3000 Operations

The Operations Section (OS) of this plan is responsible for directing the tactical actions to meet the incident response objectives. See Chapter 7 of the Incident Management Handbook for duties and responsibilities.

In general, the following response priorities will be followed:

- Protect human life and health.
- Minimize environmental impacts.
- Minimize economic and public impacts.

This section provides guidance on operations that can apply to any type of incident. It addresses operational responsibilities of initial field responders up to the activities required for the operations section staff in supporting the ICS Planning Process.

Based on the type of incident you are responding to, this section may be used in conjunction with one or more of the Annexes of this plan.

The Operations Section also directs and oversees the preparation and development of unit operational plans, requests and releases tactical resources, makes expedient changes to the Incident Action Plan as necessary and reports such to the Incident Commander (IC/UC). The OS is comprised of the Recovery and Protection Branch, Emergency Response Branch, Air Operations Branch, and Wildlife Branch, each with subordinate units. The IC/UC will determine the need for changes on this structure or adding a separate OS as the incident objectives deem necessary. Until Operations is established as a separate section, the IC/UC will have direct control of tactical resources. Refer to the Annexes for response resources and additional information including Geographic Response Strategy and Chemical Countermeasures.

3100 The Operations Section Organization

The OS organizational structure (see Figure 3-1) is designed to be highly flexible so that it can be used during any type of emergency. Unlike the other sections in this plan, Operations builds from the bottom up, only adding layers of management to maintain span of control when the size of the Operations Section requires more focused oversight.

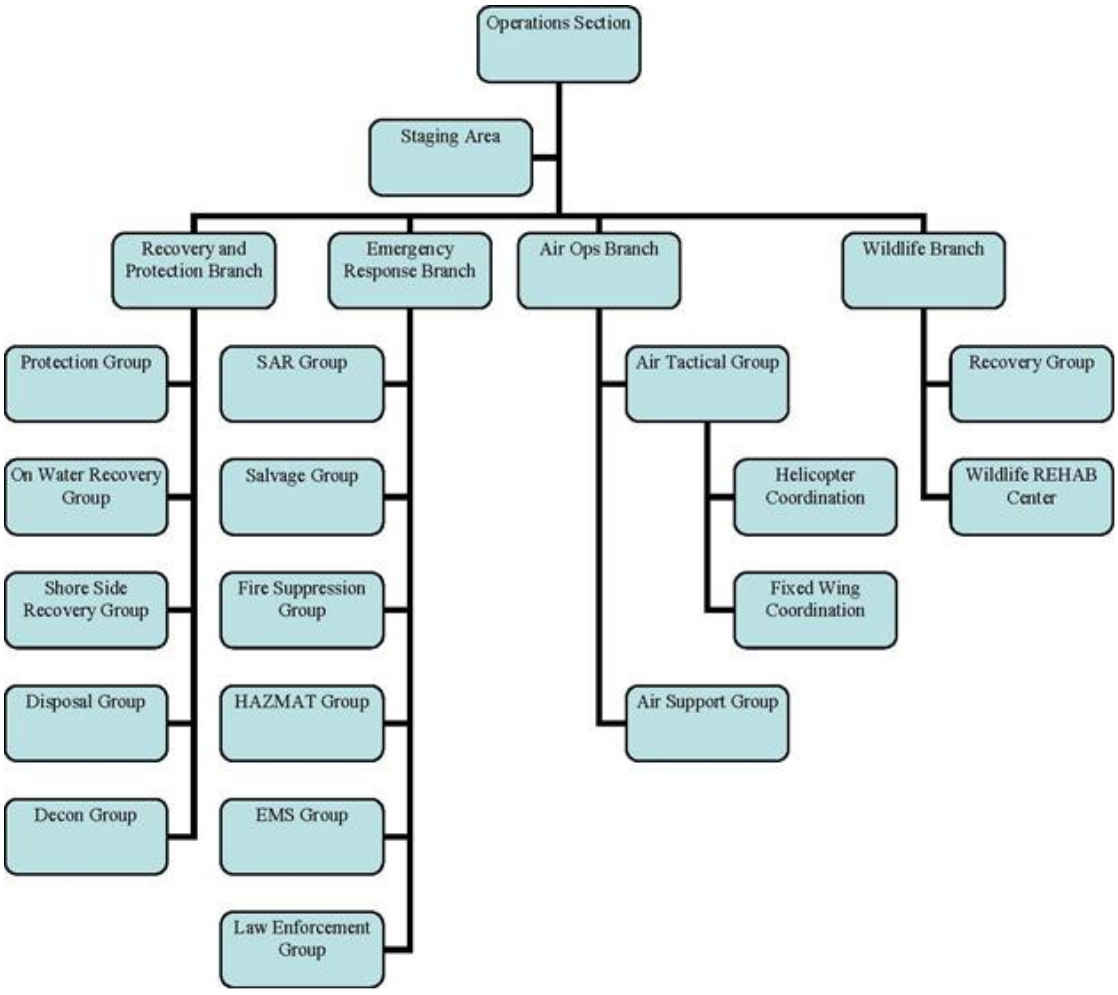


Figure 3-1. The Operations Section is designed to be highly flexible and expand and contract based on the needs of the incident.

3110 Operations Section Chief

The Operation Section Chief (OSC) is responsible for the management of all operations directly applicable to the primary mission. The OSC activates, supervises and directs elements in accordance with the IAP and the Site Safety Plan. In addition, the OSC directs the preparation of unit operational plans, requests and releases resources makes changes to the IAP as necessary and reports to the Incident Commander. Other OSC responsibilities include:

- Implement and manage the Operations Section branches and units needed to proactively accomplish Operations Section actions.

- Assist the Planning Section in defining strategic response goals and tactical operational objectives detailed in the Incident Action Plan.

- Develop detailed mission assignments, sortie schedules, duty lists, and operational assignments to accomplish the strategic response goals and tactical operational objectives.

- Identify additional response resources required or recommend the release of resources to the Unified Command.

- Evaluate and report on response counter measure efficiency.

Figure 3-2 below also provides a guide to the general responsibilities of the Operations Section Chief during the Planning Process.

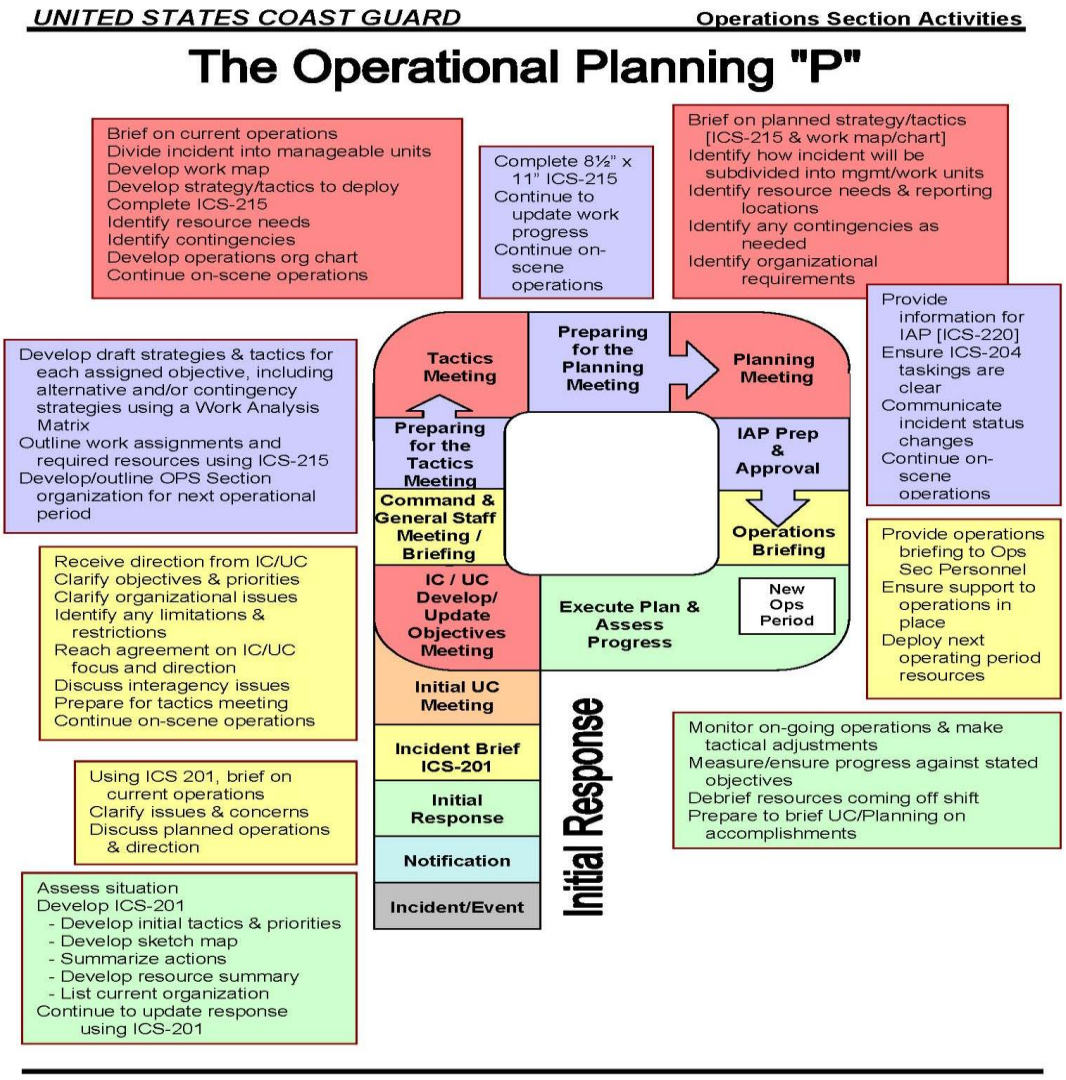


Figure 3-2. Operations Section Planning "P"

3120 Operations Section Preliminary Objectives

Below is an outline of some of the preliminary objectives that the OSC should consider when responding to a pollution incident:

0-4 Hours (Initial Response (Emergency) Phase)

- Address any public safety and health.
- Confirm spill details and determine if the pollution source can be secured and direct operations to secure.
- Ensure all pertinent emergency notifications have been made (All appropriate Federal, State Agencies, USCG Sector San Juan Command Center, and Area Committee as applicable).
- Conduct a preliminary assessment, by utilizing the ICS 201, CG Incident Briefing Form, including any grounding, firefighting, salvage or additional problems. Determine immediate objectives, priorities, and strategies. (Safety of human life and health first).
- Request Emergency Medical Services assistance as necessary. (See section 5320.1 of this plan for reference to local medical facilities).
- Coordinate with the Qualified Individual / Responsible Party response management team.
- Conduct Hazardous Materials situation assessment including site surveys and air monitoring. Analyze any HAZMAT problems detected.
- Institute Operational Risk Management (ORM) in accordance with Section 9000 of this plan for all personnel involved in the response, including civilian OSRO personnel.
- Deploy field response teams as soon as possible. Activate special teams as necessary.
- Contain the spill, at the source if feasible, as soon as possible to mitigate further environmental impact.
- Estimate current, tide, and weather effects on the situation and product movement.
- Identify high-priority areas for early protection and select appropriate response strategies (see section 3200 of this plan).
- If salvage, lightering, or dewatering operations will be required, provide tasking to those on scene and to support personnel ashore. Provide tasking to divers as necessary.
- Request marine inspector / surveyor for vessel incident.
- Identify potential staging areas and sites for immediate pre-cleaning and assign personnel.
- Continuously order personnel and equipment required for initial response as the needed. Do not wait to submit an organized or forward-projected estimate for the next operational period. Keep track of all call-ups using ICS 201.
- Direct the delivery and deployment of the first equipment to arrive on scene.
- Establish well-qualified on-scene supervisors.
- Activate Oil Spill Recovery Vessels and VOSS as necessary.
- Contact USCG/State officials to commence drug and alcohol testing (in conjunction with marine investigators and other investigators).

- Monitor personnel for signs of exhaustion and need for relief/replacement at the 4 hour mark.

4-24 Hours (First Operational Period)

- Transition from “emergency phase” driven response posture to a pre-planned operation response posture.
- Continue primary containment activities.
- Identify safety hazards that may be present and report observations to the Safety Officer.
- Continue gathering information on the extent of the spill and assist the Planning Section with situation and resource information.
- Arrange for initial over-flight with appropriate observers / Situation Unit Leader.
- Consider IR camera and video link to help tailor the response effort.
- Determine organization and staffing for the Operations Section.
- Obtain response objectives and priorities from Incident Commander/ Unified Command.
- Estimate personnel and equipment required for objectives/priorities; adjust resources ordered as needed.
- Consider dispatching liaison assistants to involved Oil Spill Response Organizations (OSROs).
- Commence Incident Planning Process “P” with Planning Section Chief to develop response tactics for the Incident Action Plan.
- Review trajectory models from Environmental Unit/SSC, identify future impacted areas and deploy protective measures (boom, pre-treatment (if approved), etc.).
- Conduct oil recovery operations as able.
- Initiate incident documentation. Identify and document the discharge source, responsible party, and preserve this information for the document unit and finance/administration section.
- Establish a restricted airspace, as needed (see Section 3410.3 of this plan).
- Review results of over-flight with Unified Command and determine future air operations needs with the Planning Section Chief.
- Anticipate the need for replacement personnel.

24-48 Hours (Second Operational Period)

- Continue to assist Planning Section with information gathering and documentation.
- Continue Incident Planning Process “P” with the Planning Section to maintain the Incident Action Plan per operational-period.
- Assist Environmental Unit Leader with data collection and evaluation of options to use alternative countermeasures such as dispersants or in-situ burning.
- Continuously monitor resource allocation to ensure that the most effective use is being made of personnel and equipment.
- Execute the completion and delivery of the following federal and state forms:
  (1) Notice of Federal Interest;
  (2) Letter of Designation of Source;
  (3) Administrative Order (as needed); and
  (4) Letter of Federal Assumption (as needed).

3130 Scalability of the Operations Section

The Operations Section will naturally evolve based on the needs of the incident. The following modular development list illustrates a typical method of expanding the incident organization at an oil spill incident. This list is not meant to be restrictive, nor imply that this is the only way to build an ICS organizational structure from an initial response to a multi-branch organization. Refer to the IMH for incident specific example organizations.

Initial Response Organization - Initial response resources are managed by the IC who will handle all Command and General Staff responsibilities. A unified command is established.
Reinforced Response Organization - The UC has established a Protection Group and a Recovery Group to manage on-water activities and a shoreline division to manage land-based resources. An SO and IO have been assigned.
Multi-Division/Group Organization - The UC has assigned all Command Staff positions and established a number of Divisions and Groups as well as an OPS and PSC. Some Logistic Units are established.
Multi-Branch Organization - The UC has established all Command and General Staff positions and has established four branches.

3200 Recovery and Protection

The Recovery and Protection Branch is responsible for overseeing and implementing the protection, containment and clean-up activities established in the IAP.

Due to the large amount of environmentally sensitive areas and the abundance of endangered and threatened fauna and flora, the best strategy for pollution response is prevention. Should a significant spill occur, there will almost certainly be significant environmental damage. In the event of a spill, the fundamental protection strategy will utilize barrier boom across the mouths of creeks that lead back into marshes areas, tidal flats and mangrove swamps. This strategy, if employed correctly, will protect the maximum of environmentally sensitive areas with a minimum amount of boom. The Operations Section shall work closely with Natural Resource Trustees to ensure all operations are carried out IAW Section 7 (all federally mandated consultations) of Endangered Species Act. See Sector San Juan Geographic Response Strategy Maps (GRS) and Environmental Sensitivity Index (ESI) Maps for specific details on sensitive areas and pre-designated booming strategies.

The probability of success for boom protection strategies is dependent upon wind and current. Currents in excess of 2.5 knots are common in inland waters during tidal changes, and currents in excess of 1 knot are expected in many of the creeks. Response tactics and speed will determine the amount of damage to environmentally sensitive areas. Due to the amount of boom required, it is not feasible to protect the face of the marsh areas during a significant spill. For smaller spills this may be an option. The density of the marsh grasses may limit the distance into which the oil can penetrate.

Numerous environmentally sensitive areas place a high priority on rapid collection of oil. Several collection points have been identified in the AC's AOR. The majority of locations are suitable for vacuum truck/skimmer units.

Water-based skimmers are also critical to rapid removal of oil in this area but are in extremely short supply. Refer to Section 3220 for more information regarding sensitive areas in Puerto Rico and the U.S. Virgin Islands.

Drinking water used in this AOR comes from surface waters. Many water intakes are located on waterways with potential for industrial uses. The water intakes are identified on the various sensitivity maps. When a spill occurs that may result in the contamination of the intakes, the appropriate facility owner/operator shall be notified. Shoreline cleanup will be conducted in accordance with shoreline sensitivity classification as outlined in the following sections.

During pre-spill planning and throughout recovery response operations, the OSC and the Unified Command (UC) are encouraged to work with appropriate State Historic Preservation Officers (SHPO) to indentify and implement methods that can minimize or avoid adverse effects to historic and culturally significant properties as required by the Programmatic Agreement on Protection of Historic Properties during Emergency Response under the National Oil and Hazardous Substances Pollution Contingency Plan (PA).

3210 Shoreline Sensitivity Classification

NOAA's Environmental Sensitivity Index lists 10 types of shorelines. For response purposes, this plan has grouped these 10 types into three categories:

High Sensitivity (Class A)
Coral Reefs, Salt marsh and Mangrove Swamps, Vegetated River Banks, Freshwater Marshes and Swamps, Shellfish Harvesting Areas and Eroding Bluffs;

Moderate Sensitivity (Class B)
Fine Sand Beaches, Coarse/Mixed Sand Beaches, Gravel Beaches, Spoil Sites, Rip Rap, Fill Sites and Tidal Flats;

Low Sensitivity (Class C)
Sea Walls and Piers.

Class A Shoreline Types – High Priority

Coral Reefs

Coral reefs are among the world's most complex and biologically diverse marine ecosystems and are increasingly threatened by pollution and other human activities. Coral reefs are directly impacted by marine-based pollution. Leaking fuels, anti-fouling paints and coatings, and other chemicals can leach into the water, adversely affecting corals and other species. Due to the fragile nature of this ecosystem, this habitat type was given a Class A priority.

In 2000, Congress enacted the Coral Reef Conservation Act (CRCA) for the protection and management of coral reefs which included appropriations and authorities to NOAA and establishment of the US Coral Reef Task Force. Two species of coral in the Area Committee's AOR have been added to the Endangered Species List. Additional response guidance can be found in the Caribbean Regional Response Team Information and Lessons Learned during Emergency Response Operations for Vessel Groundings over Coral Reefs.

Any actual, suspected, or potential damage to these corals require immediate notification to NOAA for impact assessment and consultation. Individuals should notify the Sector San Juan Command Center with the specific location and damage. The Command Center will then release a Coral Natural Resource Trustee Incident Report to all concerned so that the event can be investigated.

Predicted Oil Impacts to Coral

- Most quantities of oil, typical cargoes to Sector San Juan AOR, should remain near the surface of the water with little or no immediate danger to deeper water colonies. Depth of water is a critical component to exposure.
- Corals that are spawning at the time of an oil spill however, can be damaged because the eggs and sperm, which are released into the water at very precise times, remain at shallow water depths for various times before they settle. Thus, in addition to compromising water quality, oil pollution can disrupt the long-term viability and reproductive success of corals, rendering them more vulnerable to other types of disturbances. Timing of a spill is also a critical component to exposure.
- Excessive silting in shallower water may occur due to heavy response boat traffic causing potential suffocation of polyps.
- Excessive damage can occur from multiple booming anchors in vicinity of coral colonies.

Recommendations during spill response:

- While coating of oil upon any part of a coral will kill the affected area, physical cleaning will induce additional damage due to the fragile nature of the species and therefore is not advised.
- Protective and diversion booming may be the best option to prevent potential oiling.
- Consult with NOAA SSC and/or Environmental Unit for incident specific strategies and tactics.

Vegetated River Banks

Vegetated riverbanks occur as grassy herbaceous vegetation or trees that grow along the riverbanks to the water's edge. They may occur in fresh or brackish water systems, and may be subject to flooding, depending on the slope of the bank. A variety of plant species may be found along the riverbanks dependant on a number of factors such as the salinity of the river, steepness of the bank, degree of flooding, and exposure to current. Due to the large numbers and diversity of native plant and animal species, the difficulty of cleaning these areas, and the possibility of freshwater contamination, this habitat type was given a Class A priority.

Predicted Oil Impacts:

- Small quantities of oil will cover outer edges of the area; however, large quantities of oil may penetrate the sediment and coat the vegetation.
- Biological impacts may be great if oiling is heavy. Freshwater could be affected.
- The area/extent of surface oiling will also be affected by boat wakes and tides. Oil may persist for several months or years if not cleaned.

Recommendations for Cleaning:

- High-energy areas may be cleaned naturally, particularly if oiling is light.
- Low pressure spraying may be effective.

Salt Marsh and Mangrove Swamp

These highly productive marshes typically occur near inlets and along the rivers. The predominant plants are cord grass, turtle grass, and rushes. Numerous species of wading birds, waterfowl, fishes, and invertebrates inhabit the marshes. Shellfish harvesting areas are often located within salt marshes. Salt marshes provide protection for many commercially important juvenile fish.

These estuarine systems are characterized by mangroves and extensive sea grass beds, in addition to cord grass and rushes. These marshes support the greatest number of nesting birds, shorebirds, and hawks. Numerous species of fish have been cataloged in this region.

Predicted Oil Impacts:

- Vegetation would become coated by oil, heavy oil may cause smothering;
- Persistence may be long term because of difficulty in cleaning;
- Water-soluble toxic fractions of oil may penetrate sediments;
- High degree of biologic stress to mangroves, contamination of food chain.

Recommendations for Cleaning:

- Generally cleaning is not recommended, and may cause additional physical damage to the marsh.

Sea Grass Beds

Sea grass meadows are one of the most important biological communities. Sea grasses are highly productive, and are a major basis for inshore food chains. Their physical structure provides living space and protection from predation for a variety of organisms. Sea grass beds are essential nursery and feeding grounds for many marine organisms, especially commercial and recreationally important species and endangered manatee and sea turtles. Sea grasses stabilize sediments and play a key role in nutrient cycling.

Large areas of shallow (<1 m) sea grass meadows occur in Sector San Juan water bodies. The most abundant species is shoal grass (Halodule wrightii). Other sea grass species occurring in the plan area are manatee grass (Syuringodium filiforme), widgeon grass (Ruppia maritima), star grass (Halophila engelmanni), paddle grass (Halophila decipiens) and turtle grass (Thalassia testudinum).

Predicted Oil Impacts:

- Oiling of sea grass blades would result in blade defoliation as well as loss of sea grass and algal production, habitat and food for marine organisms. Recovery could take 6 to 12 months. The greatest impact to grasses would occur during low tide.
- Heavy or weathered oil could sink and smother grass beds.
- Oil has toxic effects (lethal and sublethal) on invertebrates and fishes inhabiting grass beds. Juvenile forms are most vulnerable. The greatest toxic effects occur in shallow (<1 m) grass beds.
- Oiling of sediments impact sea grass rhizomes and roots (below ground plant tissues) and infauna. This is likely to occur if oil sinks. Potential effects: below ground sea grass mortality; infauna mortality; productivity loss; sediment destabilization; and habitat destruction. Effects are greatest in shallow grass beds. Recovery time is at least 1 to 2 years, likely more.

Recommended Response Activities:

- Prevent oil from entering grass beds.
- Care should be taken to not scar grass beds with boat propellers involved in response activities.
- Extreme care should be taken to not disturb sediments during cleanup activities; this could result in the complete loss of grass bed.
- Clean up efforts onshore (e.g., water washing/flushing) should not result in deposition of oiled sediments into grass beds.
- Before and during cleaning, responders must evaluate if cleaning activities will be more detrimental to the bed than actual oiling.
- Oiled Intertidal or Exposed Grass Beds: Do not clean oiled grass blades; blades will slough off naturally. If oil is on sediment surface, remove by vacuum or hand. Minimize disturbance and removal of sediment and below ground sea grass.
- Sunken Oil in Submerged Grass Beds: Remove from grass bed mannually or by vacuum. Minimize disturbance and removal of sediment and below ground sea grass.
- Attention should not be focused on the incidental removal of above ground grass (blades, shoots) during cleanup; these will slough off naturally.

Freshwater Marshes and Swamps

Freshwater marshes occur in the floodplains of the major rivers in the Sector San Juan AOR and associated tributaries. Marshes are characterized by emergent herbaceous plants, fluctuating water levels, and recurring fires. Typical plant species include pickerelweed, maidencane, saw grass, cord grass and rushes. Marshes are also important breeding grounds for all classes of vertebrates, particularly reptiles and amphibians dependent on the wetland resources. Freshwater marshes perform other functions such as flood control, freshwater storage areas, fisheries production, and recreation.

Freshwater Swamps are distinguished from marshes by the abundance of trees, and are wooded wetlands. River swamps are thought to be the most biologically diverse type of swamp, providing food, cover, and nesting areas for a number of animals. Benthic invertebrates such as clams, snails, and insect larvae inhabit swamps, as do numerous fish which may be rare or endangered.

Predicted Oil Impacts:

- Oil would be persistent because of the low flushing of freshwater marshes and swamps.
- Oil may cling to the vegetation further reducing natural cleaning; high mortality for resident animals.
- Vegetation may be seasonally sensitive with dormant vegetation being less sensitive than blooming and seeding plants. Freshwater supplies may be contaminated by small amounts of oil.

Recommendations for Cleaning:

- Consider burning in freshwater marsh; it is a fire-adapted community.
- Manual cleaning from boat.
- Avoid any activity that mixes oil into sediment.
- Natural recovery recommended for light oiling.

Shellfish Harvesting Areas

In addition to the economic value of lobsters, shrimp and other shellfish, mollusks provide habitat and food for a variety of other estuarine organisms. Oysters spawn from late spring to early fall in estuarine areas. The larvae of oysters require a solid substrate, and generally utilize existing colonies for attachment. Oysters are filter feeders and rely on algae and suspended and dissolved organic matter for sustenance.

Predicted Oil Impacts:

- Most oyster reefs are inter-tidal and would be coated with oil during ebb tides.
- Oysters are in danger of smothering from silting of sediments suspended in the water column.
- Large economic losses predicted if oiling occurs in shellfish harvesting areas.

Recommendations for Cleaning:

- Do not use clean-up methods that stir up bottom sediments or mechanically damage oyster reefs.
- Natural cleaning is probably the best approach; however, responders may consider low pressure cold wash.

Class B Shoreline Types – Moderate Priority

This section outlines critical operations information for Class B Shoreline Types in Puerto Rico and the U.S. Virgin Islands.

Fine Sand Beaches

Beaches may be backed by dunes in rural areas or seawalls in the more urban areas. Beaches are typically hard packed and exposed to varying degrees of wave and current energy, depending on their location (inland or coastal). Oil penetration into the sediments would be shallow. Properties of fine sand beaches render them among the easiest of all shoreline types to clean. Often, they are fronted by tidal flats, particularly along sheltered areas. They may also be important recreational and/or economic resources. Biological diversity and density may be low; however, seasonal use by seabirds and marine turtles may be high.

Predicted Oil Impacts:

- Oily bands along upper intertidal zones varying in intensity with amount of product accumulated.
- Shallow penetration of oil into sediment.
- Danger of oiling seabirds or other organisms in the intertidal zone.

Recommendations for Cleaning:

- Care should be taken to prevent mechanical mixing of oil deeper into sediments.
- Minimize amount of sand removed from beach.
- Caution should be exercised in dune areas, particularly where concentrations of the endangered beach mouse exist.

Coarse/Mixed Sand Beaches, Spoil Sites, Rip Rap, and Fill Sites

These shoreline types are plentiful along the coast as well as inland along riverbanks. Biological diversity and/or density may range from low along the coarse sand beaches to high among gravel beaches and rip rap. These shoreline types were classified as Class B sensitivity in spite of the fact that they are generally cleanable, because of the species richness of gravel beaches and rip rap, and because of the threatened and endangered species which utilize sand beaches and fill and spoil sites.

Predicted Oil Impacts:

- Oil may penetrate deeply into sediments on coarse sand beach, with toxic effects primarily on epifaunal amphipods.
- Little penetration of oil into fill.
- Oil will penetrate between boulders of rip rap, causing lethal effects on resident flora and fauna.
- Toxic effects on invertebrates in any of these shoreline types will have detrimental effects on grazing shorebirds.

Recommendations for Cleaning:

- On coarse or mixed grain beaches, minimize sand removal. Manual cleanup is most effective.
- Avoid excessive removal of sediment from fill, use manual cleanup or low pressure spray.

- Remove oiled debris from rip rap; consider spraying, and/or replacement of heavily oiled rip rap to prevent chronic leaching.

Tidal Flats

Exposed tidal flats are primarily composed of sand and mud in shallow areas where currents and waves are sufficient to mobilize sand. The sediments are water-saturated and only the higher elevations dry during low tide. Large numbers of polycheates, copepods, amphipods, fiddler crabs, and snails render tidal flats exceptional foraging grounds for birds. Vegetation may be present at the higher elevations.

Sheltered tidal flats are generally located along lagoon beaches, seaward of salt marshes, and other calm water locations. Sediments are extremely soft, consisting primarily of silt and clay. Although rooted vegetation is sparse, microscopic algae form the basis of the food chain. A multitude of birds are attracted to these tidal flats to feed on mollusk, crab, shrimp, flounder, mullet, and a variety of infaunal invertebrates. Many of the birds forage on sheltered tidal flats from extensive nesting colonies in nearby upland areas.

Predicted Oil Impacts:

- Oil would not be expected to penetrate water saturated sediments, but may coat the surface layer on an ebb tide.
- Biological damage may be severe with significant impact from smothering.
- Persistence may be long term in sheltered flats.

Recommendations for Cleaning:

- Deployment of sorbents from shallow-draft boats.
- Careful removal of oiled wrack.
- Mechanical damage from walking on flats can be severe.

Class C Shoreline Types – Low Priority

This section outlines critical operations information about Class C Shoreline Types.

Sea Walls and Piers

These shoreline types are common in urban areas for protection of residential and industrial properties. They are typically constructed of concrete, stone, wood, or metal and are often inhabited by barnacles, shellfish, and algae. These shoreline types were given a low priority ranking because of their ease in cleaning, short time period for recruitment and re-establishment of biota.

Predicted Oil Impacts:

- Oil may percolate between joints of wooden or stone structures.
- Some biota would be damaged; other species would exhibit greater tolerance.
- Persistence of oil would be dependent upon exposure to high-energy waves and currents.

Recommendations for Cleaning:

- High-pressure washing to prevent chronic leaching.

Rocky Platforms

In general, rocky areas can be found on shorelines facing the open ocean where they are exposed to high-energy waves and currents. This shoreline type was classified as low sensitivity because of this high-energy exposure as well as ease in cleaning. The biotic assemblage of this shoreline type consists primarily of infaunal polycheates and amphipods, which display low sensitivity to oiling.

Predicted Oil Impacts:

- Oiled wrack and/or heavy oils may accumulate in depressions along rocks, slowing natural cleaning.
- Amphipods and isopods are relatively tolerant of toxic effects of oil, however, thermal absorbance capacity or rock surface may be increased.

Recommendations for Cleaning:

- Removal of oiled wrack.
- High-pressure spray may be effective where plants and animals are not attached.
- Natural cleaning in high-energy areas.

3220 Oil Discharge Classification

The following classifications of oil discharges serve as guidance for the pre-designated FOSC as specified under 40 CFR 300.5:

COASTAL WATERS (Coast Guard)	INLAND WATERS (EPA)
Minor: <10,000 gals	Minor: <1,000 gals
Medium: 10,000-100,000 gals	Medium: 1,000-10,000 gals
Major: >100,000 gals	Major: >10,000 gals

NOTE: Any discharge that poses a substantial threat to public health or welfare, or results in a critical public concern shall be classified as a "major discharge."

3230 Hazardous Materials Release Classification

The classification of hazardous substance releases under 40 CFR 300.6 is as follows:

Minor: Any release that cause’s minimal threat to public health or welfare and/or the environment.

Medium: All releases other than a minor or major release.

Major: Any release that causes a substantial threat to public health or welfare, a substantial threat to the environment and/or significant public concern.

3240 Protection

Reference the GRS Index of the ACP for comprehensive protective booming strategies.

3240.1 Containment and Protection Options

Refer to basic booming strategies for information concerning specific locations for containment and protection:

- Diversion Booming
- Containment Booming
- Exclusion Booming
- Cascade Booming
- Chevron Booming

These booming strategies are utilized throughout the GRS for the protection of resources. Various publications are available for detailed explanations of each type of booming procedure. For detailed information on these strategies, see the ExxonMobil Oil Spill Response Field Manual.

3250 On-Water Recovery

Open-water recovery includes using skimmers on oil slicks and netting systems for tar balls and highly viscous oils. Skimming of uncontained slicks can consist of either self-propelled skimming vessels or towed skimmer units. Storage capability and time needed to offload are very important considerations in determining the effectiveness of oil on-water recovery operations.

Frequently, skimming is the only option in areas with very strong currents and water that is too deep to anchor booms. Skimmers are most effective on thick slicks or areas such as convergence zones where the oil tends to accumulate naturally in thicker concentrations. If the spilled oil emulsifies, skimmer performance usually decreases significantly.

In areas of shallow water or strong currents, it may be possible to collect or corral the oil and bring it to deeper water, or low-current, areas that have better skimmer access and higher recovery rates.

For spills where the oil is highly viscous or has formed tar balls, netting systems may enhance oil recovery. Using technology adapted from the fishing industry, a net is either moored or towed, allowing the oil to be collected and recovered.

The On-Water Recovery Group is responsible for managing water recovery operations per the Incident Action Plan.

Responsibilities include:

- Direct the delivery, deployment, and operation of skimmers or other oil recovery equipment.
- Provide a field status of on-water removal operations to the OSC.

- Maintain estimates of product recovered.
- Identify field conditions related to the effectiveness of skimming operations.
- Identify logistics support needs for skimming operations.
- Ensure recovery and holding containers operate efficiently.

3260 Shoreside Recovery

An oil spill that is not contained is likely to be carried to shore by currents and wind. The physical and biological characteristics of the contaminated shoreline will determine cleanup techniques. For example, techniques that are effective on sandy beaches cannot be used on rocky shoreline; and motorized cleanup equipment should not be used in salt marshes because of potential damage to vegetation and habitat.

If oil contamination is extensive, heavy equipment is more efficient for cleanup than manual labor. Manual or "hand" cleanup is effective against light shoreline contamination in the final state of cleanup, and where heavy equipment access to a shoreline is not available. Some kind of earth moving equipment can be used to cleanup beaches composed of material ranging in size from silt to cobbles. Pressurized spraying equipment is most effective for cleaning rock and boulder beaches, rocky cliffs, and man-made structures. Small oil skimmers, hose flushing, and sorbents should be used in salt marshes.

The Shoreline Recovery Group is responsible for managing shoreline cleanup operations as per the Incident Action Plan. Responsibilities include:

- Manage the personnel and equipment necessary to accomplish shore side recovery and cleanup objectives established in the Incident Action Plan.
- Report on the efficiency of shore side recovery and cleanup methods.
- Identify resource and logistics support needs.
- Project cleanup completion dates.

3260.1 Shoreline Cleanup Options

Sandy Beaches: The most efficient method of cleaning sandy beaches contaminated with oil is with motor graders and elevating scrapers working together, however, there are some drawbacks. Rubber-tired earth moving equipment can easily lose traction or become immobilized on beaches that have a low bearing capacity; these beaches are classified as having poor traffic ability. Earth moving equipment normally used in cleaning oil-contaminated beaches should be able to operate with only occasional difficulty. If traffic ability problem should occur, the following measures should be tried in the following order:

- Pressure in all tires should be lowered to 20 PSI.
- All regular tires on the equipment should be replaced with floatation tires.

On some occasions the rear area of a beach may not have sufficient traffic ability to allow heavy equipment to cross the firmer inter tidal area. In this situation, a gravel or rock roadway can be quickly constructed (using several truckloads of material) across the soft rear area to the inter-tidal zone. When the cleanup operation is complete the gravel/rock roadway can be removed and the rear area restored to its original condition.

Gravel and Cobble Beaches: Generally gravel and cobble beaches can be worked with rubber-tired equipment, although tracked equipment may be required if traffic ability is poor. Regardless of the size of beach material, front end loaders and angle blade equipment (bulldozers or motor-graders) can be used to remove oil-contaminated materials from gravel and cobble beaches. The angle-bladed equipment casts a windrow that a front-end loader can pick up and load into a truck for disposal.

Special caution should be taken before removing material from cobble beaches located at the base of cliffs or bluffs. Often times cobble beaches serve to protect the shore by absorbing energy from incoming waves. If a substantial amount of material is removed, waves can roll up the beach and break against the base of the cliff or bluff causing it to erode. If removal of contaminated material is necessary, it should be replaced with cobbles or coarse sediments of approximately the same size and volume.

If the oil forms a thick “asphalt pavement” over the cobbles or gravel, the optimum cleanup procedure may be to break up the pavement as much as possible to allow natural movement of the sediment. This movement would tend to break up the oil further, significantly increasing the natural degradation rate.

For all other shoreline types, refer to Section 3210.

3260.2 Pre-Beach Cleanup

Pre-beach cleanup may include: removal of debris, trash, and cutting back grasses where permissible to limit the amount of possible contamination. In some cases, leaving naturally absorbent debris such as, thick mats of sea grass in place, may aid in the removal of oil. Heavy and dense objects, such as, logs, palm trunks, etc. could be removed since they would make clean-up and removal more difficult. Pre-beach cleanup may also be a suitable job for volunteers. Refer to the CRRT *Use of Volunteers at Oil Spill Cleanup* for more information.

3260.3 Temporary Storage

Ample storage is necessary to enable oil and any oily debris to be collected at the spill location(s). Storage can be limited to a few 55-gallon drums or can include tanks, bladders, tote tanks, Marine Portable Tanks (MPT), or tank trucks for large operations. Small barges can also be anchored just offshore or beached at low tide. When selecting a medium for storage, it is essential that the selected container is compatible with the material being recovered and stored.

Roll-on/roll-off dumpsters can be used to collect large amounts of oily debris and oil saturated absorbent materials, while salvage drums can be used for smaller quantities. In either case, it is essential that the drum be capable of decontamination for re-use or in the case of a dumpster or a similar large container, that it be lined with a suitable plastic material to prevent further contamination. The Response Resource Inventory (RRI) contains a complete listing of available temporary storage for recovered oil; see Section 5220.93 Temporary Storage and Disposal Facilities (TSD's).

3270 Disposal

The Disposal Group is responsible for coordinating the on-site activities of personnel engaged in collecting, storing, transporting, monitoring, temporary storage, recycling, and disposal of all response wastes.

It is the responsibility of the OSC to ensure that any recovered oil or hazardous substance is disposed of properly once cleanup has occurred. The Resource, Conservation and Recovery Act and its implementing regulations contained in Title 40, Code of Federal Regulations are quite specific in defining what is hazardous waste and how it should be handled and disposed. Also, state permit(s) for disposal of any solid waste will need to be granted/issued prior to removal from collection points. 40 CFR 261, Subpart C lists the characteristics a substance must exhibit to be considered hazardous.

In the event of a significant spill, the nearest designated facility, or several facilities if necessary, would be utilized as the recommended staging area for segregation and stockpiling of debris, unless a suitable commercial or private facility is available and preferred by the RP, or if the spill debris can be staged in the immediate vicinity of the spill affected area, such as on the beach above high water.

Puerto Rico prohibits the disposal any and all oil/hazardous materials in municipal landfills. The RP and the FOSC during the spill cleanup operations must coordinate and plan for the proper debris collection and segregation, to the extent possible, into categories of waste disposal methods. As much of the waste debris, as can be determined, will be directed to appropriate facilities for disposal. The remaining debris will be sent to the selected staging area(s) for further characterization and storage, while additional waste disposal options are being reviewed. See Section 5220.93 Temporary Storage and Disposal Facilities.

3270.1 Waste Management and Temporary Storage

Several factors must be taken into account when oily debris/waste begins to accumulate at a spill site:

- Classification of waste(s) and the use of appropriate and compatible storage;
- Amount of room to store waste containers;
- Proximity to waterway in the event a container leaks;
- Accessibility to roads and highways;
- Proximity to spill site to minimize travel for responders.

Also, when a waste storage location is established, particularly during a lengthy incident response, extra steps may need to be taken. There must be routine monitoring to ensure that the container size is appropriate, that the containers are leak free, that the plastic liners are secure, and that materials are removed promptly on a regular basis.

3270.2 Decanting Policy

The Unified Command must approve any request for decanting that arises during a response. Large quantities of oily fluids are typically generated during an oil spill response.

These fluids include the products of skimming and vacuuming operations, and are usually mostly water. Oil recovery operations can continue only as long as there is some place to store the recovered fluids. Once the field storage capacity is reached, skimming operations must terminate until additional storage is provided.

Recovered oil and water mixtures will typically separate into distinct phases when left in a quiescent state. When separation occurs the relatively clean water phase can be siphoned or decanted back to the recovery point with minimal, if any impact. Decanting therefore increases the effective on-site storage capacity and equipment operating time.

Because this process risks discharge of oil already recovered, it must be done carefully. Typically decanting water is discharged into a secondary storage container or into a boomed area where any accidentally discharged oil can be contained and recovered.

In addition to vacuum trucks, recovered oil may be temporarily stored and decanted in the field using other containers including:

- Tank trucks
- Portable tanks
- Portable bladders
- Oil field fractionation tanks
- Lined pits
- Rail Cars

More information can be found in Annex H "Caribbean Regional Response Team Contact Water Policy" or on the CRRT website.

3270.3 Sample Waste Management Plan

Several factors must be taken into account when oily debris/waste begins to accumulate at a spill site. The following should be examined:

1. Classification of waste(s) and the use of appropriate and compatible storage;
2. Amount of room to store waste containers;
3. Proximity to waterway, in the event a container leaks;
4. Accessibility to roads and highways; and
5. Proximity to spill site, to minimize travel for responders.

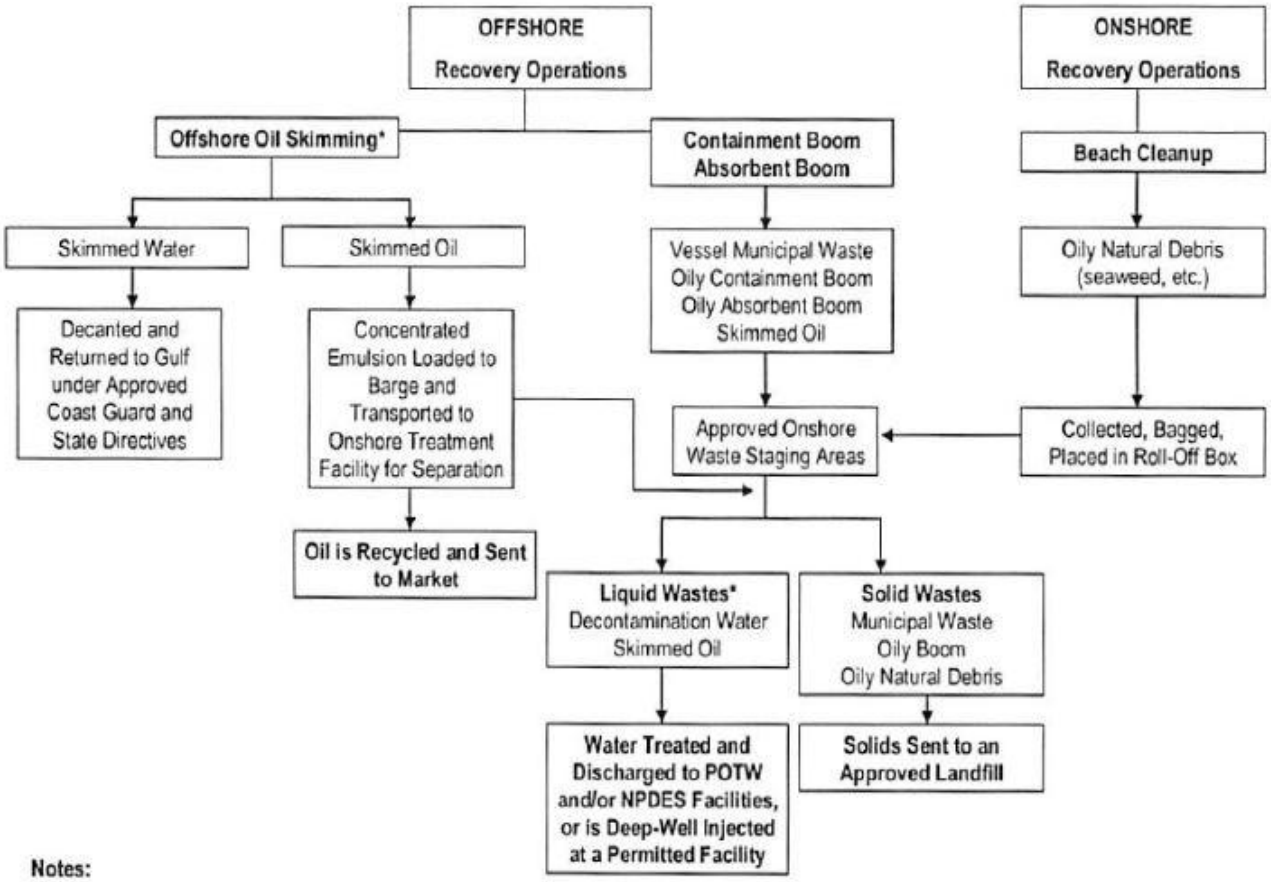
Also, when a waste storage location is set-up and used, particularly during a lengthy incident response, extra steps may need to be taken. There must be routine monitoring to ensure that the container size is appropriate, that the containers are leak free, that the plastic liners are secure, and that materials are removed promptly on a regular basis.

The minimum issues should be covered in any submitted waste management plan:

- Objective;
- Contractor information;
- Collection Sites;

- Waste type and management method (Decanted water, recovered oil, solid oily debris, oil sand/dirt, waste from decontamination operations, waste from wildlife rehab operations, oiled animal carcasses, etc.);
- Waste minimization (Pre-beach clean-up, segregation of contaminated and non-contaminated wastes);
- Temporary Storage Sites (locations, construction, permits, etc.);
- Decontamination Sites;
- Gauging of recovered oil (skimmed oil from waters, recovered oil from beaches, etc.);
- Sampling Protocol;
- Transportation (Highway, rail, etc.);
- Off-Site Waste Management Facility;
- Agency Contacts.

Sample Waste Management Plan



Notes:
* Liquid waste management is covered in detail in the Liquids Waste and Materials Management Plan included in Appendix A
POTW - Publicly-Owned Treatment Works
NPDES – National Pollution Discharge Elimination System

3280 Decontamination

Personnel

Decontamination is not an automatic or inevitable response to an incident. Whether or not to initiate decontamination procedures will depend on the assessment of the nature of the incident by first responders. A first responder, who does not properly decontaminate him/herself, may potentially contaminate his/her co-workers and family.

Once the decision to decontaminate has been made, the general principle is that all casualties, whether injured or not, who are suspected of being contaminated will receive decontamination at the scene. Although this will reduce the number of people self-referring to medical centers, people will still self-present for decontamination off-site. Medical centers and hospitals should prepare for this.

If decontamination procedures are initiated, the first objective is to remove the contaminated person from the area of greatest contamination. Usually this will be to the open air and upwind of the incident. It should be remembered that potential witnesses or suspects might be among those being decontaminated.

The careful removal of contaminated clothing will reduce the level of contamination and should, therefore, be a priority. Wherever possible the removal of clothing should be from head to foot, to limit the risk of inhalation of any contaminant. Special care should be taken to ensure there is no spread of contamination from any clothing to exposed skin. A non-ambulatory decontamination corridor or procedures should be established to prepare for the possibility of a non-ambulatory victim as to not delay their access to medical treatment.

Equipment:

Equipment decontamination may be necessary to prevent the spread of oil from contaminated areas to uncontaminated areas, such as the movement of a vessel from a work site to a marina to moor up. Decontamination will also be necessary as vessels and other equipment are demobilized. The OSC shall ensure that decontamination is addressed and a plan is developed and implemented if necessary.

3280.1 Sample Decontamination Plan

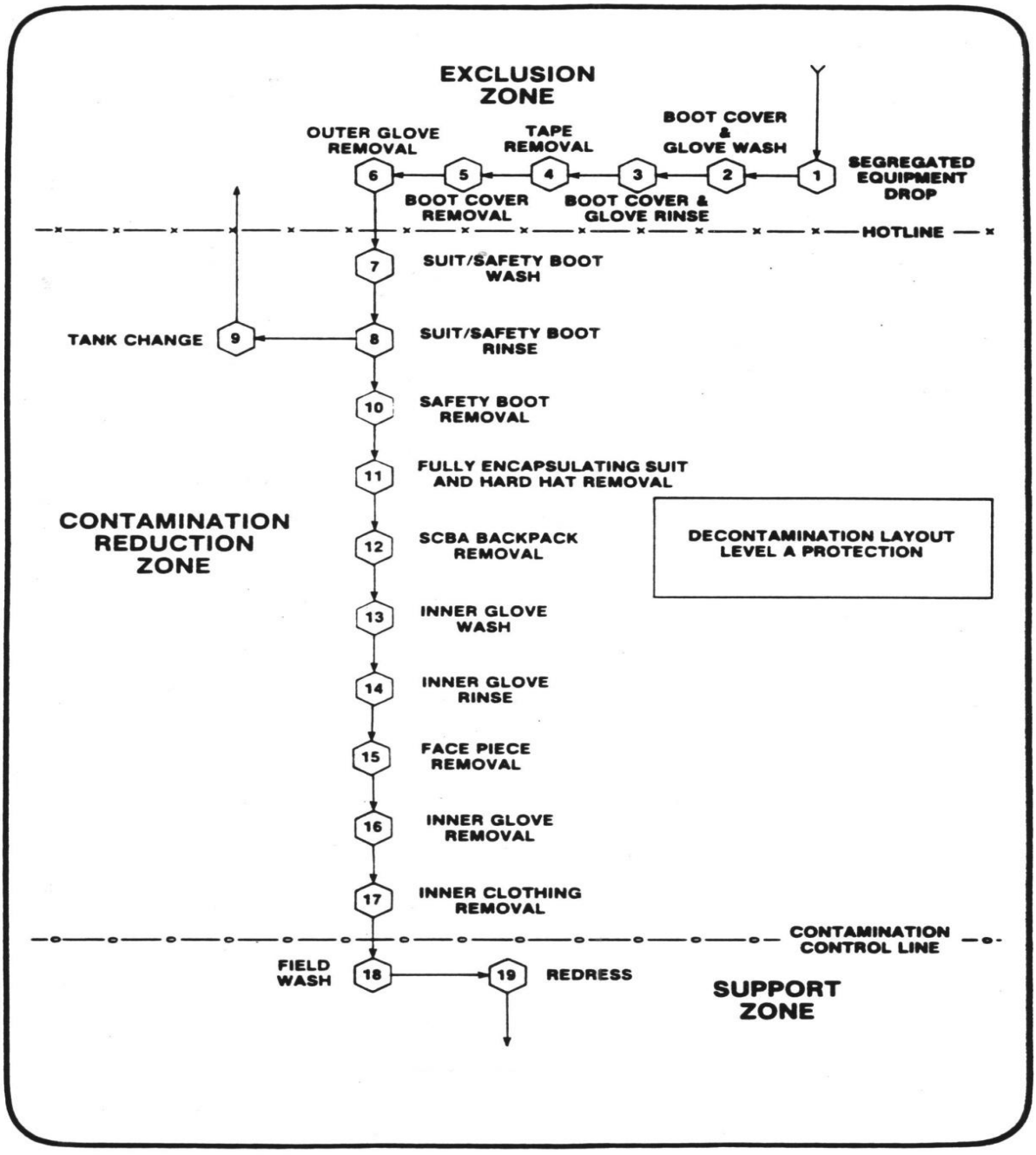


Figure 3-3. Sample Decontamination Plan

3290 Alternative Cleanup Technologies

3290.1 Dispersants

See Section 1640.1 Dispersant Pre-Approval/Monitoring/Decision Protocol.

3290.11 Dispersant Options

A product must be listed on the NCP Subpart J Product Schedule (40 CFR 300.900) (NCP Product Schedule) before it can be used for oil spill cleanup. RRTs convene to determine the appropriateness of using an oil spill cleanup technology at a particular oil spill site.

If approved for use, the Operations Section Chief shall consult with the NOAA Scientific Support Coordinator to determine the best method of application and for how long.

3290.12 Dispersant Checklist

See the SMART Guide.

3290.13 Preauthorized Zones

See Section 1640.1 Dispersant Pre-Approval/Monitoring/Decision Protocol.

3290.14 Dispersant Response Plan Worksheet

See the SMART Guide.

3290.15 SMART Protocol

See Section 1680 for more SMART information and guidance.

3290.16 Types of Equipment Required

Types of equipment required for utilizing dispersants are:

Aerial application:
- Spray Equipped Aircraft (DC-3, DC-4, C-130);
- Helicopters; and
- Air tractor.

Vessel application:
- Fire monitor arrangements; and
- Large deck layouts for dispersant totes.

3290.2 In-Situ Burn

Given the right circumstances and the necessary equipment, in-situ burning could prove an effective means of mitigating an oil spill.

Like dispersants, in-situ burning may be used to reduce the amount of free-floating oil on the water to make terrestrial contact. In addition, where shoreline or terrestrial habits are already impacted (marshes), in-situ burning may be considered as a viable oil spill response option.

3290.21 In-Situ Burn Options

"In-Situ" burning has been successfully used as a viable technique for mitigating oil spills off shore and in marsh type environments. This is especially true of areas that have mostly grassy vegetation with little or no woody vegetation. In a grassy marshland environment, an in-situ burn may produce less long-term damage to the environment than traditional mechanical cleanup methods.

ISB Decision Diagram

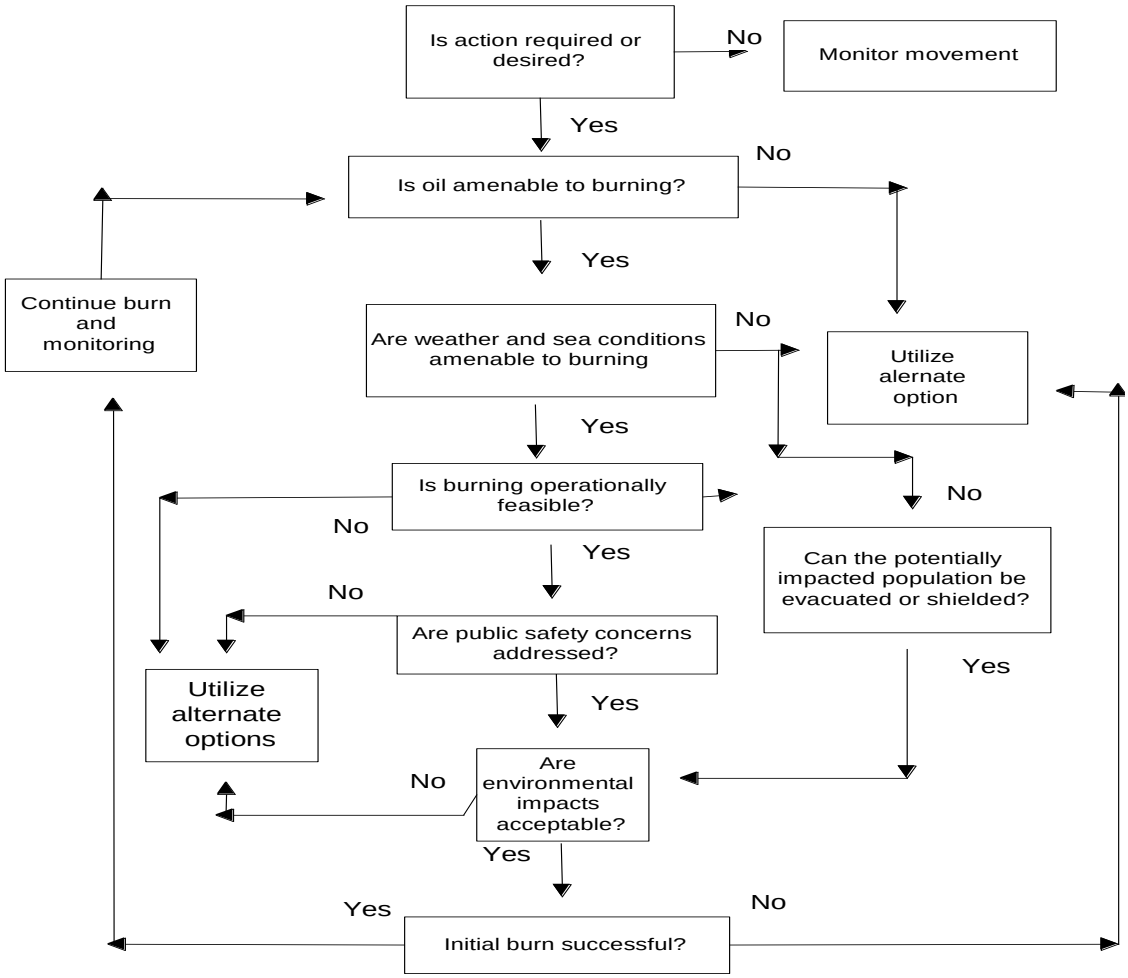


Figure 3-4. In-Situ Burn Decision Matrix

3290.22 In-Situ Burn Checklist

See the Unified Command Decision Verification Checklist, Enclosure 2 to the Oil Spill Incident Annex.

3290.23 Preauthorized Zones

See Section 1640.2 In-Situ Burn Approval/Monitoring/Decision Protocol.

3290.24 Types of Equipment Required

If ISB equipment is required the FOSC will consult with appropriate Subject Matter Experts through the CRRT network to determine this requirement. The GRS was developed to generally cover the first 24 hours of the emergency response, with the understanding that this phase of the response may be much shorter or longer, depending on the incident. Refer to the GRS for further guidance with respect to emergency measures to mitigate further damage to the environment.

3290.3 Bioremediation

See Section 1640.3 Bioremediation Approval/Monitoring/Decision Protocol.

3300 Emergency Response

During the emergency response phase, the On-Scene Coordinator and/or Operations Section Chief is responsible for overseeing and implementing emergency measures to protect life, mitigate further damage to the environment, and stabilize the situation.

3310 Search and Rescue

Search and Rescue (SAR) efforts primarily focus on finding and assisting persons in actual or apparent distress and are carried out within a well defined SAR response system.

Key response areas:

- Search Planning &Operations Safety
- Rescue Planning & Operations Stress Management
- Medical/Triage Liaison with victims family
- Fire Fighting Security
- Shoreline Search and Rescue Investigations
- On-Water Search and Recovery Resources
- Political
- Assisting & Cooperating Agencies
- Public Information
- Command Post Needs

The Operations Section Chief shall monitor how well the incident objectives, strategies, and tactics are addressing the key response areas identified above and adjust, as necessary, to ensure the maximum potential for the best possible response.

3310.1 SAR Area Resources

The Search and Rescue (SAR) Group is responsible for prioritization and coordination of all SAR resources directly related to the specific incident. In addition to the CG Stations within the Sector San Juan AOR, additional federal, Puerto Rico and U.S. Virgin Islands resources can be found in Section 9230 Local Law Enforcement Agencies.

3320 Salvage and Source Control

The Salvage Group is responsible for coordinating and directing salvage activities and source control related to the incident. In many casualties involving vessels, salvage may be the best way of mitigating a catastrophic marine casualty or preventing one from occurring. The size and complexity of a salvage operation will dictate the direction that the Unified Command will take to safely and effectively bring the incident to closure. The information contained in this section is to provide responders with guidance to help determine the extent of a casualty, evaluate the capability of a contracted salvage company, and offer ICS organizational options to help harmonize the overall response with salvage concerns. In addition, the Salvage Response Plan Annex of the Area Maritime Security Plan is an excellent resource for responding to a large scale salvage operation.

Salvage Response Mission

Protect/Minimize damage to:

- Life;
- Environment;
- Property; and
- Marine Transportation Infrastructure.

Salvage Incident Objectives

In addition to the objectives listed in the Base Plan, Unified Commands should consult the following list of objectives for consideration:

- Ensure that non-essential crew members and any passengers are evacuated;
- Ensure all crew members and passengers are accounted for;
- Create a salvage plan;
- Stop/slow flooding; and
- Extinguish the vessel fire.

Oil/Hazardous Material Release Mitigation Considerations

- Secure the Source.
- Boom the vessel.
- Conduct protection booming activities.
- Assess vapor release potential.

Possible Elements of a Comprehensive Salvage Plan

- Ground reaction/force to free determination (force the vessel exerts on the ground if grounded).
- Stability analysis: grounded or afloat.
- Strength analysis: for example hull girder stresses, damage areas, attachment points and rigging, etc.
- A summary of the engineering rationale employed for the selection of the salvage methods chosen (may be attached as appendices to the salvage plan).
- Hydrographic information.
- Potential pollution risks.
- List of specific safety hazards involved.
- Lightering considerations.
- Means for controlling interference between pollution response efforts and salvage efforts.
- Location to which the vessel will proceed after salvage.
- Means for controlling the vessel as it is freed.
- Any special issues if transit to safe refuge is needed.

Considerations in Evaluating Salvage Response Contractors

Often, the employment of a professional salvage contractor during a marine casualty is critical to ensure the safest and most expeditious resolution of an incident. The following guidelines assist the Incident Commander/Unified Command in determining if the salvage contractor hired by the Responsible Party has the knowledge and capability to undertake the salvage operation. The salvage contractor should:

- Provide salvage response services;
- Have a documented history in the business;
- Own response equipment;
- Have trained employees;
- Have 24 hour capability and a history of proven response capability;
- Have a training program for employees;
- Have a history of drills and exercises;
- Have a history of creating approved and successful salvage plans;
- Have membership in professional associations;
- Have employer's liability and salvor's liability insurance;
- Be well capitalized for the intended operation;
- Have local experience; and
- Have proven logistical capability.

Type of Salvage Contracts

Salvage companies may operate under several types of contracts when conducting salvage operations. Some contract types such as Lloyd's open form may influence the level of cooperation between the salvor and the Unified Command. Incident Commanders/Unified Command should be aware of the type of contract that a salvor is operating under and its potential influence on coordination.

3320.1 Specialized Salvage Operations

The Navy Supervisor of Salvage and Diving (SUPSALV) has the capability to respond to pollution incidents anywhere in the world. An extensive system of equipment, personnel, planning and training provides complete support to all Navy activities and vessels for emergency oil and hazardous substance spill response. SUPSALV also works with other Federal agencies to develop plans, conduct training, and respond to emergencies.

An extensive inventory of equipment is maintained at response centers in Williamsburg, VA; Port Hueneme, CA; Anchorage, AK; and Pearl Harbor, HI. This equipment is "system" oriented and allows SUPSALV to operate independently in remote locations for open-ocean spills, inland spills, arctic spills, spills relating to salvage, or other unique events. Equipment includes boom, skimmers, support craft, portable storage, logistic support systems, lightering systems, cleaning systems, and various systems to support this specialized mission.

Navy SUPSALV can be contacted at http://supsalv.org or (202) 781-1731.

3320.2 Types of Equipment Required

The type of salvage equipment needed will be determined by the type of incident and by consulting with either USCG Salvage Engineering Response Team (SERT) and/or Navy SUPSALV personnel. SERT assistance can be requested through the Coast Guard Chain of Command.

3320.3 Salvage Guidelines

The Coast Guard Salvage Engineering Response Team is comprised of 8-10 staff engineers who are on call **24 hours a day, 7 days a week**, to assist and support the Coast Guard COTP when disaster strikes. SERT members are naval architects trained to conduct technical analysis in the areas of vessel stability and structural integrity. When activated, the salvage team provides technical support to the COTP during marine casualties: groundings, collisions, explosions, and fires. The team's members have strong credentials, including Masters Degrees in Naval Architecture, professional engineering licenses, and experience in commercial vessel design. Team members are expert users of several naval architecture software packages, including GHS and HECSALV.

The team has mobile computing capability for on-scene deployment as well as presentations to inform field personnel of the services they can provide. The Coast Guard Marine Safety Center (MSC) maintains a database of about 5,000 hull files that can be used to generate computer models of vessels for use in salvage engineering. External relationships with organizations like the Navy SUPSALV, Coast Guard Intel Coordination Center (CG ICC), and the Office of Naval Intelligence (ONI), as well as all major class societies, enable the salvage team to quickly locate and transfer information about a damaged vessel that would otherwise be difficult to access.

USCG SERT can be contacted by Phone: (202) 327-3985.

3330 Marine Firefighting

See Puerto Rico and U.S. Virgin Islands Marine Firefighting Contingency Plan, Annex A.

3340 Hazardous Materials

The Hazardous Substance/Material Group Supervisor is responsible for the implementation of the phases of the IAP dealing with the Hazardous Material Group operations. The Hazardous Substance/Material Group Supervisor is responsible for the assignment of resources within the Hazardous Substance/Material Group, reporting on the progress of control operations and the status of resources within the Group. The Hazardous Substance/Material Group Supervisor directs the overall operations of the Hazardous Substance/Materials Group.

3340.1 Initial Emergency Response Procedures

The appropriate FOSC and territorial representative(s) shall respond to hazardous material releases. In the Puerto Rico coastal zone, the USCG, EQB, and the Puerto Rico Fire Department shall assess each incident and respond accordingly. In the Puerto Rico inland zone, the EPA FOSC, EQB, and the Puerto Rico Fire Department shall assess each incident and respond accordingly. PREMA shall be contacted if immediate danger to human health and safety is present. In the U.S. Virgin Islands, the USCG, DPNR, and Virgin Islands Fire Service shall access each incident and respond accordingly. In the U.S. Virgin Islands inland zone, the EPA FOSC, DPNR, and the Virgin Islands Fire Service shall assess each incident and response accordingly. VITEMA shall be contacted if immediate danger to human health and safety is present.

3340.2 Types of Equipment Required

[This Section is reserved for development by the AC]

3350 Emergency Medical Services

For EMS situations, local resources shall be used, except where a RP is identified and has hired an on-site private ambulance and/or EMS unit for the incident response.

3360 Law Enforcement

Law enforcement agencies are responsible for coordinating and directing all on-scene tactical and/or investigative law enforcement activities related to the incident, which include, but are not limited to isolating the incident, crowd control, traffic control, evacuations, beach closures, and/or perimeter security. Overall investigative activities involving both off scene and on-scene activities will be coordinated using a Joint Task Force methodology. Investigative activities that occur inside of the incident's exclusion or safety areas will be interfaced into the Operation Section when and as needed. For major incidents, this may include utilizing a Joint Field Office per the NCP.

3360.1 Perimeter, Crowd, Traffic and Beach Control

Local CG resources, with assistance from the Puerto Rico Department of Natural and Environmental Resources (DNER) and Virgin Islands DPNR would be utilized to ensure clear and safe access for incident responders. Supplemental assistance could be obtained from local police, fire, and EMS units, in addition to CG Auxiliary vessels to help maintain a Safety Zone where appropriate.

3360.2 Safety and Security Zones

Safety and Security Zones required for a response will be handled by the COTP via the Waterways Management Division. Requests for a waterway closure will be evaluated by the Unified Command in consultation with the Coast Guard to ensure minimum impact on the marine traffic in the area.

3400 Air Operations

The Air Operations Branch Director (AOBD) is ground-based and is primarily responsible for preparing the Air Operations Summary Worksheet (ICS 220-CG), the air operations portion of the IAP and for providing logistical support to incident aircraft. The Air Operations Summary Worksheet (ICS 220-CG) serves the same purpose as the Work Assignment (ICS 204-CG) does for other operational resources, by assigning and managing aviation resources on the incident. The Air Operations Summary Worksheet (ICS-220-CG) may or may not be completed depending on the needs of the incident. The AOBD will ensure that agency directives, to include the Coast Guard Air Operations Manual, COMDTINST M3710.1(series), flight manuals, unit restrictions, and other agency directives will not be violated by incident aircraft, e.g., flight hours, hoist limitations, night flying, etc. Individual aircrews retain primary responsibility to ensure their aircraft are operated in accordance with their own agency's restrictions and directives. It is also the responsibility of individual aircrews to keep the AOBD informed of their agency’s restrictions and directives that may affect their ability to execute incident assignments. After the IAP is approved, the AOBD is responsible for overseeing the tactical and logistical assignments of the Air Operations Branch. In coordination with the Logistics Section, the AOBD is responsible for providing logistical support to aircraft operating on the incident.

3410 Air Tactical

The Air Tactical Group Supervisor (ATGS) is primarily responsible for tactical operations of aircraft and aircrews. This includes: 1) providing fuel and other supplies; 2) providing maintenance and repair of aircraft; 3) keeping records of aircraft activity, and 4) providing enforcement of safety regulations. The ATGS reports to the AOBD.

3410.1 Aerial and Vessel Dispersant Surveillance

Specific to dispersant applications, Surveillance is responsible for directing and coordinating air operations missions to apply dispersants and conduct oil spill tracking, observation, and remote sensing.

Spotter Aircraft
The Spotter Aircraft Position or "Spotter" is physically located in an aircraft. The Spotter is a person who "spots" or controls, guides, or lines up the sprayer aircraft or vessels over the spill target. Because a dispersant application can be made by both vessels and aircraft, the Spotter would maintain tactical control over both types of delivery systems. The Spotter is in charge of the dispersant operation on scene. Because dispersant operations can be executed in multiple geographic areas due to the spreading and breakup of the slick, multiple spotter aircraft may be needed (one for each spray aircraft).

Monitor Aircraft
The monitor aircraft or vessel or the "monitor" is primarily responsible for monitoring the effectiveness of the dispersant operation through aerial observation in aircraft and through the use of fluorometers on board vessels to sample the dispersed oil. Effectiveness monitoring is concerned primarily with determining whether the dispersant was properly applied and how the dispersant is affecting the oil.

Observation Aircraft
The observation aircraft or vessels "observers" are platforms and persons specifically assigned to observe the dispersant operation. Their observer status should be authorized by the Unified Command on the basis of their position as a stakeholder in the outcome of the operation. Observers might include corporate officials, agency representatives, political officials, scientists, trustees, interest group representatives, and so forth.

3410.2 Dispersant Application

The Spray Aircraft or Vessel or "Sprayer" is the delivery system of the dispersants to the oil slick. The dispersant application can be either water-borne or airborne depending on the size of the spill and/or dispersant operation complexity. In both cases the "sprayer" reports to and receives tasking from the spotter aircraft. Because dispersant operations can be executed in multiple geographic areas due to the spreading and breakup of the slick, multiple "sprayer" aircraft or vessels may be needed.

3410.3 Procedures for Temporary Flight Restrictions

Due to the presence of major and several regional airports in this area, it is necessary to be aware of possible interference with airspace even for a ‘routine overflight’. In all cases, the Federal Aviation Administration (FAA) and/or nearest airport that could be affected should be contacted. NOTAMs (Notice to Airmen) or similar advisories can be posted/broadcasted by the FAA to alert aviators of possible environmental hazards. Likewise, response personnel and media engaged in assessment or follow-up surveillance of a spill site, need to be fully aware of FAA or DOD controlled airspace and any hazards or restrictions that may exist.

Who can request a TFR?

A Temporary Flight Restriction (TFR) may be requested by various entities, including: military commands; federal security/intelligence agencies; regional directors of the Office of Emergency Planning, Civil Defense State Directors; civil authorities directing or coordinating organized relief air operations (e.g., Office of Emergency Planning; law enforcement agencies; US Forest Service; state aeronautical agencies); State Governor; FAA Flight Standards District Office, aviation event organizers, or sporting event officials.

Different Types of TFR's.

The FAA issues TFR's under the following regulations:

1) Section 91.137, Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas;
2) Section 91.139, Emergency Air Traffic Rules;
3) Section 91.141, Flight Restrictions in the Proximity of the Presidential and Other Parties;
4) Section 91.143, Flight Limitation in the Proximity of Space Flight Operations;
5) Section 91.145, Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events; and
6) Section 99.7, Special Security Instructions.

Who can issue a TFR?

FAA Headquarters or the Directors of Terminal or En Route and Oceanic Area Operations (or their designee) have jurisdiction over the area concerned may issue a TFR.

In Puerto Rico, contact Air Space and Procedures at (787) 253-8695 for routine or permanent TFR's, or for immediate emergency assistance contact Combine and Route Radar Approach Facility (CERAP): San Juan CERAP (FAA), Air Control Operations Manager (787) 253-8664 or Air Control Area Supervisor (787) 253-8665.

The Air Branch is responsible for facilitating the issuance of a TFR. The following link provides more info: http://www.faa.gov.

3410.4 Permanent Area Restrictions

Permanent air restrictions can be processed through the Federal Aviation Administration using the procedures outlined in the 3410.3. The IC/UC should work with the FAA in implementing permanent air restrictions on a case by case basis.

3420 Air Support

The Air Support Group Supervisor (ASGS) is primarily responsible for supporting aircraft and aircrews. This includes: 1) providing fuel and other supplies; 2) providing maintenance and repair of aircraft; 3) keeping records of aircraft activity, and 4) providing enforcement of safety regulations. The ASGS reports to the AOBD.

3420.1 Airports and Helibases

Airports and Helibases have been identified and mapped within the Geographic Response Strategy. Additionally, a list can be found in Section 5220.70.

3420.2 Helospots

Helospots have been identified and mapped within the Geographic Response Strategy. Additionally, a list can be found in Section 5220.70.

3420.3 Aircraft Providers

[This Section is reserved for development by the AC]

3420.4 Fuel and Maintenance Services

[This Section is reserved for development by the AC]

3420.5 Air Traffic Control Procedures

[This Section is reserved for development by the AC]

3500 Staging Areas

Staging Areas serve as a location where incident personnel and equipment are sent awaiting tactical assignment. Staging areas are managed by the Staging Area Manager under the direction of the OSC.

3510 Pre-Identified Staging Areas

Potential Staging Areas have been identified in the Geographic Response Strategy.

3520 Security

All Staging Areas should include perimeter security to prohibit un-authorized entry and safety to the workers. Security needs will be dependent upon incident specific operations.

3600 Wildlife

The Wildlife Branch Director is responsible for minimizing wildlife injuries during spill responses; coordinating early aerial and ground reconnaissance of the wildlife at the spill site and reporting results to the SUL; advising on wildlife protection strategies, including diversionary booming placements, in-situ burning, and chemical countermeasures; removing oiled carcasses, employing wildlife hazing measures as authorized in the IAP; and recovering and rehabilitating impacted wildlife.

A central Wildlife Processing Center should be identified and maintained for evidence tagging, transportation, veterinary services, treatment and rehabilitation storage, and other support needs. The activities of private wildlife care groups, including those employed by the RP, will be overseen and coordinated by the Wildlife Branch Director.

3610 Fish and Wildlife Protection

In addition to wildlife initially impacted after the release or spill, continued exposure should be considered in planning due to migrating wildlife re-entering areas during the clean-up activities. Several options are available to the FOSC include hazing and capture/re- release. Any such measures should be evaluated through the Environmental Unit with appropriate recommendations made in accordance with applicable laws and regulations.

Following an oil spill, it may be necessary to initiate a deterrence or hazing program that disperses and excludes unoiled or oiled/injured wildlife from contaminated areas to reduce mortality. If warranted, deterrence activities are initiated as soon as possible following an oil spill to prevent animals from establishing or continuing regular use patterns within a contaminated area. Deterrent devices used to disperse wildlife include both visual and auditory techniques, using both simple and sophisticated devices in order to respond to the unique habits of different species, surrounding environments, and the spill situations. Careful consideration should be given in the selection and placement of deterrence devices to prevent driving unoiled wildlife into oiled areas. In some cases, the USFWS may recommend that the FOSC seek the assistance of US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Wildlife Services to help haze wildlife away from areas contaminated with oil and away from oiled wildlife/carcasses.

Fish deterrence techniques may include use of light, sound, smell, bubble curtains of air and herding nets to herd fish away from hazard areas.

Pre-emptive capture includes the capture, handling, transportation, short-term holding and release of healthy, uncontaminated wildlife. Prior to initiating a pre-emptive capture effort, it is essential to establish a release site or a holding facility and a release plan. Pre-emptive capture is recommended when there is a high potential for oiling sensitive wildlife species that are not easily hazed. However, this secondary response option has limited application based on species-specific criteria. The primary concerns when conducting pre-emptive capture are human and animal safety and minimizing transportation and holding times.

Safety of the animal should focus on stress reduction as follows:

- Have equipment necessary to handle and transport animals as quickly and efficiently as possible;
- Minimize the number of vessels, aircraft, all-terrain vehicles, etc. to herd and capture animals in a given area;
- Avoid unnecessary noise and disturbance during capture efforts;
- Never pursue the animals to the point of exhaustion; and
- Minimize human contact with the animals except to provide veterinary care.

Nets, electro fishing and anesthetizing agents (e.g., Tricaine Methanesulfonate) may be used to capture and remove fish to non-hazardous waters of similar temperature and chemistry. Various protection options are available when responding to an oil or hazmat release. The Geographic Response Strategy identifies the prioritized protection areas. Refer to the Fish and Wildlife Response Plan for additional information.

3620 Recovery

Under the direction of the Wildlife Branch Director, the Wildlife Recovery Group Supervisor is responsible for coordinating the search for collection and field tagging of dead and alive impacted wildlife and transporting them to the processing center(s). This group should coordinate with the Situation Unit in conducting aerial and group surveys of wildlife populations in the vicinity of the spill. They should also deploy acoustic and visual wildlife hazing equipment, as needed.

3620.1 Wildlife Recovery Operations

Capture of birds will only be attempted by qualified personnel with USFWS oversight. Impacted wildlife is highly unpredictable and can inflict serious injuries to a responder; accordingly, proper personal protective equipment shall be used when capturing or handling impacted wildlife. In some cases, the USFWS may recommend that the FOSC seek the assistance of the USDA APHIS Wildlife Services to help with wildlife recovery operations. Safety must be afforded the highest priority throughout the capture and transport process. Migratory birds are susceptible to stress; handling, noise and visual stress should be minimized.

Teamwork is essential in capture operations. As they lose their waterproofing, oiled birds move to shore, first preening on open beaches and river banks and later hiding under cover. Birds in this condition can be retrieved in teams of two or three people on foot with radio communication approaching quietly from water's edge and blocking access to water. This technique is most effective before dawn. Birds can then be captured using long-handled dip nets, towels, or picked up by hand. Birds should never be chased to exhaustion. Certain birds may be baited in close by "chumming" with fish or squid and captured with a long-handled net. Several species may also be effectively captured from a boat with a net gun within 10-15 meter range. Cannon, rocket and drop nets may be effective, when used with baiting techniques. Swim or walk-in traps may also prove effective, but must be regularly monitored.

3620.2 Recovered Wildlife Processing

Once birds are captured they should be removed from the netting and placed in towels, sheets or netting over the entire bird. Wings must be folded normally against the body. Care must be taken to avoid the bills and talons of large birds such as herons and raptors. A reverse body hold is recommended for large birds. Always hold the bird below waist level and away from the face. Always carefully handle the birds to minimize damage to feathers.

Each captured bird should be accompanied by a form with the following information: capture boat and personnel; date, time and location of capture; technique used to capture the animal; amount of oil in the area and whether the bird was observed or captured in the oil; behavior at capture, e.g., aggressive, lethargic, comatose; and, description of the bird, i.e., sex, age, distinguishing marks.

After transport, birds should be immediately examined by an attending veterinarian or other qualified personnel. If a treatment center is not in close proximity, it may be necessary to perform initial treatment at the collection site, such as clearing mouth and nostrils of oil; rehydrating the bird; checking for signs of oil toxicity, pining a cloth around the birds body to prevent hypothermia; and placing the bird into a transport container and avoiding disturbance, except to hydrate.

3620.3 Carcass Retrieval and Processing

The U.S. Fish and Wildlife Service are responsible for the disposition of all migratory birds, dead or alive. For all spills, a primary response goal is to prevent continued or additional contamination of wildlife as a result of predation. All bird carcasses should be retrieved and delivered to collection or morgue sites directed by the USFWS personnel to prevent oil from entering the food chain. Each carcass should be accompanied by a form containing the date and place of collection, the name of the collector, and if known, the species collected. Forms accompanying the carcass should be kept in a plastic storage bag for protection. An indelible pen or pencil should be used for labeling. If the carcass is not collected, a form should still be filled out and submitted to the USFWS collection or morgue site including a brief explanation for not collecting the specimen. Place retrieved carcasses in a plastic bag, ***one carcass per bag only***. Place the completed retrieval information form in a zip-lock bag, place it in the bag with the carcass, and tie the plastic bag shut for delivery to the Wildlife Recovery Area / morgue. Carcasses should be kept cool, but not frozen during transport to the morgue.

3630 Wildlife Rehabilitation

The Wildlife Rehabilitation Group is responsible for receiving oiled wildlife at the processing center; recording essential information; collecting necessary samples; and conducting triage, stabilization, treatment, transport and rehabilitation of oiled animals. See Section 9240 for Wildlife Rehabilitation points of contact, listed under Fish & Wildlife and Marine Environmental Non-Governmental Organizations.

3630.1 Wildlife Rehabilitation Operations

The capture and treatment or rehabilitation of wildlife contaminated by oil is implemented as the last resort for protecting wildlife. Oiled wildlife rehabilitation includes all elements related to capture, handling, transportation, stabilization, cleaning, care, holding, and release. The goal of a capture and treatment effort is the release of healthy wildlife back into their natural environment. The decision to initiate such an effort must consider incident-specific criteria. The criteria must be based on the best available science and focus on the protection and maintenance of healthy wild populations of the species affected by the spill.

Considerations for initiating an oiled wildlife capture and treatment program include: condition of the animal, weather, oil toxicity, time, species of animal, extent of oiling, care in captivity, location of treatment, available care, facility, release, zoonotic diseases, permits and euthanasia. There is no protocol available for capture, cleaning and treatment of oiled fish.

Rehabilitation operations will be organized and coordinated as facility and incident specific criteria dictate.

3630.2 Rehabilitation Facilities

Rehabilitation facilities will be characterized as the incident location dictates.

3630.3 Rehabilitation Procedures

The US Fish and Wildlife Service's policy titled Best Practices for Migratory Bird Care During Oil Spill Response (November 2003) is to be used in evaluating capture methods; making informed choices during spill responses; and evaluating oiled bird rehabilitation activities to improve field practices.

The following criteria will be used when considering and evaluating bird rehabilitators for conducting oiled-bird response.

- Hold all necessary permits for bird-related response activities;
- Experience in the capture, treatment, and care of oiled birds;
- Experience conducting bird-related response activities within the Incident Command System structure;
- Ability to quickly mobilize to perform bird capture, field evaluation, stabilization and transport, including remote locations if necessary;
- Access to appropriate facilities adequate for treating and housing oiled birds;
- Ability to establish and operate bird intake, holding, and isolation areas within 12- 24 hours of wildlife response activation;
- Ability to establish and operate bird cleaning and pre-release areas within 48 hours of wildlife response activation; and
- Agreement with a licensed veterinarian, experienced in the treatment of oiled birds, to provide any necessary veterinary medical care.

3700 Reserved

3800 Reserved

3900 Reserved for Area/District

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