

Geographic Response Plans Guidance

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1000 Geographic Response Plans

GRPs are an annex to the NWRCP and a key element of both facility and vessel contingency plans. GRPs have two main functions:

1. From a planning perspective, the GRPs provide a description of sensitive biological, cultural, and economic resources that must be addressed to be in compliance with:
 - The NCP (40 CFR 300.210(3)(i).), which requires ACPs to describe areas of special economic or environmental importance that could be impacted during an oil spill; and
 - The NHPA, which contains applicable, relevant, and appropriate requirements; the GRPs also address sensitive historic and prehistoric resources.
2. From an operational perspective, the GRPs guide responders in the first 12 to 24 hours of an oil spill by:
 - Providing prioritized lists of tactical response strategies to be implemented during the early hours of an oil spill (usually before the formation of UC);
 - Providing detailed information for booming strategies that could be utilized to minimize impacts on predetermined sensitive resources.

Once the UC is formed, additional operational strategies and tactics will be relayed to the field in the form of the ICS 204 work assignment sheets.

Because the GRPs are the primary tool used during an initial phase of the response, and fairly broad in their scope, they are not intended to minimize impacts on all possible sensitive areas that could be affected by an oil spill. Likewise, the GRPs are not intended to be an exhaustive list all of the tactical strategies that could, or should, be implemented during a spill.

Guiding Principles for GRPs

1. The safety and health of responders always take precedence over the protection of sensitive environmental resources.
2. Source control and containment are always a higher priority over GRP strategy deployments.

3. The protection strategies in the GRPs have been designed for use with persistent oils and may not be suitable for other petroleum or hazardous substances (see Section 4622 for Gasoline Policy).
4. Environmental conditions (wind, currents, and tides), together with the physical limitations of existing spill response technology, may preclude the effective protection of some areas.
5. Once a coordinated response has been established during an oil spill incident, booming strategy selection and prioritization are refined and supplemented based on real-time assessments. UC has the authority to supersede the strategies proposed in the GRPs.
6. Response personnel may find it necessary to deviate from the exact details provided for deploying a particular strategy. An on-site evaluation of actual conditions is often needed to determine whether a strategy is safe to deploy and whether it will be effective under existing environmental conditions or effective for the particular type of oil involved. Therefore, field personnel should use their best judgment to modify existing strategies based on real-time conditions and notify Command accordingly. Field personnel are also encouraged to notify the Command Post regarding any opportunities for deploying additional strategies that might be used to take advantage of incident-specific conditions.

GRP Response Strategies:

In general, GRPs include the following types of response strategies:

- No action: Appropriate when weather, sea, or other conditions make deployments unsafe and/or infeasible and when response actions or site access will cause further environmental damage (e.g., wetlands);
- Collection booming with on-water recovery: Deploying various types of boom to collect oil for mechanical removal using sorbent materials, vacuum trucks, or near shore skimming devices;
- Exclusion Booming: Deploying various types of boom to reduce oiling in sensitive areas; and
- Deflection Booming: Deploying various types of boom to divert oil away from a sensitive area and/or divert oil toward a collection point.

GRPs do not include:

- *In-situ* Burning: Burning oil on the water, usually requires containment by fire-resistant boom (see NWRCP policy on *in-situ* burning use); and
- Dispersants: Applying chemical agents, usually by aircraft, to aid in breaking up surface slicks and dispersing oil within water column (see NWRCP policy on dispersant use).

Sensitive Resources Addressed by GRPs

The NCP (40 CFR 300.120 (3) (i) requires that Area Committees identify and prioritize sensitive areas requiring protection. In the NWRCP, sensitive areas are broken into three main categories, described below.

Environmentally Sensitive Resources

Key natural resource areas are identified using a wide of range data provided by resource trustees, tribes, plan holders, spill response organizations, contingency plan holders, and other interested stakeholders during the process of GRP development and review. The ESI maps developed by NOAA are one example of the type of natural resource information available (<http://response.restoration.noaa.gov>). When appropriate, tactical response strategies are designed for implementation during the early hours of an oil spill to reduce impacts on those areas, and trajectory models or other assessment techniques are used to establish initial response priorities.

Historically or Culturally Sensitive Resources

Information on sensitive historic and cultural sites is coordinated through contact with tribal governments, state archaeologists, and the DOI. Due to the sensitive nature of this information, the specifics regarding the location and nature of such sites are not included in the GRP documents. However, to ensure that tactical response strategies do not inadvertently harm historical and culturally sensitive sites, historic preservation specialists are consulted to review the GRP documents prior to finalization.

Socioeconomically Sensitive Resources

Economically sensitive areas are facilities or locations that rely on a body of water to be economically viable and that could be severely impacted by an oil spill. Economically sensitive areas are broken down into three separate categories: critical infrastructure, water dependent commercial, and recreational areas. Information on economic resources will be gathered for inclusion as an appendix to the GRPs as they are being updated.

Geographic Scope of the GRPs

GRPs have been developed for all marine waters of Washington and Oregon and for many of the inland waterways, including the Columbia River from the mouth to the confluence with the Snake River (Washington/Oregon), Lower Snake River (Washington), Spokane River (Washington), Nisqually River (Washington), Clark-Cowlitz Rivers (Washington), Lower Deschutes River (Oregon), Clearwater and Lochsa Rivers (Idaho), and the Pend Oreille River (Idaho). For a complete list of GRPs, with links to those available in electronic format, go to <http://www.oilspills101.wa.gov/northwest-area-contingency-plan/geographic-response-plans-grps/list-of-geographic-response-plans/>.

For More Information

A fact sheet describing the development, maintenance, and testing of the GRPs is available on the NWACs/RRT10 website at <http://www.rrt10nwac.com/FactSheets.aspx>.

1100 Evaluation Criteria for Geographic Response Plans

Specific strategies for response to spills in sensitive areas are detailed in the GRP. Below is a list of some of the biological, cultural, and booming criteria used to determine whether it is appropriate to develop and maintain GRP strategies at specific locations. These criteria are not intended to be exhaustive or ranked in order of priority, but rather to help frame the evaluation of GRP strategies.

Key Criteria for Biological Sites, Species, and Habitats of Concern

1) Temporal considerations –

- a) What is the expected recovery time for habitats or fish and wildlife resources?
- b) What is the residence time of the oil?

2) Substrate –

- a) What is the exposure risk? What is the likelihood that a habitat or species will be exposed to direct contact with surface oil or to dispersed/dissolved oil in the water column?
- b) Given the substrate is cleanup feasible?

3) Habitat quantity, quality, and pattern –

- a) Is the impacted habitat considered scarce at local, regional, or statewide scales?
- b) Is the size of the impacted habitat significant compared to other sites in the region?

- c) Is species diversity or endemism high? Is this true year-round or is it seasonal?
- d) Is abundance of fish and/or wildlife high? Is this true year-round or is it seasonal?
- e) What life stages of organisms are present?
- f) Is the habitat important to threatened or endangered species?
- g) What is the status of the habitat's integrity (i.e., is the area undeveloped or highly altered)?
- h) Does the habitat have a special designation or status (i.e., Marine Protected Area, biological research area, restoration site, etc.)?
- i) Is the habitat and/or its associated fish and wildlife resources especially susceptible to injury by oil?

Key Criteria for Archeological and Cultural Sites of Concern

- 1) Deployment** – Does the act of deploying the GRP strategy threaten the archeological site (anchoring the boom, parking vehicles, etc.)?
- 2) Purpose** – Will implementing the GRP strategy type (collection, diversion, deflection) negatively impact the site?
- 3) Review** – If either of the above is possible, then a review of the site records is necessary to determine the exact location and sensitivity of the site. If the site records are old or insufficient, then a field visit is necessary.
- 4) Significant developments** – Are there significant developments that may cause any concern about the impacts irrelevant (housing developments etc.)?
- 5) Additional criteria for archaeological sites without existing GRP strategies include:**
 - a) **Impacts.** Does the site extend below the high tide line?
 - b) **Vulnerability.** Will it be damaged or destroyed if oil were to hit the area (or by the placement of response equipment in the area, e.g., vacuum trucks, etc.)?
 - c) **Integrity.** Has the site been disturbed yet, or is it still intact?
 - d) **Historic Importance.** Is the site nominated for, or already on, the National Register of Historic Places or the state equivalent?
 - e) **Tribal Importance.** Does the site hold special tribal importance?

- f) **County Importance.** Does the site hold special county importance?
- g) **Feasibility.** Is booming the site feasible?

Examples Socioeconomic Sites of Concern

Critical Infrastructure:

- Drinking water intakes;
- Energy/power generation intakes, locks and dams; and
- Federal/state irrigation agricultural channels and water projects.

Water Dependent Commercial Areas:

- Industrial intakes;
- Agricultural irrigation intakes;
- Aquaculture;
- Marinas;
- Commercial fishing and shellfish harvest areas;
- Federal/state and private fish hatcheries; and
- Specially designated residential, commercial and industrial areas (e.g., floating homes and live aboard marinas).

Water Dependent Recreational Areas

- Boating;
- Public recreational areas
- Sport fishing;
- National/state/local parks and beaches;
- National seashore recreational areas; and
- National river reach designated as recreational.

Key Criteria for the Use of Boom

- 1) **Effectiveness** – Is booming the most effective strategy for reducing oil spill impacts?
Would other alternatives such as a phone call to an operator, shutting off a water intake, or closing a tidal gate be as effective?
- 2) **Safety** – Determine if the safety of human responders will be put at risk for limited likelihood of strategy success.

- 3) **Determine** – What type of booming strategy would be the most effective at reducing oil impacts to the resource under prevailing conditions—collection, deflection, or exclusion?
- 4) **Evaluation** – Evaluate the site for advantageous characteristics based on:
- a) **Anchoring substrate.** Does the substrate allow responders to easily anchor the boom?
 - b) **Accessibility.** Can the site be easily accessed by vessels or vehicles?
 - c) **Time to arrive on scene.** How long will it take to get to the site?
 - d) **Potential for oiling.** Is the site located near shipping activity or fueling operations?
 - e) **Beach substrate.** Use NOAA ESI or Washington State Department of Natural Resources ShoreZone classification to determine vulnerability to oiling and likely oil longevity based on the shoreline type.
 - f) **Type and quantity of boom.** How many sections of boom and what size anchors will be required for deployment? What is the anchoring depth? What type of boom tending will be required? Will this tending be complicated by the amount of time it takes to arrive at the site or the difficulty of access? Is the amount of boom required reasonable (<1000 feet).
 - g) **Prevailing weather – especially wind and waves.** Is a booming strategy realistic for prevailing conditions?
 - h) **Tidal influence.** At extreme lows, will there be nothing but mud flats (very difficult to tend boom when it is stuck in the mud), or at extreme highs, will the entire face of a coastal marsh be underwater (thus exposing the entire perimeter to oil)?
 - i) **Influence of currents.** What velocities can be expected?
 - j) **Feasibility.** Depends on: boom size, boom length, number and size of anchors, capability of the recruited workboats (to tow boom, set and recover anchors, shelter boat crews, carry boom and associated equipment); the experience of the boat crew; and the effectiveness of the anchoring system (both on shore and in water).