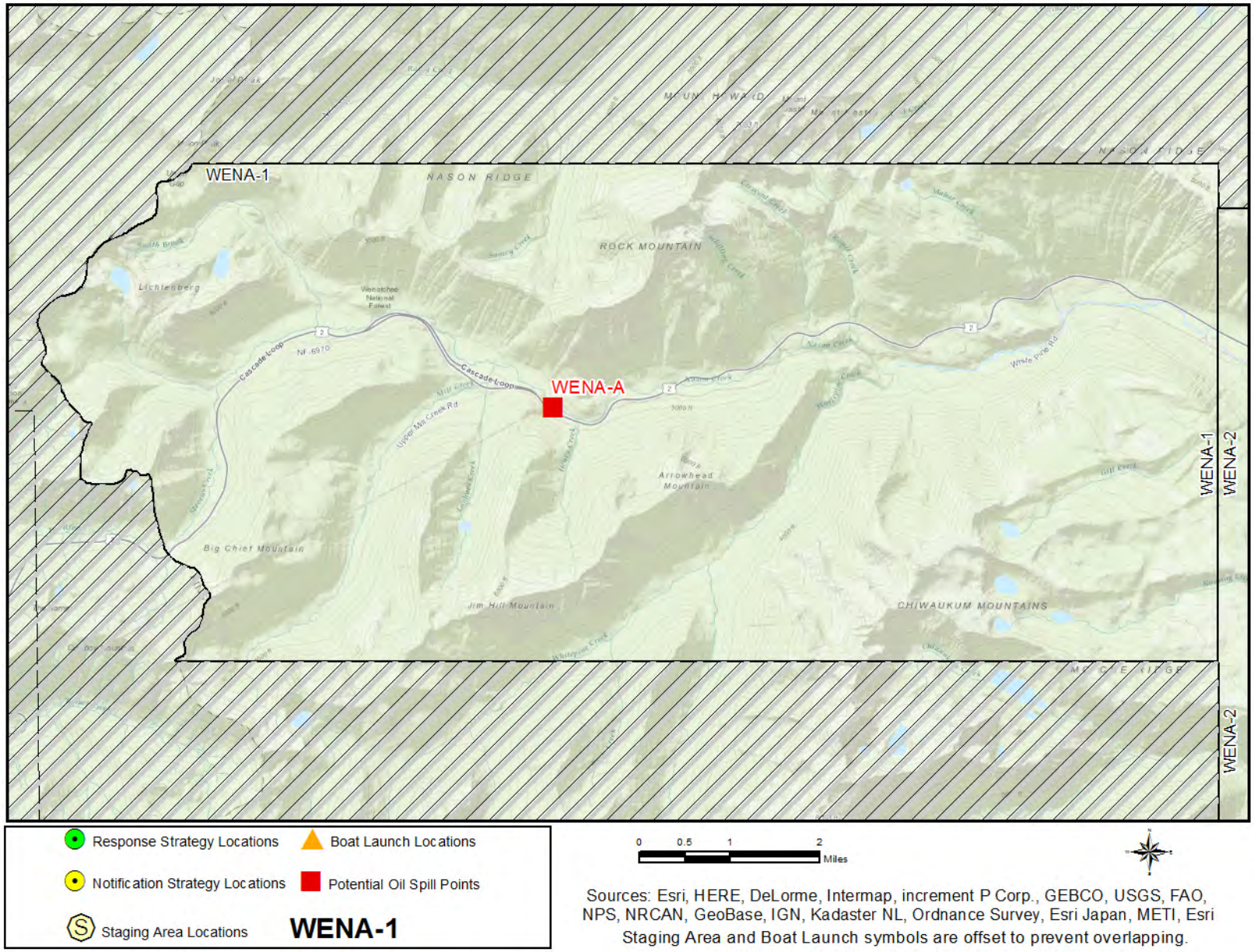



**Figure 4-7: Sector Map WENA-1**

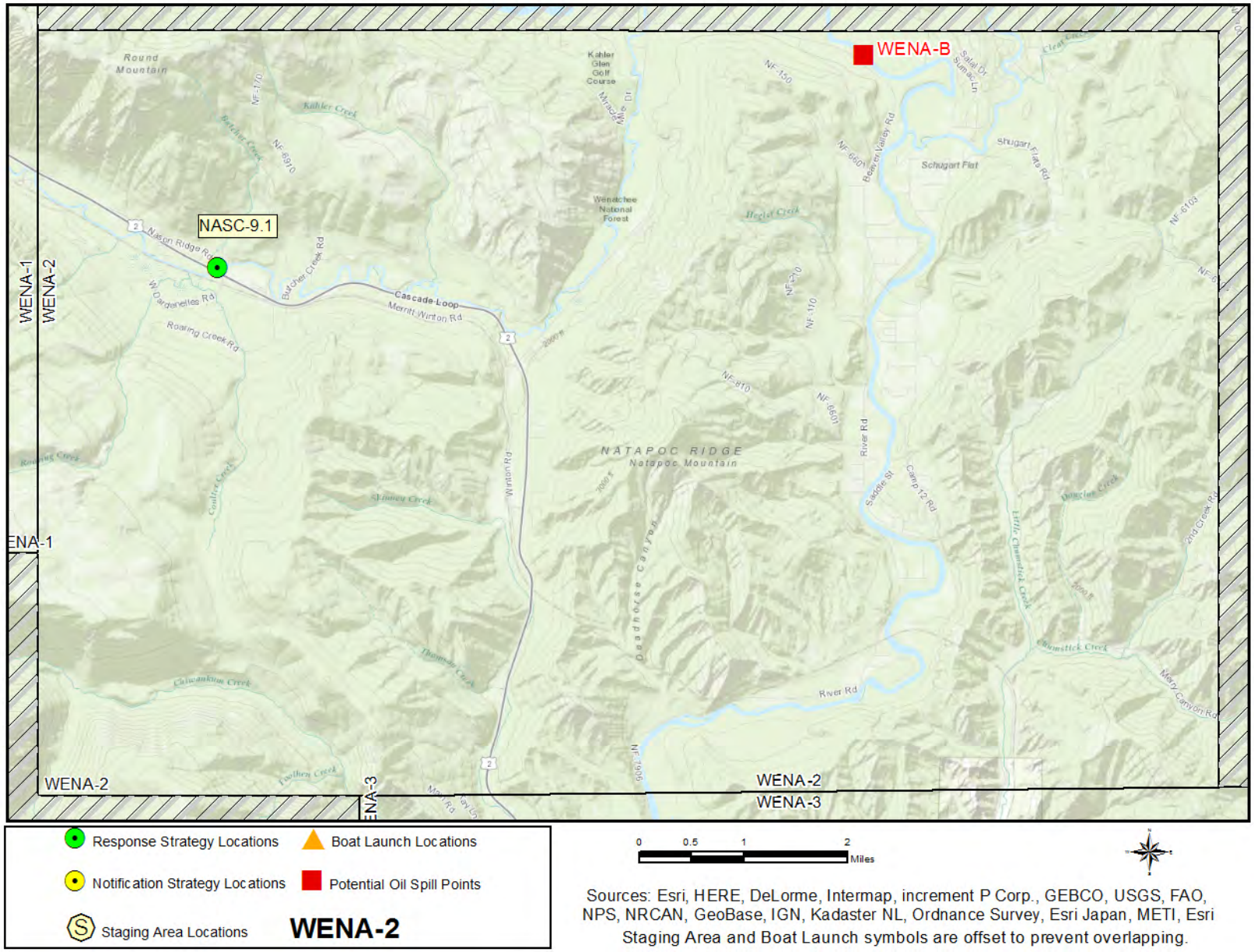



**Figure 4-8: Sector Map WENA-2**

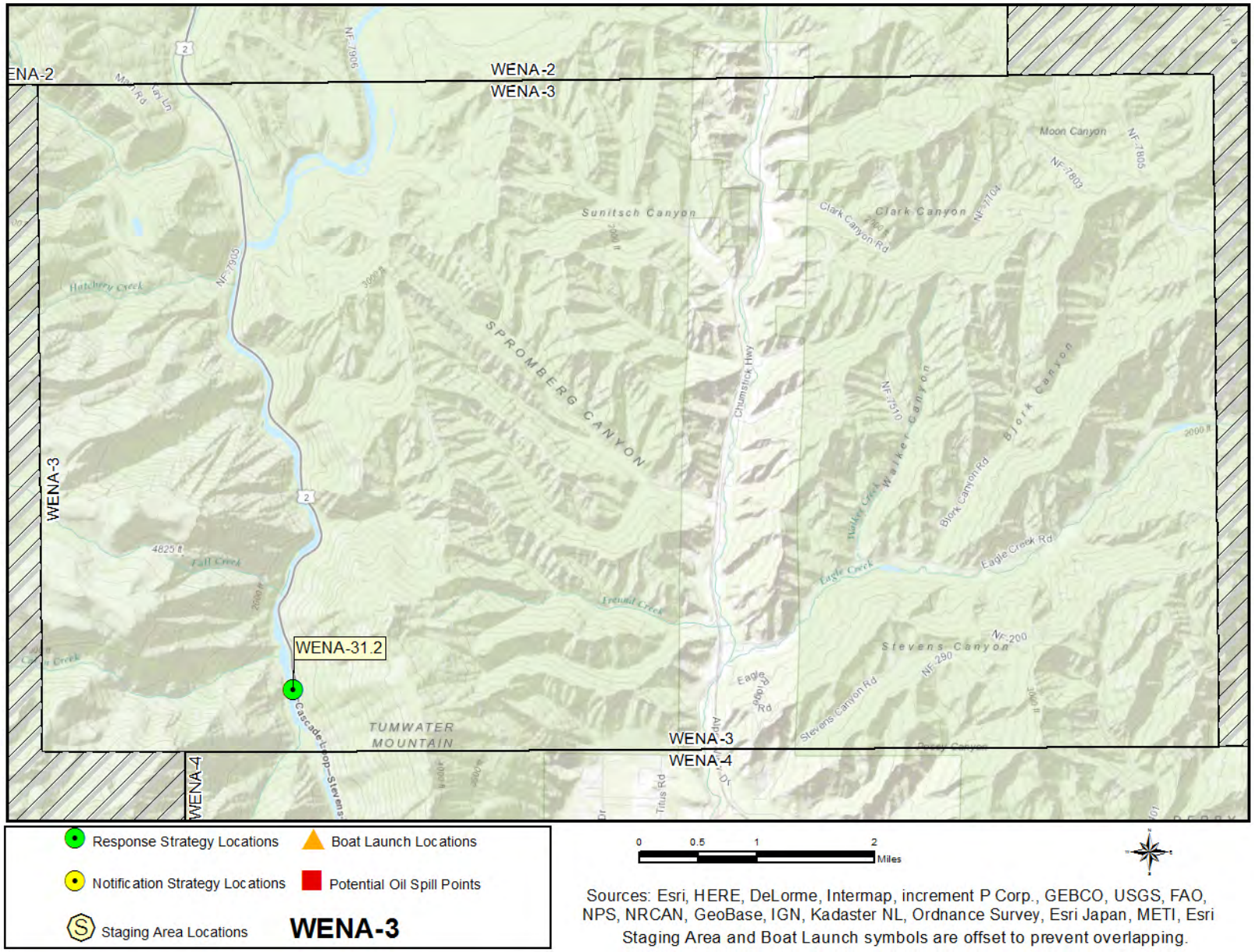
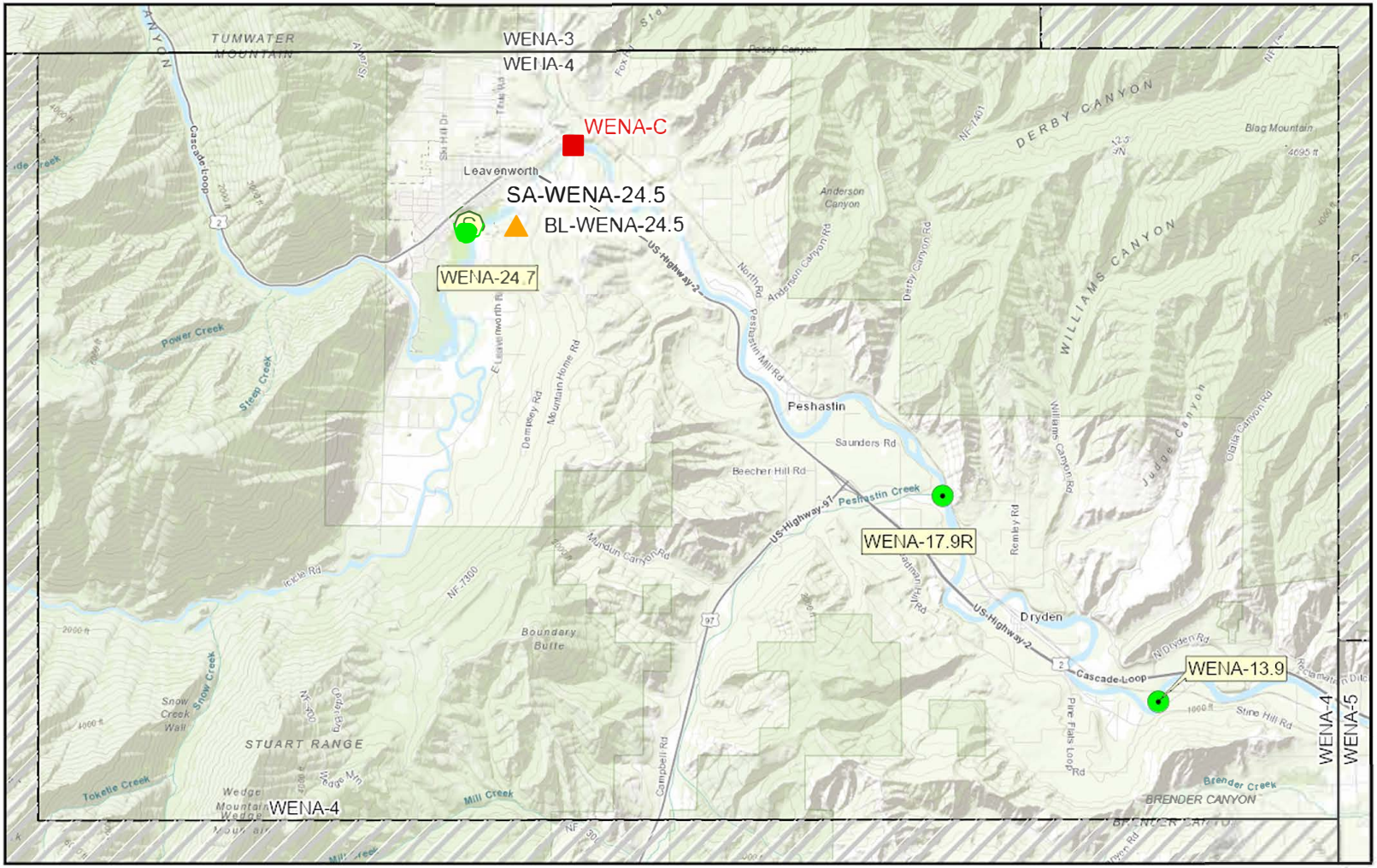



**Figure 4-9: Sector Map WENA-3**

<< Go Back




World Topographic Map: County of Kittitas, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

## WENA-4

Staging Area and Boat Launch symbols are offset to prevent overlapping.

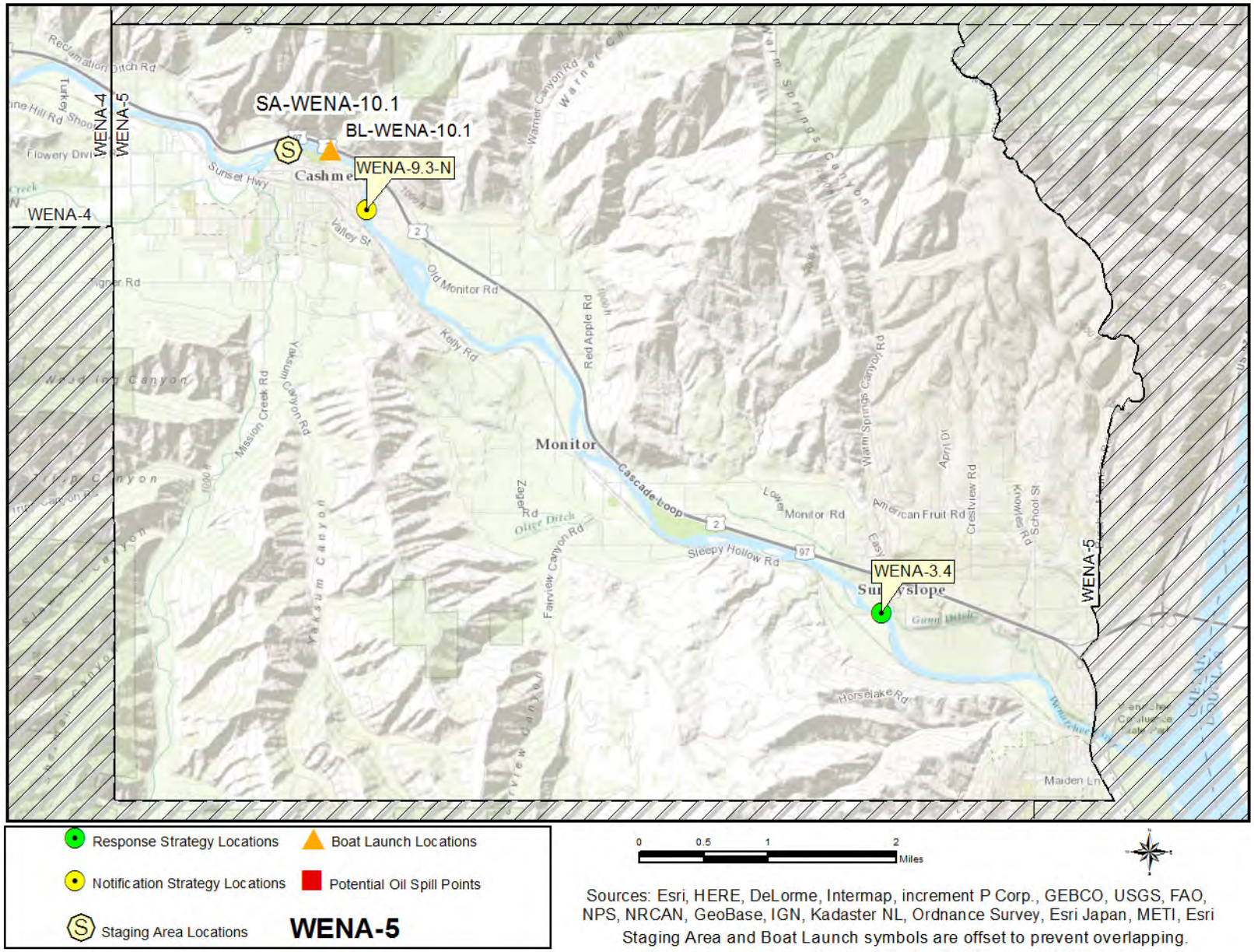
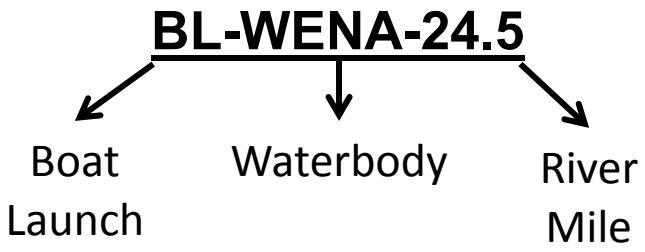



**Figure 4-11: Sector Map WENA-5**

## 4.5 MATRICES

### 4.5.1 Naming Conventions (Short Names)

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




Associated river body short name designations used within the Wenatchee include: NASC = Nason Creek.

<< Go Back



### 4.5.2 Response Strategy Matrices

| Strategy Name | Location | Strategy Type | Boom Length | Boat Req? | Staging Area | Resources At Risk | Comments | Sector Map (Page #) | Strategy Details (Page#) |
|---|---|---|---|---|---|---|---|---|---|
| NASC-9.1 | Nason Creek RM 9.1<br>47.76938<br>-120.80189 | Collection | Boom 200ft | Yes | Onsite<br>Stage equipment along Nason Ridge Rd. The Nason Creek Rest Area is 0.4 miles ESE from strategy location. | Downstream Resources, Riparian Area, Salmonids | Strategy location is ~100 yards downriver from US-2 bridge. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. | 44 | 57 |
| WENA-3.4 | Wenatchee River<br>47.47232<br>-120.37170 | Collection | Boom 500ft | Yes | Onsite<br>Stage equipment on shoulder of Sleepy Hollow Rd. | Downstream Resources, Riparian Area, Salmonids | Strategy location is north of Sleepy Hollow Road bridge. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. | 47 | 59 |
| WENA-13.9 | Miller Fox WDFW Water Access Site<br>47.53121<br>-120.53390 | Collection | Boom 600ft | Yes | Onsite<br>Stage equipment at WDFW water access site. | Downstream Resources, Riparian Area, Salmonids | Strategy location is at WDFW Water Access Site. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. | 46 | 61 |

<< Go Back



| Strategy Name | Location | Strategy Type | Boom Length | Boat Req? | Staging Area | Resources At Risk | Comments | Sector Map (Page #) | Strategy Details (Page#) |
|---|---|---|---|---|---|---|---|---|---|
| WENA-24.7 | Blackbird Island 47.59085 -120.66411 | Exclusion | Boom 400ft | Yes | Remote Stage equipment at SA-WENA-24.5 City of Leavenworth Boat Launch (9556 E Leavenworth Rd, Leavenworth, WA 98826). | Backwater Area, Riparian Area, Salmonids | Strategy location is within Waterfront Park in Leavenworth. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. | 46 | 63 |
| WENA-31.2 | Tumwater Diversion Dam 47.62115 -120.72517 | Deflection | Boom 500ft | Yes | Onsite Stage equipment at The Alps store (13905 U.S. 2, Leavenworth, WA, 98826) 250 yards north of strategy location. | Downstream Resources, Fish Ladder(s), Riparian Area, Salmonids | Strategy location is above Tumwater Diversion Dam. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. Tumwater Canyon Dam is managed by Chelan County P.U.D. | 45 | 65 |

<< Go Back



### 4.5.3 Notification Strategy Matrices

| Strategy Name | Location | Strategy Type | Resources at Risk | Implementation | Comments | Sector Map (Page #) | Strategy Details (Page#) |
|---|---|---|---|---|---|---|---|
| WENA-9.3-N | City of Cashmere Water Intake 47.51803 -120.45754 | Notification | Water Intakes | Contact Woodard Curran, contractor who operates and controls intake structure on the Wenatchee River at 714-916-3873. Inform them of any significant oil spill or potential spill that impacts or threatens the Wenatchee River. | Notify City of Cashmere Wastewater Treatment Plant so that staff can protect the resources under their control. | 47 | 69 |

<< Go Back



### 4.5.4 Staging Area Matrices

| Strategy Name | Location | Position | Nearest Address | Contact | Strategies Served | Comments | Sector Map (Page #) | Strategy Details (Page#) |
|---|---|---|---|---|---|---|---|---|
| SA-WENA-10.1 | Riverside Park | 47.52476 -120.46695 | 201 Riverside Dr Cashmere, WA 98815 | City of Cashmere City Hall 509-782-3513<br>Chelan County Department of Emergency Management Assistant Director 5096676864 | N/A | Riverside Park is managed by the City of Cashmere. Coordinate staging with the City; call 509-782-3513. | 47 | 73 |
| SA-WENA-24.5 | City of Leavenworth Boat Launch | 47.59181 -120.65935 | 9556 E Leavenworth Rd Leavenworth, WA 98826 | City of Leavenworth City Hall Leavenworth, WA 98826 509-548-5275 | WENA-24.7 | City of Leavenworth Boat Launch is managed by the City of Leavenworth. Coordinate staging with the City; call 509-548-5275. | 46 | 75 |

### 4.5.5 Boat Launch Matrices

| Strategy Name | Location | Position | Nearest Address | Contact | Strategies Served | Comments | Sector Map (Page #) | Strategy Details (Page#) |
|---|---|---|---|---|---|---|---|---|
| BL-WENA-10.1 | Riverside Park | 47.52476 -120.46695 | 201 Riverside Dr Cashmere, WA 98815 | City of Cashmere City Hall 509-782-3513<br>Chelan County Department of Emergency Management Assistant Director 5096676864 | N/A | Riverside Park is managed by the City of Cashmere. Coordinate staging with the City; call 509-782-3513. | 47 | 79 |
| BL-WENA-24.5 | City of Leavenworth Boat Launch | 47.59181 -120.65935 | 9556 E Leavenworth Rd Leavenworth, WA 98826 | City of Leavenworth City Hall Leavenworth, WA 98826 509-548-5275 | WENA-24.7 | City of Leavenworth Boat Launch is managed by the City of Leavenworth. Coordinate staging with the City; call 509-548-5275. | 46 | 81 |

**This page was intentionally left blank.**

# APPENDIX 4A

## Response Strategy 2-Pagers

<< Go Back



# RESPONSE STRATEGIES - LIST

<< Go Back



# Nason Creek RM 9.1 NASC-9.1

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 46.163', -120° 48.113' | 47° 46' 9.8", -120° 48' 6.8" | 47.76938, -120.80189 | Leavenworth |

| | |
|---|---|
| ***Strategy Objective:*** | Collection : Collect oil moving downstream on Nason Creek. |
| ***Implementation:*** | Transport 200ft boom to site using vehicle. Secure one end to left bank at/near Point A (47.76937, -120.80222). Then extend 100ft boom east and anchor at/near Point B (47.76937, -120.80186). Finally extend remaining boom ENE and anchor at/near Point C (47.76942, -120.80142). Use shoreside anchoring posts or trees to secure boom to shore. Do not anchor to bridge. Use additional anchoring systems (as needed) to keep boom secure in water. |
| ***Staging Area:*** | Onsite : Stage equipment along Nason Ridge Rd. The Nason Creek Rest Area is 0.4 miles ESE from strategy location. |
| ***Site Safety:*** | Slips, Trips, Falls; Water Hazard; Steep Banks; Unstable Bridge |
| ***Field Notes:*** | Strategy location is ~100 yards downriver from US-2 bridge. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. |
| ***Watercourse:*** | Creek - Nason Creek |
| ***Resources at Risk:*** | Downstream Resources, Riparian Area, Salmonids |


***Recommended Equipment***

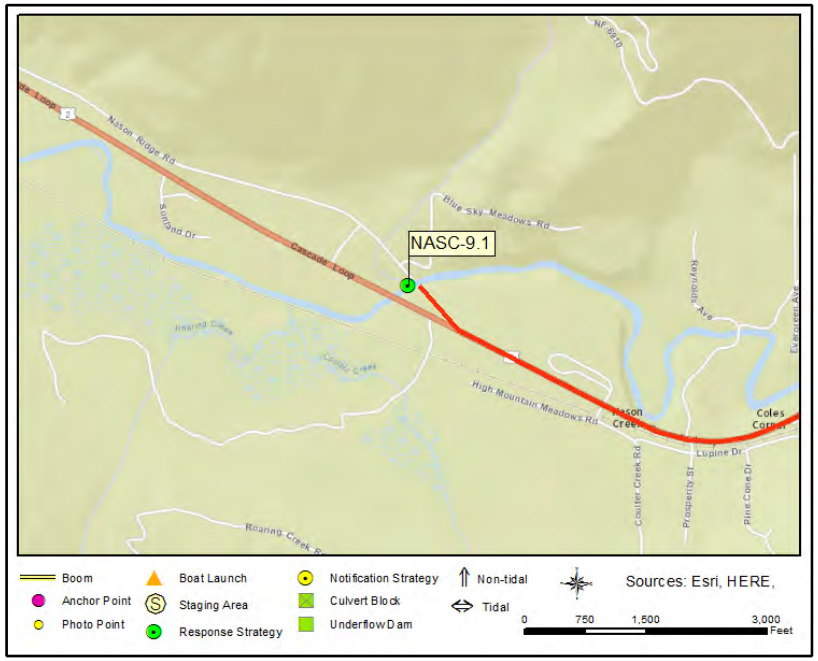
| | | |
|---|---|---|
| 2 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 2 | Each | Anchoring System(s)- Shoreside |
| 200 | Feet | Boom - B3 (River Boom) or equivalent |
| 1 | Each | Bridle(s) - Towing (appropriately sized for boom) |
| 1 | Each | Vac Truck or Skimmer and Storage |
| 1 | Each | Workboat(s) - of adequate size for type and amount of boom |

***Recommended Personnel***

| | |
|---|---|
| 1 | Boat Operator |
| 2 | Laborer |
| 1 | Supervisor |

# Nason Creek RM 9.1 NASC-9.1

NASC-9.1 Photo: Looking NW across Nason Creek. Water flows from left to right.




## Site Contact

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director

Wenatchee, WA 98801
5096676864

## Nearest Address

17700 U.S. 2
Leavenworth, WA 98826

## Driving Directions

1. Start at Cashmere, WA
2. Go west on Cottage Ave toward Aplets Way (0.01 miles)
3. Turn right on Aplets Way (0.28 miles)
4. Turn left on US-2 W (US-97 S) (29.84 miles)
5. Turn right on Nason Ridge Rd and finish at end of road along Nason Creek

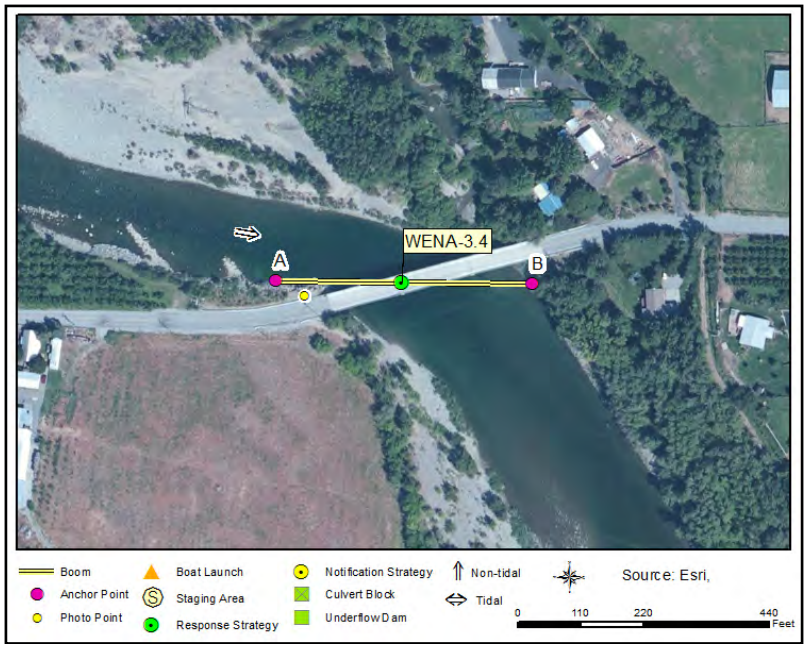
<< Go Back



# Wenatchee River WENA-3.4

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 28.339', -120° 22.302' | 47° 28' 20.4", -120° 22' 18.1" | 47.47232, -120.37170 | Wenatchee |

| | |
|---|---|
| ***Strategy Objective:*** | Collection : Collect oil moving downstream on Wenatchee River. |
| ***Implementation:*** | Transport 500ft boom to site using vehicle. Secure one end to right bank at/near Point A (47.47232, -120.37265). Extend remaining boom ESE under bridge and anchor at/near Point B (47.47227, -120.37073). Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water. |
| ***Staging Area:*** | Onsite : Stage equipment on shoulder of Sleepy Hollow Rd. |
| ***Site Safety:*** | Slips, Trips, Falls; Water Hazard; Roadway Hazard |
| ***Field Notes:*** | Strategy location is next to Sleepy Hollow Road bridge. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. Follow WSDOT guidelines for work zone traffic control. Oil collection point is on private property. |
| ***Watercourse:*** | River - Below a Dam - Wenatchee River |
| ***Resources at Risk:*** | Downstream Resources, Riparian Area, Salmonids |




***Recommended Equipment***

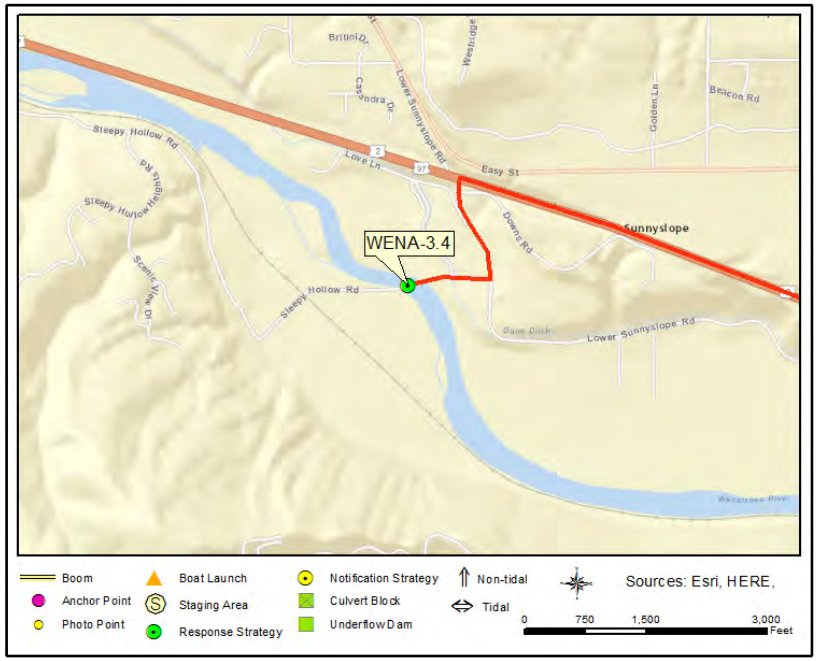
| | | |
|---|---|---|
| 6 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 2 | Each | Anchoring System(s)- Shoreside |
| 500 | Feet | Boom - B3 (River Boom) or equivalent |
| 1 | Each | Bridle(s) - Towing (appropriately sized for boom) |
| 1 | Each | Vac Truck or Skimmer and Storage |
| 1 | Each | Workboat(s) - of adequate size for type and amount of boom |

***Recommended Personnel***

| | |
|---|---|
| 1 | Boat Operator |
| 3 | Laborer |
| 1 | Supervisor |

# Wenatchee River WENA-3.4

WENA-3.4 Photo: Looking WNW toward anchor point A. Photo is oriented upriver.




## Site Contact

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director

Wenatchee, WA 98801
5096676864

## Nearest Address

1427 Sleepy Hollow Rd
Wenatchee, WA 98801

## Driving Directions

1. Start on WA-285 N (S Mission St)
2. Turn right at N Miller St to stay on WA-285 N (N Miller St) (2.09 miles)
3. Continue on US-2 E (1.65 miles)
4. Turn left on Lower Sunnyslope Rd (0.26 miles)
5. Turn right on Sleepy Hollow Rd (0.13 miles)
6. Finish at 1427 Sleepy Hollow Rd, 98801, on the left

<< Go Back



# Miller Fox WDFW Water Access Site WENA-13.9

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 31.873', -120° 32.034' | 47° 31' 52.4", -120° 32' 2.0" | 47.53121, -120.53390 | Cashmere |

| | |
|---|---|
| ***Strategy Objective:*** | Collection : Collect oil moving downstream on Wenatchee River. |
| ***Implementation:*** | Transport 600ft boom to site using vehicle. Secure one end to left bank at/near Point A (47.53061, -120.53461). Then extend 400ft boom NNE and anchor at/near Point B (47.53126, -120.53384). Finally extend remaining boom NE and acnhor at/near Point C (47.53150, -120.53319). Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water. |
| ***Staging Area:*** | Onsite : Stage equipment at WDFW water access site. |
| ***Site Safety:*** | Slips, Trips, Falls; Water Hazard |
| ***Field Notes:*** | Strategy location is at WDFW Water Access Site. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. |
| ***Watercourse:*** | River - Wenatchee River |
| ***Resources at Risk:*** | Downstream Resources, Riparian Area, Salmonids |


***Recommended Equipment***

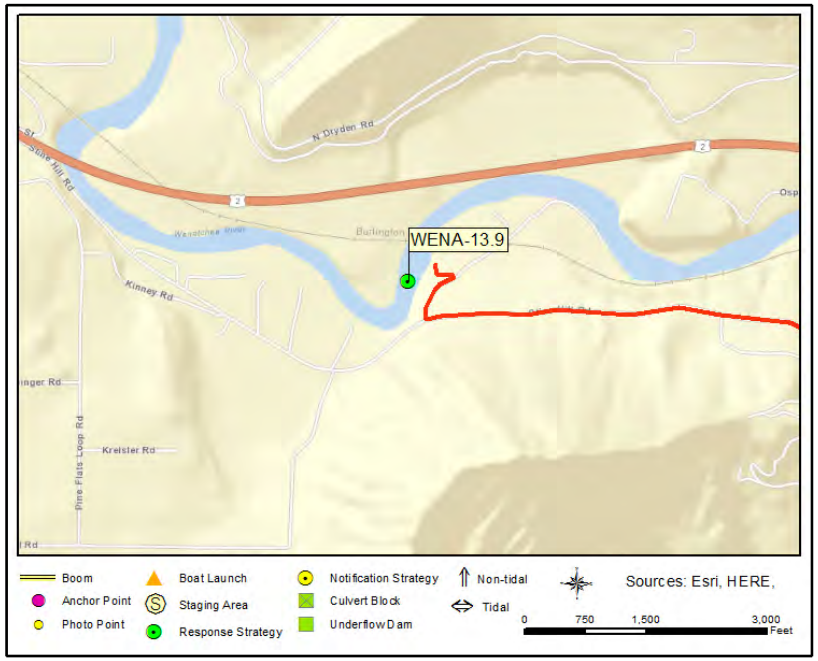
| | | |
|---|---|---|
| 8 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 2 | Each | Anchoring System(s)- Shoreside |
| 600 | Feet | Boom - B3 (River Boom) or equivalent |
| 1 | Each | Bridle(s) - Towing (appropriately sized for boom) |
| 1 | Each | Vac Truck or Skimmer and Storage |
| 1 | Each | Workboat(s) - of adequate size for type and amount of boom |

***Recommended Personnel***

| | |
|---|---|
| 1 | Boat Operator |
| 3 | Laborer |
| 1 | Supervisor |

# Miller Fox WDFW Water Access Site WENA-13.9

WENA-13.9 Photo: Looking SW across Wenatchee River. Water flows from left to right.




## Site Contact

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director
5096676864

**Washington Department of Fish & Wildlife**
Land/Property Contact : Region 2
509-754-4624

## Nearest Address

7466 Stine Hill Rd
Cashmere, WA 98815

## Driving Directions

1. Go on US-2 W (US-97 S) toward Easy St
2. Turn left on Goodwin Rd (0.12 miles)
3. Turn right to stay on Goodwin Rd (0.18 miles)
4. Make sharp right on Ruby St (0.05 miles)
5. Turn left on Larson St (0.06 miles)
6. Turn right on Hughes St (0.04 miles)
7. Turn left (0.06 miles)
8. Turn right on Sunset Hwy (0.28 miles)
9. Continue on Stine Hill Rd (0.04 miles)
10. At fork keep right on Stine Hill Rd (1.73 miles)
11. Finish at 7466 Stine Hill Rd, 98815, on the right

# Peshastin Creek — WENA-17.9R

| | | | | |
|---|---|---|---|---|
| **Position - Location:** | 47° 33.443', -120° 34.468' | 47° 33' 26.6", -120° 34' 28.1" | 47.55738, -120.57446 | Peshastin |

**Strategy Objective:** Exclusion : Keep oil out of creek.

**Implementation:** Using workboat, deploy 300ft boom on riverbank (north/upriver of confluence). Then extend boom south/downriver along the riverbank. Use anchoring systems as needed to keep boom secure. Adjust boom angle and anchor points as needed for conditions. Use anchor posts, existing structures, and trees to secure boom.

**Staging Area:** Onsite: Stage equipment onsite.

**Site Safety:** Slips, Trips, Falls; Uneven Surfaces; Water Hazard

**Field Notes:** A major habitat restoration project was completed at this location in 2025. Notify WDFW before deployment. Also, Dryden Dam (operated by Chelan PUD) is just downriver.

**Watercourse:** River - Below a Dam - Peshastin Creek & Wenatchee River

**Resources at Risk:** Habitat Restoration Site, Resident Fish, Salmonids


**Recommended Equipment**

| | | |
|---|---|---|
| 2 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 2 | Each | Anchoring System(s)- Shoreside |
| 300 | Feet | Boom - B2 (18" to 42") |
| 1 | Each | Workboat(s) - (hand-launch) |

**Recommended Personnel**

| | |
|---|---|
| 1 | Boat Operator |
| 2 | Laborer |
| 1 | Supervisor |

# Peshastin Creek WENA-17.9R

WENA-17.9R Photo: From the riverbank, looking north/upriver across creek mouth. High water conditions (April).


## Site Contact

**Washington Dept. of Fish and Wildlife**
Land/Property Contact : Region 2
509-754-4624

**Chelan County Public Utilities District**
Municipality (County/City) : Main Office
509-663-8121

## Nearest Address

Otis Rd
Peshastin, WA 98847

## Driving Directions

[<< Go Back]



# Blackbird Island WENA-24.7

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 35.451', -120° 39.847' | 47° 35' 27.1", -120° 39' 50.8" | 47.59085, -120.66411 | Leavenworth |

***Strategy Objective:*** Exclusion : Keep oil out of Wenatchee River backwater area.

***Implementation:*** Transport 400ft boom to site using workboat. Secure one end to right bank at/near Point A (47.59041, -120.66428). Extend remaining boom NNE and anchor at/near Point B (47.59131, -120.66391). Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water.

***Staging Area:*** Remote : Stage equipment at SA-WENA-24.5 City of Leavenworth Boat Launch (9556 E Leavenworth Rd, Leavenworth, WA 98826).

***Site Safety:*** Slips, Trips, Falls; Water Hazard; In-water or Underwater Pilings.

***Field Notes:*** Strategy location is within Waterfront Park in Leavenworth. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864.

***Watercourse:*** River - Wenatchee River

***Resources at Risk:*** Backwater Area, Riparian Area, Salmonids


***Recommended Equipment***

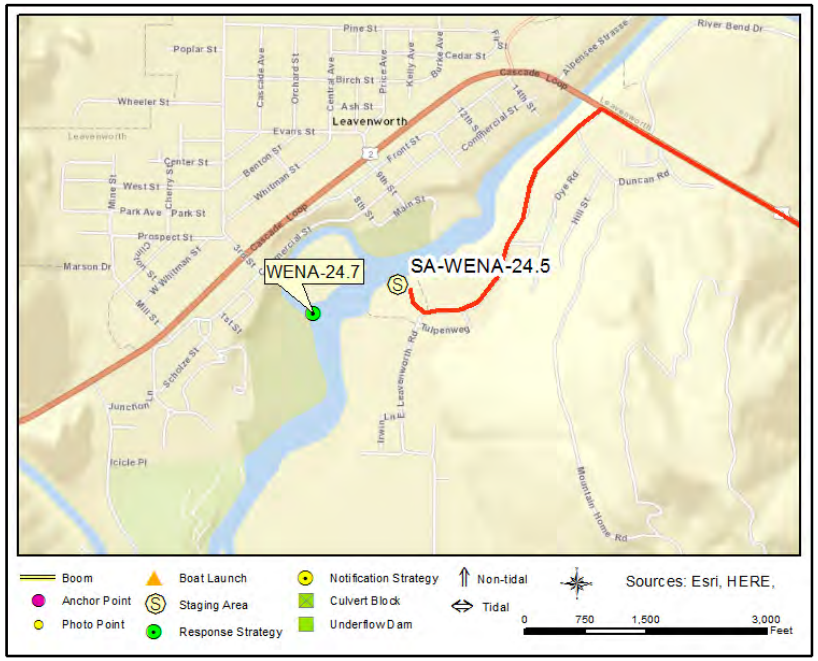
| | | |
|---|---|---|
| 5 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 2 | Each | Anchoring System(s)- Shoreside |
| 400 | Feet | Boom - B3 (River Boom) or equivalent |
| 1 | Each | Bridle(s) - Towing (appropriately sized for boom) |
| 1 | Each | Workboat(s) - of adequate size for type and amount of boom |

***Recommended Personnel***

| | |
|---|---|
| 1 | Boat Operator |
| 2 | Laborer |
| 1 | Supervisor |

# Blackbird Island WENA-24.7

WENA-24.7 Photo: Looking south toward anchor point A. Photo is oriented upriver.




## Site Contact

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director
5096676864

**City of Leavenworth**
Land/Property Contact : City Hall
509-548-5275

## Nearest Address

9556 E Leavenworth Rd
Leavenworth, WA 98826

## Driving Directions

TO STAGING AREA/BOAT LAUNCH at City of Leavenworth Boat Launch (SA-WENA-24.5 & BL-WENA-24.5):
1. Start at Cashmere, WA
2. Go west on Cottage Ave toward Aplets Way (0.01 miles)
3. Turn right on Aplets Way (0.28 miles)
4. Turn left on US-2 W (US-97 S) (10.55 miles)
5. Turn left on E Leavenworth Rd (0.69 miles)
6. Finish at 9556 E Leavenworth Rd, 98826, on the right

<< Go Back



# Tumwater Diversion Dam WENA-31.2

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 37.269', -120° 43.510' | 47° 37' 16.1", -120° 43' 30.6" | 47.62115, -120.72517 | Leavenworth |

| | |
|---|---|
| ***Strategy Objective:*** | Deflection : Keep oil away from Tumwater Diversion Dam fish ladder on left bank. |
| ***Implementation:*** | Transport 500ft boom to site using workboat. Secure one end to left bank at/near Point A (47.62153, -120.72462). Then extend 300ft boom SW and anchor at/near Point B (47.62107, -120.72527). Finally extend remaining boom SSW and anchor at/near Point C (47.62039, -120.72547). Use shoreside anchoring posts, trees, or existing structures to secure boom to shore. Use additional anchoring systems (as needed) to keep boom secure in water. |
| ***Staging Area:*** | Onsite : Stage equipment at The Alps store (13905 U.S. 2, Leavenworth, WA, 98826) 250 yards north of strategy location. |
| ***Site Safety:*** | Slips, Trips, Falls; Water Hazard; Roadway Hazard |
| ***Field Notes:*** | Strategy location is above Tumwater Diversion Dam. Notify Chelan County Department of Emergency Management prior to deployment; call 509-667-6864. Tumwater Canyon Dam is managed by Chelan County P.U.D. |
| ***Watercourse:*** | River - Wenatchee River |
| ***Resources at Risk:*** | Downstream Resources, Fish Ladder(s), Riparian Area, Salmonids |


***Recommended Equipment***

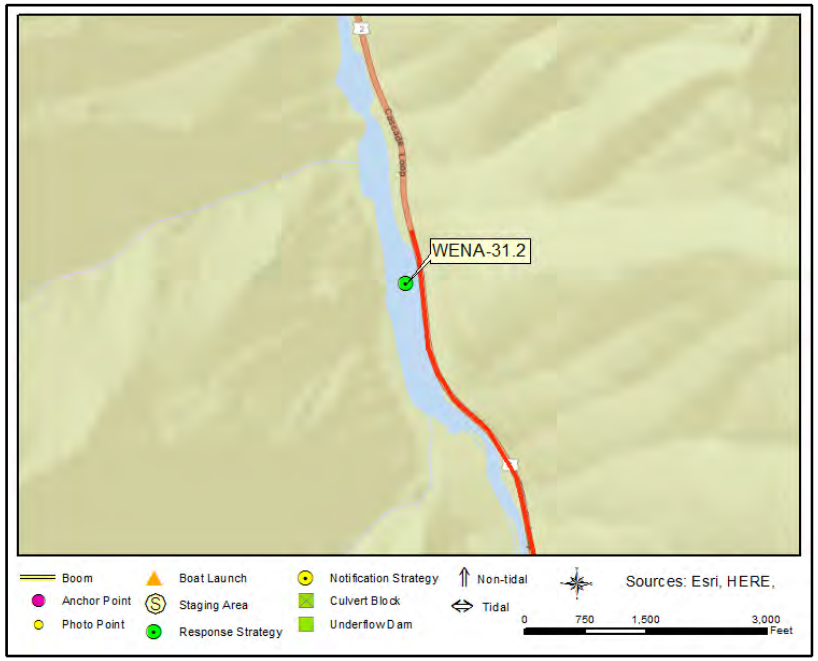
| | | |
|---|---|---|
| 6 | Each | Anchoring System(s) - (anchor, lines, floats) |
| 1 | Each | Anchoring System(s)- Shoreside |
| 500 | Feet | Boom - B3 (River Boom) or equivalent |
| 1 | Each | Bridle(s) - Towing (appropriately sized for boom) |
| 1 | Each | Workboat(s) - of adequate size for type and amount of boom |

***Recommended Personnel***

| | |
|---|---|
| 1 | Boat Operator |
| 3 | Laborer |
| 1 | Supervisor |

# Tumwater Diversion Dam WENA-31.2

WENA-31.2 Photo: Looking south toward response strategy. Photo is oriented downriver.




## Site Contact

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director
5096676864

**Chelan County Public Utilities District**
Land/Property Contact : Main Office
509-663-8121

## Nearest Address

13905 U.S. 2
Leavenworth, WA 98826

## Driving Directions

1. Start at Cashmere, WA
2. Go west on Cottage Ave toward Aplets Way (0.01 miles)
3. Turn right on Aplets Way (0.28 miles)
4. Turn left on US-2 W (US-97 S) (15.5 miles)
5. Finish at 13905 U.S. 2, 98826, on the right

# APPENDIX 4B

## Notification Strategy 2-Pagers

<< Go Back



# NOTIFICATION STRATEGIES LIST

**WENA-9.3-N**

# City of Cashmere Water Intake — WENA-9.3-N

| | | | | |
|---|---|---|---|---|
| **Position - Location:** | 47° 31.082', -120° 27.452' | 47° 31' 4.9", -120° 27' 27.1" | 47.51803, -120.45754 | Cashmere |

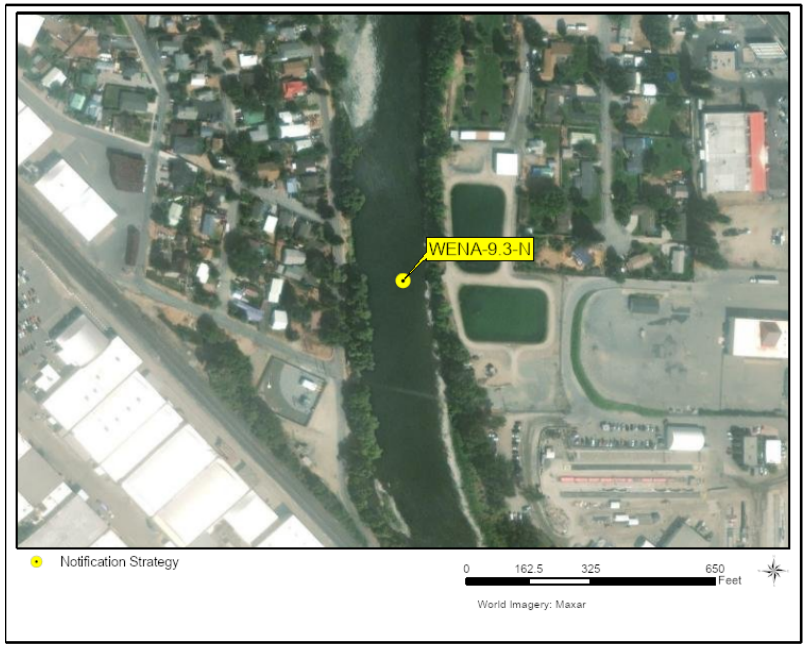
**Strategy Objective:** Notification : Notify City of Cashmere Wastewater Treatment Plant so that staff can protect the resources under their control.

**Implementation:** Contact Woodard Curran, contractor who operates and controls intake structure on the Wenatchee River at 714-916-3873. Inform them of any significant oil spill or potential spill that impacts or threatens the Wenatchee River.

**Field Notes:** The City of Cashmere draws drinking water through a surface water intake ~0.2 miles south of Cottage Ave bridge. The Water/Wastewater Supervisor can shut off the drinking water intake at any time day or night.

**Watercourse:** River - Below a Dam - Wenatchee River

**Resources at Risk:** Water Intakes



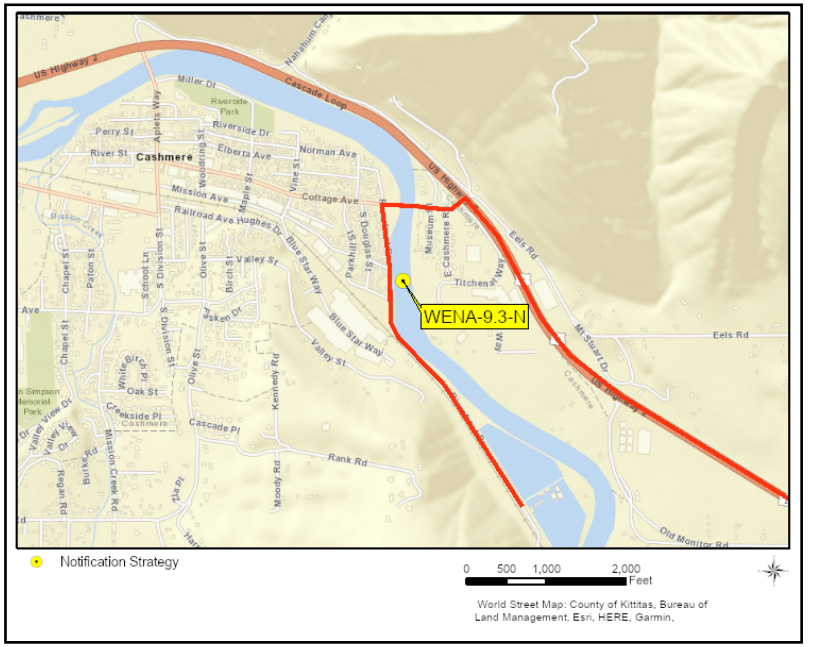

**Communication Process and Action:**

Contact Woodard Curran, contractor who operates and controls intake structure on the Wenatchee River at 714-916-3873. Inform them of any significant oil spill or potential spill that impacts or threatens the Wenatchee River. Contact Water/Wastewater Supervisor by cell phone at 509-668-3416 if no answer at Woodard Curran.
Once notified, the Wastewater Treatment Plant staff will determine what action(s) they need to take in order to protect the resources under their control. Actions by the plant may include shutting down the intake and closing intake valve.

# City of Cashmere Water Intake — WENA-9.3-N

**No Photograph Available**

WENA-9.3-N Photo: Photo Not Available




## Site Contact

**Woodard Curran**
Primary Contact : City of Cashmere Contractor
714-916-3873

**City of Cashmere Wastewater Treatment Plant**
Municipality (County/City) : Water/Wastewater Supervisor
509-668-3416

## Nearest Address

Riverfront Dr
Cashmere, WA 98815

## Driving Directions

TO CITY OF CASHMERE WASTEWATER TREATMENT PLANT:
1. Start at Wenatchee, WA
2. Go west on Orondo Ave toward S Wenatchee Ave (0.07 miles)
3. Turn right on WA-285 N (S Mission St) (1.23 miles)
4. Turn right at N Miller St to stay on WA-285 N (N Miller St) (2.09 miles)
5. Continue on US-2 E (7 miles)
6. Turn left on Cotlets Way (0.13 miles)
7. Continue on Cottage Ave (0.08 miles)
8. Turn left on Riverfront Dr (0.4 miles)
9. Finish at wastewater treatment plant at Riverfront Dr, 98815, on the left

# APPENDIX 4C

## Staging Area 2-Pagers

<< Go Back



# STAGING AREAS LIST

SA-WENA-10.1

SA-WENA-24.5

<< Go Back



# Riverside Park SA-WENA-10.1

**Staging Area**

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 31.486', -120° 28.017' | 47° 31' 29.1", -120° 28' 1.0" | 47.52476, -120.46695 | Cashmere |

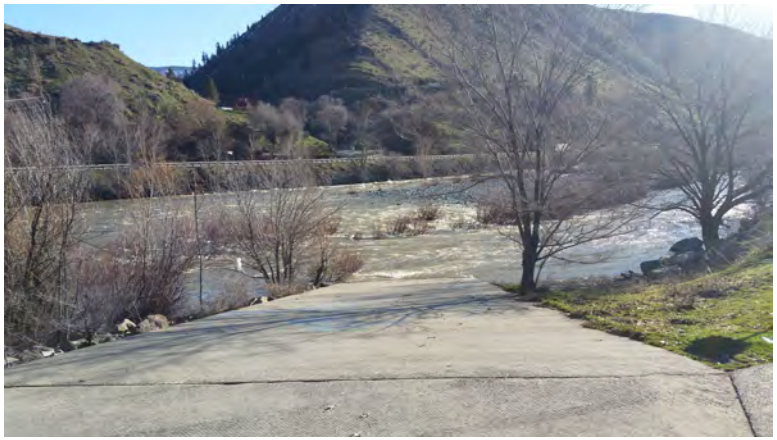
***Comments:*** Riverside Park is managed by the City of Cashmere. Coordinate staging with the City; call 509-782-3513.


***GRP Response Strategies Served:***

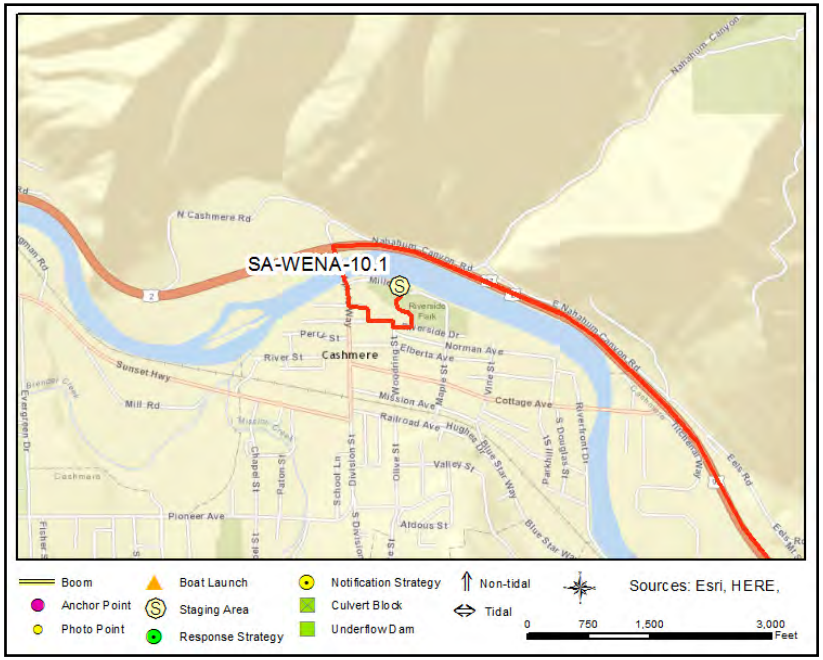
***Location Information***

| Asset | Type/Status | Amount/Number |
|---|---|---|
| Boat Dock(s) | No | |
| Boat Ramp(s) | Concrete, Solid | 1 lane, 9 degree grade |
| Cell Phone Coverage | Yes | 3 bars/3G |
| Covered Spaces | No | |
| Estimated Lot Size | | 68,000 SqFt |
| Lot Cover (Primary) | Asphalt | 100% |
| Parking - Car | Marked | 70 |
| Parking - Trailer | Marked | 6 |
| Power | Yes | 110 & 220 |
| Restroom | Restroom - Flush | 2 (summer only) |
| User Fee | Unknown | |
| Waste Disposal | Trash Receptacle | 1 |
| Water (potable) | Yes | |

# Riverside Park SA-WENA-10.1



SA-WENA-10.1 Photo: Looking ENE from top of boat ramp.
Water flows from left to right.




## Site Contact

**City of Cashmere**
Land/Property Contact : City Hall
509-782-3513

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director
5096676864

## Nearest Address

201 Riverside Dr
Cashmere, WA 98815

## Driving Directions

1. Start at US 2 Wenatchee
2. Go on US-2 E (US-97 N) toward US-2 W (7.75 miles)
3. Turn left on Aplets Way (0.15 miles)
4. Turn left on E Prospect St (0.04 miles)
5. Turn right on North St (0.03 miles)
6. Turn left on E Pleasant Ave (0.06 miles)
7. Bear right on Woodring St (0.01 miles)
8. Turn left on Riverside Dr (0.01 miles)
9. Finish at 201 Riverside Dr, 98815, on the left

<< Go Back



# City of Leavenworth Boat Launch SA-WENA-24.5

**Staging Area**

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 35.509', -120° 39.561' | 47° 35' 30.5", -120° 39' 33.7" | 47.59181, -120.65935 | Leavenworth |

***Comments:*** City of Leavenworth Boat Launch is managed by the City of Leavenworth. Coordinate staging with the City; call 509-548-5275.


***GRP Response Strategies Served:***

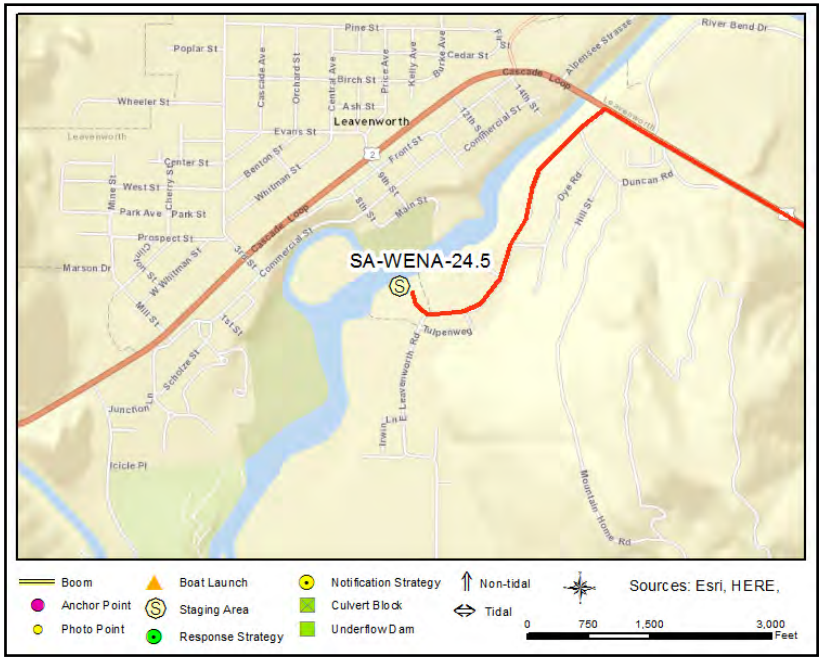
WENA-24.7

***Location Information***

| Asset | Type/Status | Amount/Number |
|---|---|---|
| Boat Dock(s) | No | |
| Boat Ramp(s) | Gravel | 1 lane, 7 degree grade |
| Cell Phone Coverage | Yes | 4 bars/4G |
| Covered Spaces | No | |
| Estimated Lot Size | | 15,000 SqFt |
| Lot Cover (Primary) | Gravel | 100% |
| Parking - Car | Gravel | 10 |
| Parking - Trailer | Gravel | 2 |
| Power | No | |
| Restroom | None | |
| User Fee | No | |
| Waste Disposal | None | |
| Water (potable) | No | |

# City of Leavenworth Boat Launch SA-WENA-24.5

SA-WENA-24.5 Photo: Looking NNE from top of boat ramp across Wenatchee River. Water flows from left to right.




## Site Contact

**City of Leavenworth**
Land/Property Contact : City Hall

Leavenworth, WA 98826
509-548-5275

## Nearest Address

9556 E Leavenworth Rd
Leavenworth, WA 98826

## Driving Directions

1. Start at Cashmere, WA
2. Go west on Cottage Ave toward Aplets Way (0.01 miles)
3. Turn right on Aplets Way (0.28 miles)
4. Turn left on US-2 W (US-97 S) (10.55 miles)
5. Turn left on E Leavenworth Rd (0.69 miles)
6. Finish at 9556 E Leavenworth Rd, 98826, on the right

# APPENDIX 4D

## Boat Launch 2-Pagers

<< Go Back



# BOAT LAUNCHES LIST

**BL-WENA-10.1**

**BL-WENA-24.5**

<< Go Back



# Riverside Park BL-WENA-10.1

**Boat Launch Location**

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 31.486', -120° 28.017' | 47° 31' 29.1", -120° 28' 1.0" | 47.52476, -120.46695 | Cashmere |

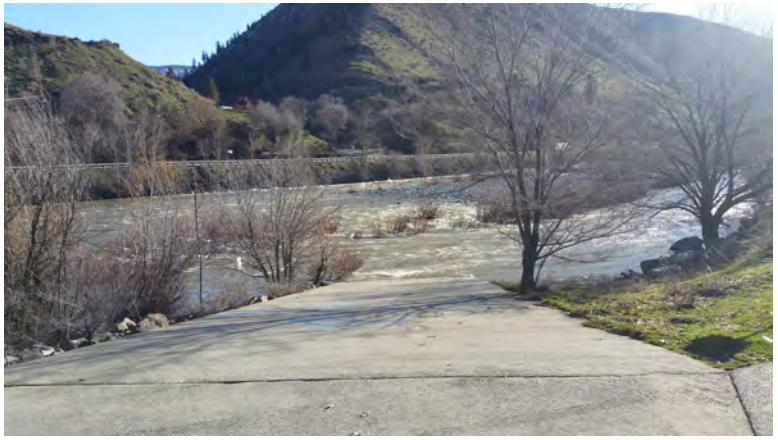
***Comments:*** Riverside Park is managed by the City of Cashmere. Coordinate staging with the City; call 509-782-3513.


***GRP Response Strategies Served:***

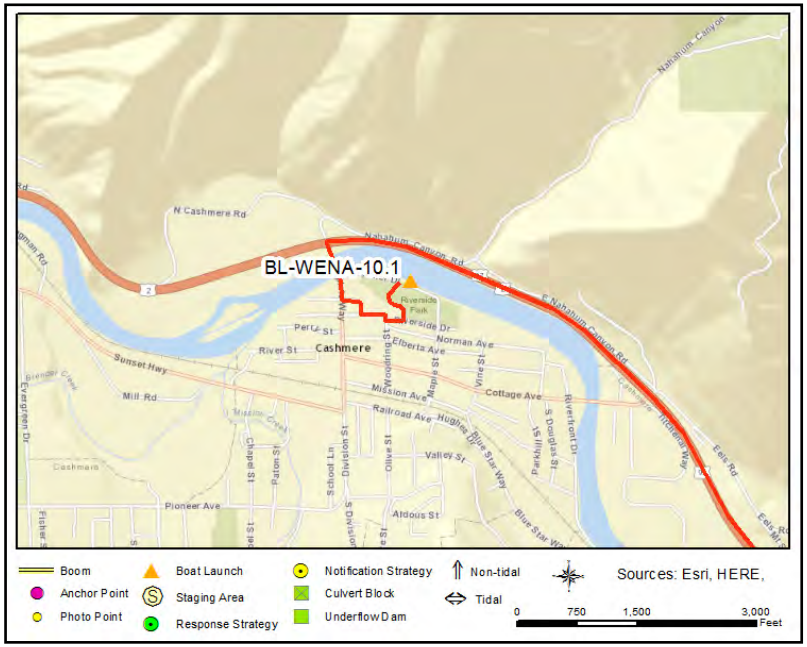
***Location Information***

| Asset | Type/Status | Amount/Number |
|---|---|---|
| Boat Dock(s) | No | |
| Boat Ramp(s) | Concrete, Solid | 1 lane, 9 degree grade |
| Cell Phone Coverage | Yes | 3 bars/3G |
| Covered Spaces | No | |
| Estimated Lot Size | | 68,000 SqFt |
| Lot Cover (Primary) | Asphalt | 100% |
| Parking - Car | Marked | 70 |
| Parking - Trailer | Marked | 6 |
| Power | Yes | 110 & 220 |
| Restroom | Restroom - Flush | 2 (summer only) |
| User Fee | Unknown | |
| Waste Disposal | Trash Receptacle | 1 |
| Water (potable) | Yes | |

# Riverside Park BL-WENA-10.1



SA-WENA-10.1 Photo: Looking ENE from top of boat ramp.
Water flows from left to right.




## Site Contact

**City of Cashmere**
Land/Property Contact : City Hall
509-782-3513

**Chelan County Department of Emergency Management**
Emergency Contact : Assistant Director
5096676864

## Nearest Address

201 Riverside Dr
Cashmere, WA 98815

## Driving Directions

1. Start at US 2 Wenatchee
2. Go on US-2 E (US-97 N) toward US-2 W (7.75 miles)
3. Turn left on Aplets Way (0.15 miles)
4. Turn left on E Prospect St (0.04 miles)
5. Turn right on North St (0.03 miles)
6. Turn left on E Pleasant Ave (0.06 miles)
7. Bear right on Woodring St (0.01 miles)
8. Turn left on Riverside Dr (0.01 miles)
9. Finish at 201 Riverside Dr, 98815, on the left

<< Go Back



# City of Leavenworth Boat Launch BL-WENA-24.5

**Boat Launch Location**

| | | | | |
|---|---|---|---|---|
| ***Position - Location:*** | 47° 35.509', -120° 39.561' | 47° 35' 30.5", -120° 39' 33.7" | 47.59181, -120.65935 | Leavenworth |

***Comments:*** City of Leavenworth Boat Launch is managed by the City of Leavenworth. Coordinate staging with the City; call 509-548-5275.


***Location Information***

| Asset | Type/Status | Amount/Number |
|---|---|---|
| Boat Dock(s) | No | |
| Boat Ramp(s) | Gravel | 1 lane, 7 degree grade |
| Cell Phone Coverage | Yes | 4 bars/4G |
| Covered Spaces | No | |
| Estimated Lot Size | | 15,000 SqFt |
| Lot Cover (Primary) | Gravel | 100% |
| Parking - Car | Gravel | 10 |
| Parking - Trailer | Gravel | 2 |
| Power | No | |
| Restroom | None | |
| User Fee | No | |
| Waste Disposal | None | |
| Water (potable) | No | |

***GRP Response Strategies Served:***

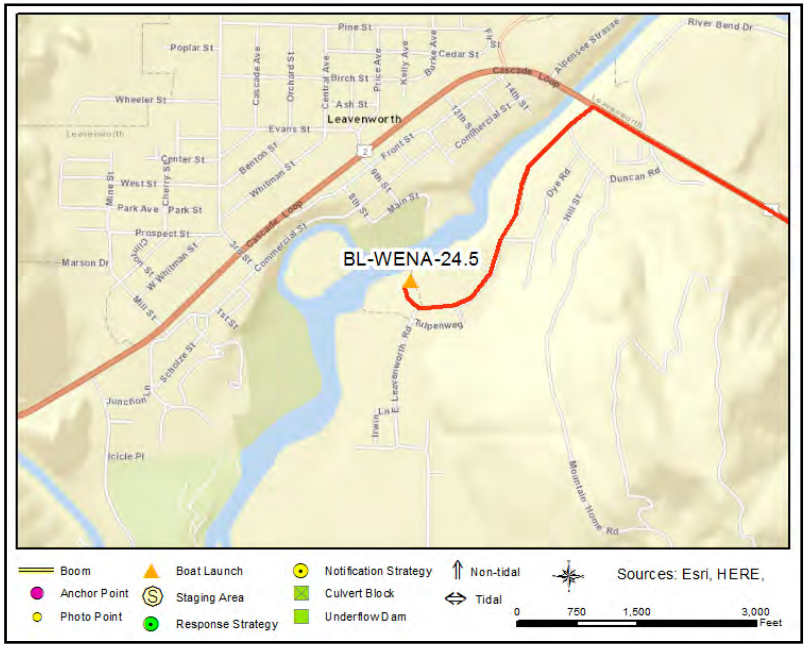
WENA-24.7

<< Go Back



# City of Leavenworth Boat Launch BL-WENA-24.5

SA-WENA-24.5 Photo: Looking NNE from top of boat ramp across Wenatchee River. Water flows from left to right.




## Site Contact

**City of Leavenworth**
Land/Property Contact : City Hall

Leavenworth, WA 98826
509-548-5275

## Nearest Address

9556 E Leavenworth Rd
Leavenworth, WA 98826

## Driving Directions

1. Start at Cashmere, WA
2. Go west on Cottage Ave toward Aplets Way (0.01 miles)
3. Turn right on Aplets Way (0.28 miles)
4. Turn left on US-2 W (US-97 S) (10.55 miles)
5. Turn left on E Leavenworth Rd (0.69 miles)
6. Finish at 9556 E Leavenworth Rd, 98826, on the right