MSU Area Contingency Plan
Section 3000 Operations

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3000 Operations

The Operations Section is responsible for the tactical implementation of all forces used to mitigate an incident. The Operations Section expands and/or contracts based upon the existing and projected needs of an incident. Initially, the Operations Section usually consists of those few resources first assigned to an incident but may later include appropriate members from the Unified Command agencies and/or their contractors.

All incidents begin with operations. The Operations Section Chief (OSC) must be both tactically competent in responding to the incident and possess a thorough understanding of the Incident Command System (ICS). Some of the primary responsibilities of the OSC include:

- Manage tactical operations,
- Ensure tactical operations are conducted safely,
- Maintain close communications with the Incident Commander/Unified Command,
- Identify required tactical resources to accomplish response objectives,
- Identify staging areas,
- Assemble & disassemble strike teams and task forces, and
- Assist in the development of the Incident Action Plan (IAP).

This section of the ACP provides guidance on Operations that can apply to any type of incident. It addresses Operations from the actions of initial responders up to the activities required in supporting the ICS planning process.

The guidance in this section includes:

- The Operations Section Organization
- Considerations for building the Operations Section

1. Deputies
2. Divisions
3. Groups
4. Branches
5. Staging Areas

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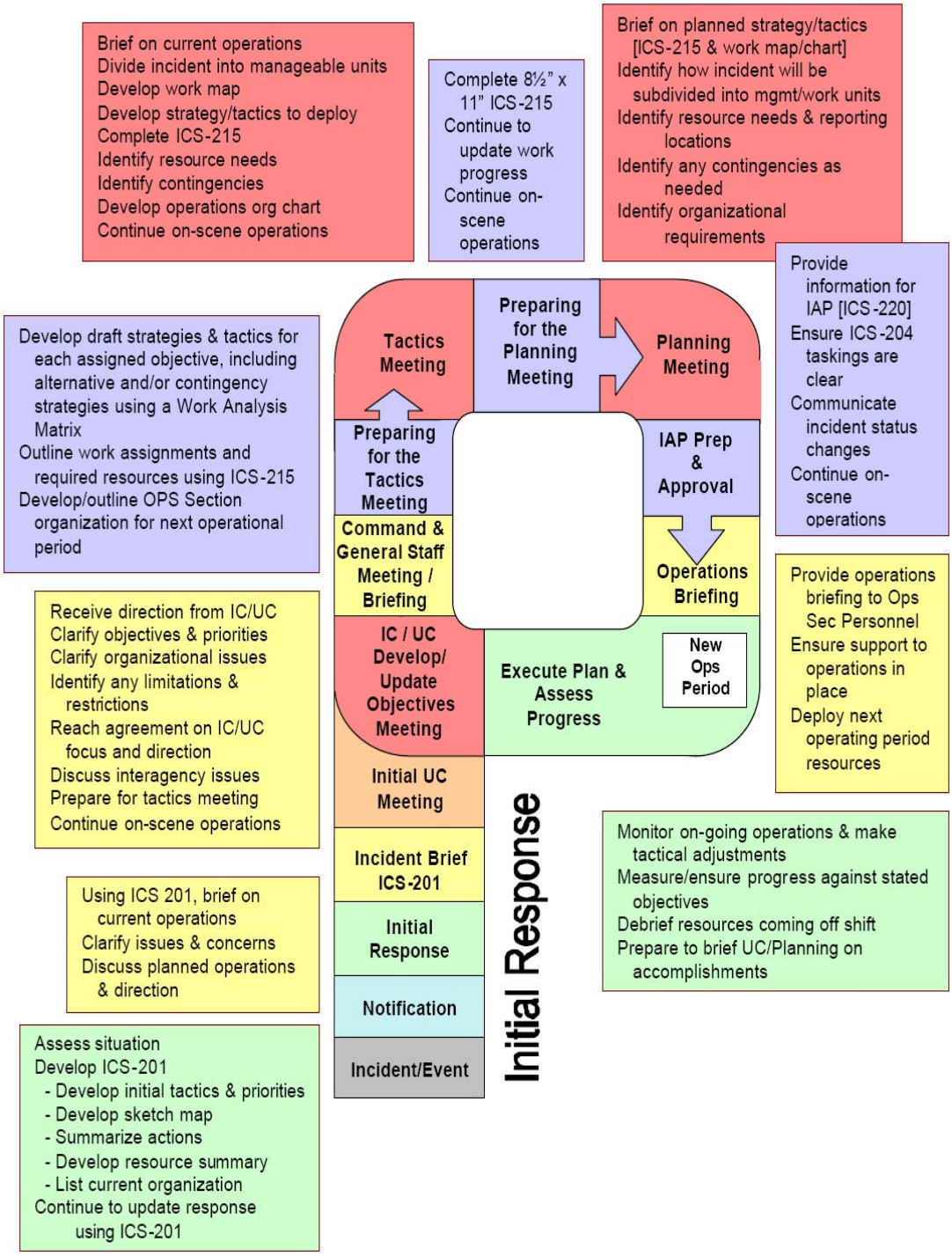
Operational Planning "P" For Operations Section Activities

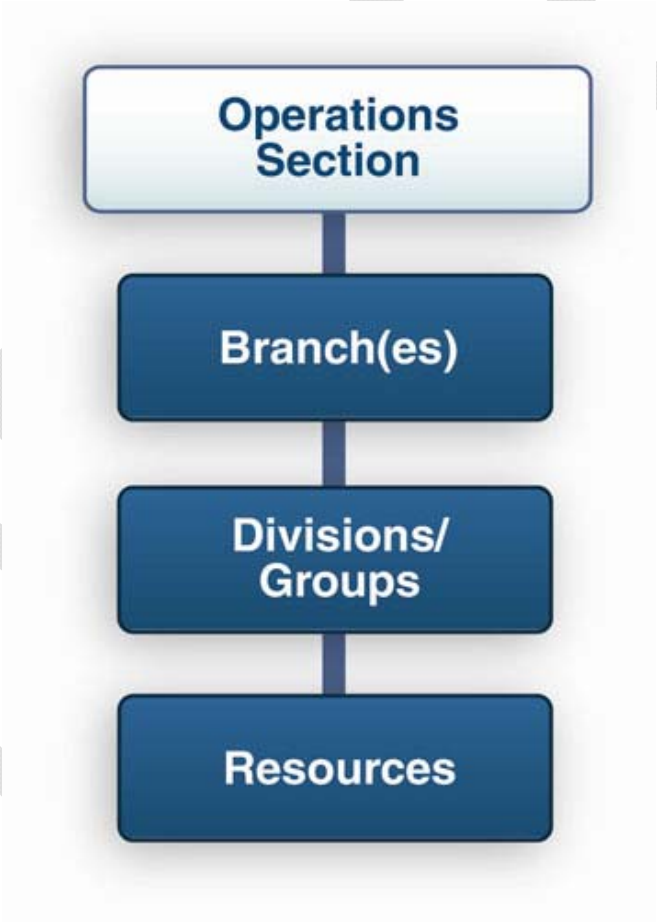


3100 Operation Section Organization

The operations organization is designed to be highly flexible as that it can be used during any type of emergency. Unlike other sections of ICS organization, Operations builds from the bottom up, only adding layers of management to maintain span of control when the size of the Operations Sections requires more focused oversight.

The below figure is a general organization chart of the Operations Section and its subordinate units. Operations Section organization information regarding the Operations Section and staff positions with the commands can be found in the National Incident Management System (NIMS) guidance and the National Response Framework. The pattern for response will follow the NIMS Incident Command System (ICS) process and position descriptions. Where NIMS ICS does not describe a process or organizational requirement the incident specific need will be addressed.

Organizational Elements of the Operations Section



3110 ICS Position Specific Job Aids

Available ICS position specific job aids can be found on https://homeport.uscg.mil/mycg/portal/ep/contentView.do?contentId=41284&contentType=EDITORIAL

3120 Considerations for Building the Operations Section

To effectively manage an incident, the OSC must divide the incident into manageable work units. Some things to consider when dividing the incident are:

- Incident priorities,
- Size of the affected area,
- Complexity of the incident and number of tasks,
- Amount of work to be accomplished,
- Span of control,
- Open water versus shoreline activities,
- Topography of the affected area,
- Logistics requirements,
- Kind of functions to be accomplished,
- Contingencies,
- Need for staging areas, and
- Jurisdiction.

3120.10 Deputies

When an incident is particularly large and complex, deputies should be employed to ensure effective operations. Deputies can be assigned to augment operations in several ways:

- Provide more focused oversight of a particular aspect of operations,
- Provided relief during the evening shift,
- Provide support during the critical planning process, and
- Perform specific tasks that require their level of knowledge and expertise.

3120.20 Divisions

Divisions are used to divide an incident geographically. Some considerations for creating divisions are:

- Determine the geographical area each Division will cover,
- Designate the Division(s) using letters (ex. Division A),
- Every Division must have a supervisor, and
- In river environments, use a different letter to designate each side of the water body in order to avoid confusion.

3120.30 Groups

Groups are used to divide an incident along functional lines. Operations are often divided functionally in the beginning of an incident. Some considerations for creating groups are:

- Determine the functions that will be conducted during the response (ex. Fire-fighting, on-water recovery),

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- Designate each Group by their functional assignment (ex. Triage group), and
- Every Group must have a supervisor.

3120.40 Branches

Branches are primarily used for span of control. Branches can designate an incident geographically or functionally. Some considerations for creating Branches are:

- If designating a Branch for geographic area, designate each Branch by Roman numerals for geographic area (ex. Branch III), or if the branch corresponds to a political jurisdiction (e.g. parish), then use the name of the jurisdiction.
- If designating a Branch for function, designate each Branch by the function that will be conducted during the response (ex. Search & Rescue Branch).
- Every Branch must have a Branch Director.

The responsibilities of a Division/Group Supervisor and Branch Director can be found in U.S. Coast Guard Incident Management Handbook, COMDTPUB P3120.17A.

3120.50 Strike Teams/Task Forces

Strike Teams are specified combinations of the same kind and type of resource with common communications and a leader. Task Forces are a group of resources with common communications and a leader assembled for a specific mission. The responsibilities of a Strike Team/Task Force Leader can be found in U.S. Coast Guard Incident Management Handbook, COMDTPUB P3120.17A.

3120.60 Staging Areas

Staging Areas are temporary locations to hold tactical resources for immediate deployment. Some considerations for creating a Staging Area are:

- Determine most feasible locations to establish a Staging Area,
- Designate Staging Areas by their physical location (ex. Basin Ave. Staging), and
- Every Staging Area must have a manager.

3130 Operations Section Chief

The OSC, a member of the General Staff, is responsible for the management of all tactical operations directly applicable to the primary mission of the Incident/Unified Command. The OSC will normally be selected from the Responsible Party or the agency with the most jurisdictional responsibility for the incident.

The OSC activates and supervises organization elements in accordance with the IAP, and directs its execution. The OSC also directs the preparation of operational plans; requests or releases resources, monitors operational progress, and makes expedient changes to the IAP, as necessary, and reports to the Incident/Unified Command. Specific duties of the OSC can be found in the U.S. Coast Guard Incident Management Handbook, COMDTPUB P3120.17A

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3140 Expectations of Division and Group Supervisors

Personnel assigned as a Division or Group Supervisor must carry out the tactical assignments outlined in the IAP. To be successful they must possess both the leadership qualities and expertise to ensure the operations under their control are conducted safely and efficiently. There are certain expectations that the OSC should have for Division and Group Supervisors such as providing information on work accomplished, remaining work to be done, recommendations for the next operational period, estimated completion time for primary objectives and any unusual logistical support needs.

3200 Recovery and Protection Branch

Recovery and Protection is on the Area Committee work list, and will be improved as part of the 2014 annual update cycle. Please refer to the 2013 ACP work list.

The Recovery and Protection Branch Director and the Protection Group Supervisor are responsible for the deployment of containment, diversion, collection, protection and absorbing boom in designated locations. Depending on the size of the incident, the Protection group may be further divided into teams, task forces, and single resources.

The goal of most of containment and recovery strategies is to collect the spilled oil from the water and prevent it from reaching sensitive resources. Frequently, this is not possible and sensitive resources are oiled in spite of response efforts, especially during large oil spills. Often the goal will be to minimize environmental impact using a variety of booming, containment, and recovery techniques. These techniques are discussed in Chapter 9000, Appendix F Oil Spill Best Management Practices.

3210 General Hierarchy of Response Priorities

In general, Federal law establishes three priority levels for dedication of emergency oil spill response resources.

- First Priority- Protection of human health and safety,
- Second Priority- Protection of environmental resources, and
- Third- Protection of economic resources.

Examples of resources that will receive a first priority response (human health and safety) include:

- Drinking water intakes- other health/safety intakes,
- Power plant intakes- desalinization plants, and
- Critical public use areas at risk (e.g. hazardous vapors).

The second priority group is thoroughly identified in the area Geographic Response Plans (GRPs) and the applicable Environmental Sensitivity Index.

The IC/UC should utilize the predetermined response strategies outlined in the applicable GRP. However, the UC/IC and responders should remain flexible and be receptive to

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additional information when implementing the booming plan or other countermeasures. Factors such as unusually high winds, strong tidal currents, equipment limitations, bottom conditions, and the type of oil can have a significant effect on the proposed strategy. Modifications to the preplanned strategies should be expected.

In addition to the seasonal variances, the protection priority of an entire area could change. For example, if the Scientific Support Coordinator (SSC) or a U.S. Fish and Wildlife Service (USFWS) biologist determined that a certain section of marshland or coastline previously categorized as a lower priority is currently a breeding ground for an endangered species, then protection of that site may be afforded the utmost priority. Sensitive locales which may be already impacted or inevitably impacted may be used to collect or retain oil so that other nearby sites can be protected.

3210.10 Response Prioritization

The initial response is focused on minimizing impacts through the strategic objectives of:

- Stopping the Source,
- Containment,
- Recovery, and
- Protection of Sensitive Areas.

In a spill event, sensitive area protection prioritization should be determined by three considerations: which sites are at risk (how soon the oil product will get to each sensitive site?), the predefined hierarchy of protection priorities, and the time and response resources available to implement protection. Responders should not assume that sensitive locales equidistant from the source of a spill are at equal risk from the oil. For the purpose of prioritization, “risk” is defined as “the probability of spilled oil reaching the vicinity of a sensitive site of concern”. This means that the urgency to protect key resource is first determined by the likelihood that it will be impacted in the near future and mobilization time for requisite response staff and equipment (can the sites at risk be protected by available resources before oil arrives?). If the sites are too numerous to protect with the response resources available within projected times of impact, then triage of protection follows as the prescribed general hierarchy below or those identified for a specific area in the GRP.

During an actual incident, the relative likelihood of a site coming into contact with the oil is a function of the proximity of the spill to the site and whether prevailing conditions (wind, current, and tides) at the time of the incident will move the oil toward or away from it. At a minimum, first responders to a spill in the marine environment should obtain an initial forecast of oil movement speed and direction from a reliable source such as the NOAA SSC, or forecast it based on present and impingent tides, currents, winds, and rainfall runoff conditions. This requires responders to use best information (optimally, real time information) about the local weather, tides, and currents to make the best prediction possible about the movement of the oil from the discharge location. This information can be used to model the probable trajectory.

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3220 Tactical Response Options

Site specific tactical plans that include protection and containment strategies for environmentally sensitive areas within MSU Port Arthur's Area of Responsibility (AOR) are located in the most current version of the Texas General Land Office Tool Kit. These mapped strategies are located online at http://gisweb.glo.texas.gov/atlas/atlas/acp/portarthur/pa_grp_index_map.pdf and available at Coast Guard Marine Safety Unit Port Arthur. Each individual area identifies all potentially impacted areas and marine/aviary species that may be impacted by coastal oil spill impact.

Refer to ESI (RPI) charts for a more detailed list of resources as well as shoreline types (lists shoreline types, biological resources in as in (a) above, refuges and parks, spill response access such as boat ramps and marinas).

Establish Strategies:

- Refer to the product characteristics
- Identify shoreline type codes.
- Highlight portion indicating shoreline type.
- Make recommendation on primary and conditional strategies. As a general rule,

  Priorities establish:
  - vegetated vs. non-vegetated
  - natural vs. modified
  - public vs. private

3220.10 Response Operations

a. Mobilize pollution response team (if necessary)

b. Public Affairs Officer - Prepare press statement to read along these lines "Yes we have received a report of a spill and are in the process of investigating. A formal press release will be prepared as soon as more information is received." It is critical to give accurate information to the press as quickly as possible. If no information is available, say so, but ensure that the press is given the information as soon as it is available.

c. Assess personnel safety - Determine personnel safety equipment needed based on potential and existing exposure:

- Existing injuries
- Exposure potential
- Fire/explosion potential
- Toxic gases
- Personal protective clothing/equipment
- Use unit Safety Occupational and Health Officer
- Develop Site safety plan
- OSHA training requirements

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- Identify nearby medical services

d. Evaluate severity of incident:

- Conduct over flights (photos, video)
- Classify the type and size of spill
- Expected duration of spill
- Acquire samples
- Chemical/physical properties of material
- Weather (12, 24, 48, 72 hour forecasts)
- Oil movement or projected movement
- Immediate HHS and environmental concerns
- Extent of contamination
- Property damage thus far?
- News coverage thus far?
- Assess fire/explosion hazard
- Determine threat to public health
- Secure or isolate the source
- Stabilize the vessel/facility/pipeline
- Extinguish fires
- Secure/isolate the source
- Define nature of incident; determine:
- RP;
- environmental impact;
- status of spill;
- movement of spilled product

e. Determine environmental resources/vulnerable areas at risk.

f. Evaluate severity of incident and the need for additional resources:

- Initial assessment of incident severity
- Estimate duration of spill response efforts

g. Issue (as applicable)

- NOFI
- LOD of Source
- Directive/Administrative Order

h. Activate initial spill assessment organization

- Federal (FOSC Pollution Response Team)
- State
- Local

i. Initiate response strategy

- Identify sensitive areas.
- Confirm protection priorities. (local, State, Natural Resource Trustees)

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- Identify countermeasures to prevent shoreline impacts and protect Sensitive areas.
- Determine feasibility of using dispersants, in-situ burning, bioremediation, or other technologies.
- Select initial strategy and appropriate response.

These actions shall normally be undertaken by the RP, but may be initiated by the FOSC if the source of the spill or the RP has not yet been identified. Every reasonable effort shall be made to persuade RP's to initiate these actions, emphasizing their liability for Federal government actions if the FOSC determines that actions taken by a particular RP are not sufficient or not performed in a timely manner.

3220.20 Situation Assessment

Note: At any release where the lead agency determines that there is a threat to the public health or welfare or the environment, the lead agency may take appropriate removal actions to abate, prevent, minimize, stabilize, mitigate, or eliminate the discharge/release, or the threat resulting from that discharge/release (NCP, 40 CFR Part 300.415(b)(1)). At discharges/releases determined to pose a substantial threat to the public health or welfare, the FOSC must direct a response to the incident.

The following checklist is intended to be used as a guideline of considerations to be referred to when developing tactical response options/strategies. This list is NOT in order of importance and may not apply to every situation. The Checklist does not limit the Operations Section from choosing response options/strategies that are not listed.

Situations Assessment Checklist

- Evaluate if special circumstances exist requiring section action
- Health and safety issues
- Fire and/or explosions
- Requirements for access limitations (barricades, security fences, etc.)
- Vessel collision
- Vessel grounding
- Lightering operations
- Salvage operations
- Vessel traffic blockages
- Sample collection and analysis for evaluation or source determination
- Implement support infrastructure
- Determine response structure consistent with the Incident Command System principles that will be used, and from there determine level of support needed to fill positions in the structure which include Finance/Admin, Logistics, Operations, and Planning.
- Implement Geographical Response Plan for location based on real time information and protection strategy effectiveness.
- Determine and mobilize personnel necessary for initial response efforts
- Mobilize equipment
- Coordinate Volunteers
- Identify initial resources at risk using GRPs or any other source information available

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- Natural resources- fish, wildlife, habitats, and Endangered Species Act (ESA) issues.
- Cultural resources- Initiate contact with a State Historic Preservation Officer, NHPA: http://www.achp.gov/overview.html#top
- Socio-economic resources:
- Critical Infrastructure
  - Drinking water
  - Energy/power generation intakes, Lock and Dams
  - 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
  - Specially designed residential, commercial, and industrial areas (ex. Floating homes and love aboard marinas)

- Water dependent recreational areas
  - Boating
  - Public recreational areas
  - Sport fishing
  - National/State/local parks and beaches
  - National seashore recreational areas
  - National river reach designated as recreational

- Notify and coordinate with Natural Resource Trustees (See notification section for contact information)

- Coordinate with Federal, State Natural Resource Damage Assessment (NRDA) personnel (see notification section for contact information.)

3220.30 Containment and Cleanup

The priority for all countermeasures is safety of personnel and protection of the environment. A number of cleanup techniques are available for response to a pollution incident. Single or multiple techniques may be utilized in abating a spill. The determining factors in method selection usually depend on the type of product spilled, current state of product, size of the incident, location, weather, and site impact.

Some volatile materials may create hazards if a containment boom is utilized (See Gasoline Policy Section 4650). Other defensive countermeasures may be more appropriate as conditions warrant. Each spill of a volatile product should be assessed individually and due consideration given to the most suitable actions for a given situation.

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Weather and other circumstances permitting, every effort should be made to collect oil as close as possible to the source of the incident (e.g. in the case of a grounded tanker, lighter the vessel). Even as oil spreads across a water surface, collection on this medium is preferable to beach cleanup. If the weather conditions at the beginning of an incident response are unfavorable for certain operations, these solutions may become feasible at a later time in the response.

The following is a list intended to be used as a guideline of considerations to be referred to when developing tactical response options/strategies. This list is NOT in order of importance and may not apply to every situation. The list does not limit the Operations Section from choosing response options/strategies that are not listed.

Refer to "Characteristic Coastal Habitats: Choosing Spill Response Alternatives", equivalent NOAA Inland waters job aids, and Chapter 9000 Appendix F Oil Spill Best Management Practices for detailed information on listed options/strategies.

- Natural recovery (which may include setting aside areas for research purposes and countermeasures effectiveness determination. Recognize that identifying set-aside sites involves a complex matrix of scientific, logistical, legal, and public relations issues.);
- Booming and containment;
- Skimming;
- Barriers and berms;
- Physical herding;
- Manual oil removal/cleanup;
- Mechanical oil removal;
- Sorbents;
- Vacuuming;
- Debris removal;
- Sediment reworking/tilling;
- Vegetation cutting/removal;
- Flood/deluge;
- Dispersants http://response.restoration.noaa.gov/disp_aid/disp_aid.html);
- In-Situ Burning
- Decanting
- Sub-sea containment strategies
- NMFS Biological Opinion for oil response.

A critical element to containment and cleanup is to monitor the strategies/tactics that have been implemented for effectiveness and efficiency. It is also important to discuss and develop criteria/guidance for terminating the cleanup (e.g., how clean is clean?).

3220.40 Protection

The goal of most oil containment and recovery strategies is to collect the spilled oil from the water and prevent it from reaching sensitive resources. Frequently, this is not possible and sensitive resources are oiled in spite of response efforts, especially during large oil

spills. Often the goal will be to minimize environmental impact using a variety of booming, containment, and recovery techniques.
The following are techniques that can be implemented by the Operations Section to contain spilled oil on the water or as a means to direct it away from sensitive natural resources or cultural amenities. Shoreline cleanup and treatment methods are discussed in more detail later in this Chapter. For swift current environments, the USCG publication, "Oil Spill Response in Fast Currents- A Field Guide" (Hansen & Coe, 2001) provides an excellent summary of techniques and equipment which have success in such challenging environments.

3220.41 Containment and Protection Options

As oil escapes containment it becomes increasingly difficult to recover. Inevitably oil does escape containment, and additional measures must be included to deal with the escaping oil. This is particularly necessary where oil booming is subjected to winds, waves, and strong currents; oil entrains or is splashed over boom. To counter oil escapement, deployments should include preplanning to anticipate and control escapement.

Before spilled oil can be effectively recovered, the spreading of the oil must be controlled and the oil contained in an area accessible to oil recovery devices. Generally, spilled oil is contained using oil containment boom. Typical boom has a floatation section that provides a barrier on and above the water surface and a skirt section that provides a barrier below the surface. The physical dimensions of the boom to be used for a particular spill will be dependent on local conditions. In the open water it may be necessary to use a boom that is several feet tall. In a protected marsh, a boom that is only a few inches tall may be appropriate.

There are limitations on the effectiveness of any boom. Oil will be lost if the conditions are such that there is splash-over from breaking waves. Oil will also be carried under the boom skirt if it deployed in such a way that currents cause the oil to impact the boom with a velocity perpendicular to the boom of greater that 0.7 knots. Once a boom has been deployed, it may be necessary to reposition it due to changing tides and currents. It is desirable to have personnel available to readjust the boom as required. In all cases of boom deployment, consideration must be given to protecting the safety of those involved in the activity.

Hard/Containment booming is used to prevent spreading and to concentrate the oil so it can be skimmed or vacuumed. Factors that need to be considered are: type and size of boom required for weather, winds, tides, and currents in the vicinity of potential spill areas; the type of deployment vessel needed; the amount of boom needed for effective containment and available skimming capabilities. Fixed or natural anchor points should be selected.

Sorbent booming is useful when the amount of oil is minimal, when tides and currents are light, or when shorelines require protection. Heavier oil can be recovered using absorbent (oil "sticks" to the boom) and lighter fuels generally are recovered using adsorbents (sausage, sweep, or diapers). Sorbent booming can also be used as a backup for other types of booming to recover product that may have entrained past the primary barrier.

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3220.42 Shoreline Protection Options

Southeastern Louisiana is home to a large expanse of mud flat and marsh systems. These areas are particularly difficult to protectively boom and every effort should be made to contain and recover the oil before it approaches any of these areas. If the on-water recovery operations are not entirely effective and oil still threatens the marsh areas, intertidal barrier boom may be used to protect the mud flats.

A recommended deployment strategy is as follows: Place intertidal boom along the entire front of the mud flat, with the boom being anchored just off shore of the low –low tide line. In areas where wave entrainment of the boom at high tide is considered to be a problem, place a line of boom across the upper mud flat near enough to the marsh to be away from the threat of wave entrainment. The boom positioned on the mud flat would rest on the flat at low tide and be of the type of construction that would prohibit oil from passing under it on the rising tide. The boom would eventually lift up off the tidal flat surface as the tide continues to rise.

Deployment of this type of boom and it supporting arrangement is extremely manpower intensive. It should only be implemented if there is a high probability that oil will reach the marsh areas. It is envisioned that these resources would not be available until equipment began to cascade into the area sometime after the initial response. Other factors to consider in this of this type of booming are:

- Water body type,
- Water current velocity,
- Water depth,
- Wave height, and
- Shore type.

Generally, sediment berms, dikes and dams will most often be used to protect small coastal inlets or perhaps tidal channels serving wetlands and marshes when these channels are accessible. The object of berms, dikes and dams is to keep oil outside an inlet because there are often abundant natural resources and economically significant areas that use the sheltered waters within.

Occasionally, dikes and dams have been used across a channel to contain the oil within a portion of marsh in order to prevent widespread contamination of other resources.

Dikes and Dams are not practical when currents are great, waters are deep, and waves are large. Also, beaches with abundant sand are generally the most suitable for building dikes and dams. Berms can be built above the active beach face to prevent oil contamination of high beach during spring tides. Alternative strategies should be prepared and the necessary supplies and equipment in place should a berm, dike, or dam fail.

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3220.50 On-Water Recovery

Oil removal/recovery in open water is accomplished through the use of skimming devices once the oil has been contained. Skimmers can be freestanding in which the skimmer is a separate piece of equipment which pumps the oil-water mixture from the contained surface into tanks on a vessel. These skimmers are usually driven by hydraulic units on board a vessel. Self-propelled skimmers have a skimmer as an integral part of the vessel. The skimming vessel positions itself at the head of a concentrated or contained pool of oil and recovers the oil into tanks on board the vessel. There is also a type of skimmer in which the weir or collection zone of the skimmer is an integral part of the boom which is close to the skimmer.

Vessels of Opportunity (VOO), such as fishing vessels, may be used to deploy or tow boom and, depending on the size of the vessel, be equipped with skimming equipment. They need to have adequate deck space and lifting cranes to carry the necessary equipment. The Coast Guard's Vessel of Opportunity Skimming System (VOSS) can be deployed on a variety of vessels. Locations of VOSS can be found in Chapter 9000, Appendix R, and Area Response Resource Inventory.

In the MSU Port Arthur and Lake Charles area FOSC zone it is not uncommon to encounter currents in excess of three miles per hour. With appropriate skimmer operations, it is possible to recover spilled oil in these high current areas. Standard skimming techniques must be modified somewhat to optimize oil recovery.

3220.51 High Current Environments

To be successful, most containment and skimming systems must encounter oil at speeds of less than one knot. Typically skimmers are operated in conjunction with containment boom. If oil encounters the boom/skimming system with a perpendicular velocity greater than 0.7 knots, the oil will carry under the boom and be lost. Therefore, the most important consideration for skimming in high currents is to keep the speed of the skimming system below one knot relative to the water's surface.

As a basic example: A skimmer pointed upstream in a 5 knot current would actually be proceeding downstream or backwards at four knots to keep its velocity relative to the water's surface at one knot. Gauging a skimmers velocity relative to the water's surface can be somewhat difficult. Often the most reliable method is for the skimmer operator to closely monitor the skimming system. They should look for signs of oil entrainment as well as ensuring the integrity of the containment system. As current speeds change so must the speed of the skimmer. The skimmer monitoring can be aided by using a helicopter observer. The Observer can tell is oil is being lost by the skimmer as well as direct the skimmer to the best skimming location.

Boom is often deployed in front of the skimmers forming a V thus directing oil into the skimmer. The practice increases the area being covered by the skimmer. Ideally this V should be as wide as possible. In high currents, as the V width is increased the speed of the oil encountering the boom perpendicularly is increased.

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Oil will spread more quickly in the direction of the current flow; skimmers should operate in an up and down stream orientation. The oil slick will be elongated in the direction of the currents. Skimmers will encounter the most oil as they proceed up and down stream within the slick. Operating back and forth across stream and across the slick will result in sub-optimal recovery efficiency.

3220.52 Near-Shore/Shallow Water

Oil recovery techniques and equipment are different in near-shore/shallow water locations that open water. Shallow draft vessels and smaller boom and skimmers are used in these situations. These vessels can maneuver into tight places behind and under wharfs or in sloughs and can actually skim next to shore in may near-shore locations.

Strategies for near-shore cleanup can differ depending on the depth of the water and the location. Near-shore operations, within a bay or inlet, will also require shallow draft vessels, workboats, and skimmers. However, the vessels may only be operable at high tide. At or near low tide, the operation may evolve into a shoreline cleanup operation. Any boom towing boats or skimmers must be able to withstand going aground without sustaining major damage.

Coastal shallow water or near-shore strategies will differ in certain respects. In addition to the need for small, shallow draft vessels and/or specialized vessels may also be needed. The safety of personnel involved in these operations is the IC/UC's paramount concern.

3220.53 Non-floating Oils Recovery and Protection

Non-floating oil that is spilled and transported subsurface either remains suspended in the water column or is deposited on the seabed, usually after interaction with suspended sediments or sand. Different strategies for containing these oils can depend on the location of the oil.
The recovery of sunken oil has proven to be very difficult and expensive because the oil is usually widely dispersed. Several of the most widely used recovery methods are manual removal, pump and vacuum systems, nets and trawls, dredging, and onshore recovery.

For specific containment and recovery methods refer to Chapter 3 of the National Academy of Sciences (NAS) "Spills of Non-floating Oils: Risk and Response" contained in Chapter 9000 Appendix U.

3220.54 Shore-Side Recovery

There are predictable locales where recover efforts can be optimized at shorelines. There are two situations where oil collection should be vigorously attempted at the shoreline:

- Places where oil naturally collects at the shoreline because of winds and currents
- Diversion and capture of oil as it flows past or along the shoreline and points with low environmental sensitivity

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Oil is a substance that spreads primarily in two dimensions on the water surface while water moves in three dimensions; oil will spread thin, but it will also accumulate at predictable locales; it will accumulate wherever water has downward currents: such as tide rips along mud flats, and at windward coves.

3220.55 Natural Collection Points

A list of pre-identified natural collection points are listed in the following table. Information not contained in the following table includes Barge Staging Areas which create natural collection areas for a spill on the Mississippi River. Responders are encouraged to also consider barge staging areas in the vicinity of a response for collection/pocketing of oil.

The Operations Section is organized as follows may be comprised of any or all of the below Branches, Groups and Divisions:

- **Operations Section**
  The Operations Section is responsible for managing all tactical operations at an incident. The buildup of the Operations Section is generally dictated by the number of tactical resources involved and span of control considerations.

- **Staging Area Manager**
  Staging Areas are locations set up at an incident where resources can be placed while awaiting a tactical assignment.

- **Recovery and Protection Branch**
  This branch is responsible for the deployment of equipment, the recovery of pollutants from the environment.

- **Protection Group**
  This group is responsible for the deployment and maintenance of equipment deployed to prevent areas from becoming contaminated.
- **On-Water Recovery Group**
  This group is responsible for the deployment and maintenance of equipment deployed in the On-Water environment.

- **Shore side Recovery Group**
  This group is responsible for the deployment and maintenance of equipment deployed in the shore side environment.

- **Disposal Group**
  This group is responsible for the removal and final disposition of materials collected and contaminated during the incident.

- **Decontamination (DECON) Group**

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This group is responsible for the cleaning of equipment contaminated during the incident.

- **Emergency Response Branch**
  This branch is responsible for responding to the emergent issues that occur during the incident.

- **Search and Rescue (SAR) Group**
  This group is responsible for search and rescue operations that occur during the incident.

- **Salvage Group**
  This group is responsible for salvage and recovery operations that occur during the incident.

- **Fire Suppression Group**
  This group is responsible for the fighting of fires that occur during the incident.

- **Hazardous Materials (HAZMAT) Group**
  This group is responsible for coordinating the response to Hazardous Materials (HAZMAT) and Substances (HAZSUB) during the incident.

- **Emergency Medical Services (EMS) Group**
  This group is responsible for the recovery and evacuation of persons affected by the incident.

- **Law Enforcement Group**
  This group is responsible for the law enforcement support needed during the incident.

- **Air Operations Branch**
  When activated, the Air Operations Branch is responsible for managing all air operations at an incident. This includes both tactical and logistical operations. Prior to activation, management of aircraft operations is the responsibility of the Operations Section Chief.

- **Air Tactical Group**
  This group is responsible for coordinating the airborne tactical operations of fixed and/or rotary-wing aircraft operating on an incident.

- **Helicopter Coordinator**
  This person is responsible for the coordinating the actions of rotary-wing aircraft assigned to the incident.

- **Fixed Wing Coordinator**

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This person is responsible for the coordinating the actions of fixed wing aircraft assigned to the incident.

- **Air Support Group**
  This group provides logistical support for all aircraft assigned to an incident.

- **Wildlife Branch**

- **Wildlife Recovery Group**
  This group is responsible for the rescue and transport of animals trapped by the incident and their transport to the rehabilitation center

- **Wildlife Rehabilitation Center**
  This is where animals trapped by the incident are taken for treatment and recovery.

3220.56 Volunteers

In a spill response, the Unified Command may choose to utilize volunteers who have expressed a willingness to assist with wildlife response during an oil spill. These volunteers must be under the direction of a trained and experienced supervisor. Individuals working directly with wildlife will be given a short training course on proper handling and safety techniques. Those working with any wildlife that has not been cleaned of oil must also complete an additional four-hour HAZWOPER awareness level training course, at a minimum, plus additional on-the-job training. For a full description of the volunteer program and the required training and procedures for utilization of volunteers, see the Volunteers Section of the ACP.

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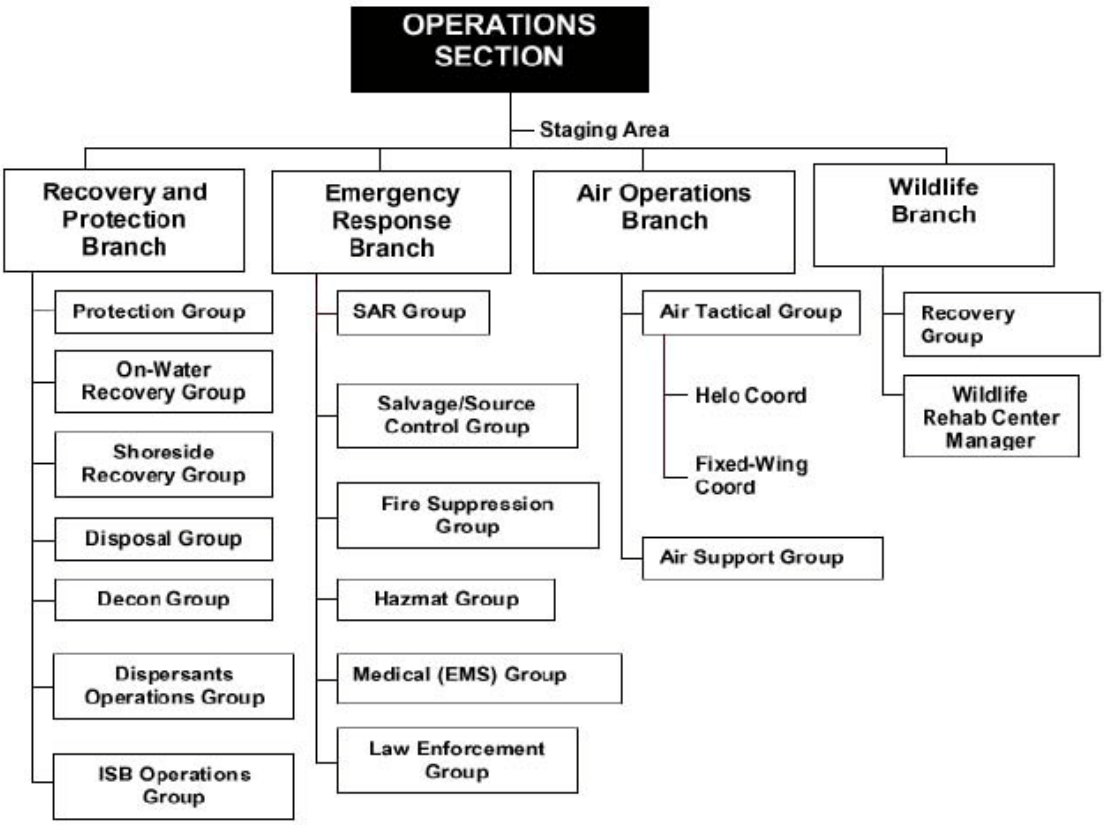

3220.60 Planning process for identification & prioritization of ESA's

The Area Sub-Committee will update any and all changes to appropriate environmentally sensitive areas periodically and adjust response tactics accordingly. The current process for identifying and prioritizing these sensitive areas are researched (to include operational field surveys) in conjunction with Texas General Land Office and Texas Fish & Wildlife representatives and are referenced at:
http://gisweb.glo.texas.gov/atlas/atlas/acp/portarthur/pa_grp_index_map.pdf

3220.70 Process for identifying protection priorities during response

During a response, all of the appropriate environmentally sensitive areas will be referenced and a determination will be made as to which areas will be directly affected, which areas could potentially be affected, and which areas have no threat of being affected. The previously referenced mapped strategies will be printed for guidance and operations will work closely with planning to identify any special response considerations.

3220.80 Formal and Informal Consultation under the Endangered Species Act, Section 73224

The Endangered Species Consultation Handbook, located at: http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf addresses

the major consultation processes, including informal, formal, emergency, and special consultations.

The section 7 consultation program meets the consultation needs of all federal agencies involved on a response. They also provide information about listed, proposed, and candidate species and critical habitats to Federal agencies planning projects, and those applying for Federal permits and licenses.

3220.90 Historical, Cultural, & Archaeological Resources at Risk

The following landmarks could be at risk in the event of an oil spill, and special consideration should be taken to ensure their preservation as part of the areas history and culture as per 36 CFR Part 800.

When trying to protect historical landmarks the Texas
Historical Commission (THC) should be consulted.
Texas Historical Commission
Phone: 512-463-6100
Email: thc@thc.state.tx.us
Address: P.O. Box 12276 Austin, TX 78711-2276

For Louisiana:
Office of Historic Preservation
Capital Annex Building
1051 North Third Street
Baton Rouge, Louisiana 70802
Mailing; P.O. Box 44247 Baton Rouge LA 70804
Phone: (225) 342-8160
Fax: (225) 219-0765

Historical markers include but are not limited to:

- Atakapan Indians of Orange County at Front Ave. & the end of 4th St., Ochiltree, River walk Park, Orange.
- Site of End of the Line Station at Front Ave. at 23rdSt.
- Alexander Gilmer located at Evergreen Cemetery, Border and Jackson St.
- Old Niblett's Bluff, C.S.A. Front and Third Streets

3220.100 Area Committee Stakeholder Names, Organization & Contact Information

Refer to sections 1320, 1330, 9210 and 9220 of this document.

3230 Response & Containment Strategies

Tactical Response options include:

- Immediately boom canals, water intakes, and outlets.
- Protect vegetated shorelines before non-vegetated shorelines.
- Protect natural shoreline before modified shoreline.
- Protect public lands before private lands.

3230.10 Near Spill Containment and Recovery

The most effective strategy to aid oil collection and removal is containment. All oil removal and recovery techniques are most effective where oil is thickest. Typically, this is at or near the release site. The most effective use of resources is to insure containment at the primary release site. This must include surrounding the release site with impervious oil barriers including multiple layers of boom as necessary. As oil escapes containment it becomes increasingly difficult to recover and recovery success diminishes rapidly. Inevitable oil escapes containment, and additional measures must be included to deal with oil escaping containment. This is particularly a necessary where oil booming is subject to winds and waves or strong: oil entrains or is splashed over boom. To counter oil escapement, deployments should include preplanning to anticipate and control escapement. Two measures must be incorporated. First, configure containment booms to focus and limit any oil escapement to preplanned points along the boom perimeter, for both the ebb and flood tides; these points should be selected to optimize recovery of any escaping oil. A skimmer should then be positioned just downstream from these locations where it can continue skimming escaping oil throughout the 24 hour tide cycle regardless of light or weather conditions. This is very practical in bay conditions where both boom and skimmers can be positioned by anchoring.

In open ocean conditions it is more difficult to implement. Second, employ secondary booming in the spill area. This strategy is most effective in the near shore areas typical in bays, though opportunities may occur in open water to slow spread from the primary containment area. In bays, spill locations are often near shorelines. Shorelines act as containment since they prevent free movement of oil. Also, winds and tides often drive oil toward the shore. Once oil is ashore or in a low current area, contain and recover it there, if possible, to minimize its movement and contamination of other locales. Wherever possible every attempt should be made to contain and collect oil along shorelines which are already oiled. Shores, which have already been impacted, can no longer be protected; therefore, use them as containment and recovery sites. The objective then changes from protection to containment and preventing oil escape to non-oiled areas. If the oil moves from a near shore spill site to open water, the recovery potential will diminish dramatically. As with primary containment, escapement secondary containment booms are predictable and skimmers should be positioned to capture oil throughout the day and night, particularly during the ebb tide. These secondary shoreline confinement strategies should always be reviewed with the Resources at Risk Specialist.

3230.20 Offshore/Open Water Operations

Oil removal/recovery in open water is accomplished through the use of skimming devices once the oil has been contained. Skimmers can be freestanding in which the skimmer is a separate piece of equipment which pumps the oil-water mixture from the contained surface into tanks on a vessel. These skimmers are usually driven by hydraulic units on

board a vessel. Self-propelled skimmers have a skimmer as an integral part of the vessel. The skimming vessel positions itself at the head of a concentrated or contained pool of oil and recovers the oil into tanks on board the vessel. There is also a type of skimmer in which the weir or collection zone of the skimmer is an integral part of the boom which is in contact with the oil. The pumping and oil collection is done on the vessel which is close to the weir skimmer. “Vessels of opportunity”, such as fishing vessels, may be used to deploy or tow boom and, depending on their size, be equipped with skimming equipment. They need to have adequate deck space and lifting cranes tocarry the necessary equipment. The Coast Guard’s Vessel of Opportunity Skimming System (VOSS) could be deployed on a variety of vessels. To be most effective, oil spill recovery equipment must be directed to the location of the thickest oil accumulation. Observers on vessels at water level are unable to see a vast area and are unable to recognize the most optimum skimming locations. Skimming activities are best directed by trained observers aloft in helicopters. One observer may be able to direct several skimming units to optimum skimming locations. During hours of darkness or poor visibility, tracking devices that emit radio location signals can be placed in the spilled oil to trace the oil movement. Remote sensing systems have been developed which can track oil movement even in darkness and poor visibility. The sensor is mounted in an aircraft that over flies the spill area. The sensor systems include Side Looking Airborne Radar (SLAR), infrared and radiometric.

3230.30 Near Shore/Shallow Water

Oil recovery techniques and equipment are different in near shore/shallow water locations than open water. Shallow draft vessels and smaller boom and skimmers are used in these situations. These vessels can maneuver into tight places behind and under wharfs or in sloughs and can actually skim next to shore in many near shore locations. Strategies for near shore cleanup can differ depending on the depth of the water and the location. Near shore operations, within a bay or inlet, will also require shallow draft vessels, workboats and skimmers. However, the vessels may only be operable at high tide. At or near low tide, the operation may evolve into a shoreline cleanup operation. Any boom towing boats or skimmers must be able to withstand going aground without sustaining major damage. Coastal shallow water or near shore strategies will differ in certain respects. In addition to the need for small, shallow draft vessels, specialized vessels may also be needed. Once again, the safety of personnel involved in these operations is the Unified Command’s paramount concern.

3230.40 Shoreline Collection

There are predictable locales where recovery efforts can be optimized at shorelines. Since oil re-accumulates, there are two situations where oil collection should be vigorously attempted at the shoreline: 1) places where oil naturally collects at the shoreline because of winds and currents; and 2) diversion and capture of oil as it flows past or along shorelines and points with low environmental sensitivities. (The reason oil recollects is that oil is a substance that spreads primarily in two dimensions on the water surface while water moves in three dimensions; oil will spread and thin, but it will also re-accumulates at predictable locales; it will accumulate wherever water has downward currents: such as

tide rips along mud flats, and at windward coves.) Specific shoreline cleanup tactics for sensitive areas are located online at http://gisweb.glo.texas.gov/atlas/atlas/acp/portarthur/pa_grp_index_map.pdf and available at Coast Guard Marine Safety Unit Port Arthur.

3230.41 Natural collection points

For debris are on all shorelines. These points are so predictable that it is very difficult to keep oil off even with pre-deployments. An alternative is to anticipate such collections and leverage the opportunity for oil capture. This entails developing the site for collection while limiting and focusing undesirable impacts to the habitat. Though this entails risk, the trade-off is likely to be nominal since the impacts are virtually inevitable.

3230.42 Diversions to shores

With low environmental sensitivities are a desirable alternative to the unmitigated spread of oil. As described above, oil spreads rapidly on open water and effectual on-water skimming is difficult in a high current environment. Diversion can shunt oil out of the high current and into quiet water capture points at shore. It can be an effective addition to on-water skimming recovery. Here are the operational considerations when establishing a shoreline collection site when oil is moving along or near shore. Boom sound may be positioned at an acute angle to the current to move oil toward the shore collection. Cascading boom arrangements may be necessary. Once oil is at the shoreline, it may be necessary to deploy additional boom to trap the accumulated oil at the shore collection site when the tide reverses. Good land accessibility is important part of selecting capture sites since it permits site support and easy removal of collected oil. Though some natural collection sites may have poor land access, they may be important accumulation points, which can be exploited effectively via water. Deployments of this type should be made only per recommendation of the ACP, Incident Action Plan or with the direction of the Resources at Risk Specialist and the Unified Command.

3230.50 Skimming Operations

With appropriate skimmer operations, it is possible to recover spilled oil in this high current area. Standard skimming techniques must be modified somewhat to optimize oil recovery.

To be successful, most containment and skimming systems must encounter oil at speeds of less than one knot. Typically skimmers are operated in conjunction with containment boom. If oil encounters the boom/skimming system with a perpendicular velocity greater than one knot, the oil will carry under the boom and be lost. Therefore, the most important consideration for skimming in high currents is to keep the speed of the skimming system below one knot relative to the water’s surface. As a basic example: A skimmer pointed upstream in a 5 knot current would actually be proceeding downstream or backwards at four knots to keep its velocity relative to the water’s surface at one knot. Gauging a skimmer’s velocity relative to the water’s surface can be somewhat difficult. Often the most reliable method is for the skimmer operator to closely monitor the skimming system. They should look for signs of oil undercarry as well as ensuring the

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integrity of the containment system. As current speeds change so must the speed of the skimmer.

The skimmer monitoring can be aided by using a helicopter observer. The observer can tell if oil is being lost by the skimmer as well as direct the skimmer to the best skimming location. Oftentimes boom is deployed in front of the skimmers forming a V thus directing oil into the skimmer. The practice increases the area being covered by the skimmer. Ideally this V should be as wide as possible. In high currents, as the V width is increased the speed of the oil encountering the boom perpendicularly is increased to avoid oil undercarry. In that oil will spread most quickly in the direction of the current flow, skimmers should operate in an up and down-stream orientation. The oil slick will be elongated in the direction of the currents. Skimmers will encounter the most oil as they proceed up and down stream within the slick. Operating back and forth across stream and across the slick will result in sub-optimal recovery efficiency.

More specific information on the suggested containment and recovery strategies can be found in The Geographic Response Plan map index for the SE Texas and SW Louisiana Area Contingency Plan and is found online to http://gisweb.glo.texas.gov/atlas/masterpage.pdf and available at Coast Guard Marine Safety Unit Port Arthur.

3230.10 Type & capability of response equipment

Refer to Section 3500, 3510, and 3510.1 of this document.

3230.20 Staging Area Information

Refer to Section 3500, 3510, and 3510.1of this document.

3230.30 Boom / Skimmer Configurations &Deployment Strategies

For Booming strategies, Skimmer Configurations and Deployment strategies for the coastlines of Southeast Texas and Southwest Louisiana , Please refer to the South East Texas/Southwest Louisiana individual Geographic Response Plans (GRP) located on the latest version of the Texas General Land Office Tool Kit which can be accessed on the web at;
http://gisweb.glo.texas.gov/atlas/atlas/acp/portarthur/pa_grp_index_map.pdf

3240 Disposal

This section identifies storage and disposal options for oily waste generated by a significant oil release. It is the goal of the Area Committee to have oil removed from impacted areas as soon as possible and to ultimately treat or dispose of the oily waste in the most efficient and environmentally sound manner.

3240.10 Waste Types Expected

The following wastes may be generated during the response to an oil spill:

- Oil (petroleum product, crude or refined)
- Oil and seawater mixture
- Oil and freshwater mixture
- Oil saturated booms/absorbent pads

- Oil-contaminated debris, e.g. palm fronds, plant, etc.
- Petroleum contaminated soils, i.e. sand
- Oil contaminated wildlife (dead)

Quantities of each will vary depending on location of spill, size, and type of petroleum product.

3240.20 Waste Handling and Disposal Instructions

Waste disposal procedures must be followed closely. Documentation of waste volumes and oil recovered is very important. Refer to Appendix F Waste Management Plan for further information on waste handling and disposal instructions.

3240.30 Oil, Oil and Seawater, Oil and Freshwater

- Collect material with vacuum truck
- Transport to location of bulk storage tank
- Document volumes of oil and water recovered (tank gauging)

3240.40 Oily Booms and Absorbent Pads, Oil-Contaminated Debris

- Place oiled materials into plastic bags and then into visqueen-lined roll-offs or dumpsters
- Transport to central storage area
- Scale all loads into central storage area (indicate type of waste on scale ticket, obtain tare weight after off-loading waste)

3240.50 Oily Soil

- Place into visqueen-lined dump trucks
- Decontaminate equipment used to excavate soil.
- Transport to central storage area
- Scale all loads into central storage area

3240.60 Dead Wildlife

The recovery of oiled wildlife is the responsibility of the Wildlife Branch of the Operations Section. Before removing oiled wildlife get specific guidance from the

Wildlife Branch In general:

- Collect in plastic bags
- Label: date, time animal found, location found, and person finding animal (name and phone number)
- Put on ice (chill) do not freeze

3240.70 Special Instructions

- Label all containers (roll-offs, dumpsters, etc.) with:
- Type of material (soiled boom, absorbent pads, etc.)

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- Location (waste generation site)
- Date
- Name and phone number of contact person
- Include the statement Recovered oil type contaminated material

** All Hazardous material that is disposed of will be required to have a hazardous waste manifest that will track all steps of disposal process.*

3300 Emergency Response

3310 Search and Rescue

The Search and Rescue (SAR) Group is responsible for prioritization and coordination of all SAR missions directly related to a specific incident. The Search and Rescue Group Supervisor reports to the Emergency Response Branch Director. All SAR efforts will be coordinated through Sector Houston Galveston via MSU Port Arthur's OPCEN (409-723-6500) liaison.

3320 Law Enforcement

For information on law enforcement issues please reference section 5220.41 of this plan.

3330 EMS

The Emergency Medical Services (EMS) Group is responsible for coordinating and directing all emergency medical services related to the incident. The EMS Group Supervisor reports to the Emergency Response Branch Director.

3330.10 Emergency Medical Services

On water recovery may also include Diving Operations. Specific guidelines for supplied air diving are listed below.

3330.20 USCG Diving Operations Inspection Guide

All references are from 46Code of Federal Regulations

The inspection of a dive site can be conducted much like an inspection of a barge or vessel. The three main sections of interest are documentation, personnel and equipment.

Applicability –The outer continental shelf, and from any vessels required to have a COI regardless of their geographic location. **46CFR Part 197.202 page 423**

Designation of Person-in –charge – The diving supervisor must be designated in writing. No law or rule that I have seen states what the form is to look like. I have seen memorandums style letters, and I have seen the designation be as simply as a supervisor's name on a dive log (dive logs are legal documents). The dive supervisor must be known

not only to the dive crew but also all stakeholders in the dive operation. **46 CFR Part 197.210 page 425**

Operations Manual- 46 CFR Part 197.420 page 433 This must be on the dive site. It will be located in the dive shack or near the rack if the jobsite does not have a dive shack. Many companies label this as the "Safe practice manual". Whatever it is called the following information must be provided; Safety procedures, personnel assignments, emergency procedures, and operating procedures with respect to use of burning, welding and underwater tools.

Logbook-46 CFR part 197.480 this does not have to be a BOOK, and in most cases it is not. Dive supervisors will have a running log, and a stack of dive logs. Individual divers will have their logbooks with the logged dives that they have made throughout their careers. The dive logs MUST have the following info;

- Date, Location of dive, mode of diving (scuba, air, mixed gas, or SAT)
- The names of the supervisor diver, standby diver, tender, and standby tender
- Weather condition, water visibility, currents, temperature
- The type of work being performed
- Time diver leaves surface, leaves bottom, reaches surface, times at each water stop, repeat group, and surface interval if less than 24hours from last dive

Copy of American Red Cross Standard 1st Aid handbook 46 CFR 197.314 NOT APPLICABLE if **dive is on air, shallower than 130 AND within the No D limits**

The CFR states that the American Red Cross, however I know many companies use American Heart Association, DAN, YMCA or another CPR & 1st aid provider to do their training. It is my OPINION that any are sufficient to meet the intent of the regulation. I have at one point or another been CPR certified through DAN, Red Cross, and Heart Association and from my own experience they are all very similar in procedure and effectiveness.

3330.30 Dive Station

The following equipment MUST be at the dive station and continuously monitored throughout the duration of each dive. Gages & Timekeeping device, logs and the applicable dive tables

Gages 46 CFR part 197.318 page 427 A gage indicating diver depths must be at the dive location for surface supplied divers. This is called the pneumofathometer or Pnuemo gage.

Timekeeping device 46 CFR part 197.318 page 427 Offshore industry standard is TWO stopwatches on site. This is in case one has a dead battery in the middle of a dive. It is also Standard practice on decompression dives, especially when running a chamber to synchronize watches with the Tenders prior to every shift. The tenders operate the chamber, therefore tenders or any chamber operator MUST have their watches synchronized with dive supervisors.

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Dive Tables applicable to dive 197.314 page 426 bottom of page.

Treatment Tables 197.314 page 426 bottom of page also.

Primary Breathing Supply part 197.432 (B)

Secondary Breathing Supply part 197.432(e) required for dives deeper than 130fsw. Industry standard is to have a rack or manifold with Primary air from a compressor, secondary air from a separate compressor and high pressure air bottles as a third air supply. The HP (high pressure) air will usually be labeled on the rack as emergency or HP air. All valves should be labeled on the rack.

3330.40 Equipment on Deck

Air compressors system part 197.310 the system must have a pressure vessel (known as volume tank) that has check valve on inlet side, pressure gage, a relief valve, and a drain valve.

Air quality tests part 197.450 page 435 Every breathing air compressor must be tested for air quality every 6 months.

Dive Hoses part 197.312 page 426. Hoses will be made up of communications wire, strength line, pneumofathometer hose and breathing gas hose.

Diving Helmets part 197.322 page 427. The dive hats that will be encountered will be a Superlight, miller or Gorski. Each of these brands meets the requirements. They are all **REQUIRED** to be inspected by the **manufacturer annually**. Each Dive had should have a sticker on the hat, or the certificate at the dive site.

Divers Safety harness part 197.324 page 427. Look for a positive buckling system and ensure that the hose is not being pulled by the helmet. This harness will have the emergency gas bottle (the bailout) married into it.

PVHO-General (the chamber, or the can) part 197.328 page 427 and 197.332 page 429 must be built in accordance with ASME PVHO-1. On the site inspectors should look to see that chambers have shut off valve located within a foot of all pipe penetrating pressure boundaries. Have a two way communications between the chamber operator and the diver in the chamber (most often sound powered phones). Look for pressure gage for each compartment of chamber. Also inspectors should ensure that a person can lay flat in the chamber. There should be portholes for operator to see the diver in chamber.

3330.50 Guidelines for reviewing a salvage plan

For any salvage operation several different techniques can be used to safely achieve the goal. These guidelines intend to show the types of questions that should be asked while formulating a salvage plan and in some cases used for selecting the best plan for a specific operation.

Assessment Phase

This may be done with side scan sonar, remote operated vehicles or divers, or any other means that may gather the required information.

If divers are utilized ensure that they are professional hard hat divers familiar that utilize surface supplied equipment. The entire dive team must have certificates from a commercial dive school or the military (US Navy Dive School 2nd class minimum). There is no government issued license for divers, however the International Marine Contractors Association (IMCA) and the Association of Diving Contractors (ADC) are the most recognized and accepted association for commercial divers. The ADC members carry experience level cards rating from entry level tender to dive supervisor.

Questions to Ask during the Assessment phase

- Is the vessel a hazard to health, Safety or the Environment?

  If yes then contact spill response and or medical teams.

- Vessel description
  Not only get an idea of size & weight but also look for things like; structural integrity of vessel or object to be salvaged, will object shift or move during rigging process, find out condition of cargo (if any). Will cargo shift or leak during lift?

- Review an appropriate incident action plan.
  When reviewing the plan focus on key elements such as; Is the plan designed for an inland application such as shallow harbors with minimal industrial equipment or is it a plan utilizing tugs, barges and heavy lift cranes?

Salvage Response Plan must include these elements;

1. Does the salvage team intend to use heavy lift crane or lift bags?

If lift bags are the method of recovery then ask the following questions;

- Why are lift bags used instead of a heavy lift crane? Answers may include cost, time efficiency or unavailability of crane.
- Is the water deep enough to raise object to surface not just off bottom?
- Once object is on surface what is the next phase of salvage?
- Tow object? Dewater? If dewatering while lift bags are supporting object how will the salvage team stop load from shifting during dewatering process? Are salvage team members familiar with lift bag characteristics?

Review the lift bag method thoroughly. A salvage operation can be accomplished safely and efficiently using lift bags, however this is the riskier option. Verify that the divers are familiar with the lift bags. Lift bags are one of the leading causes of fatalities among divers. If a heavy lift crane is utilized ask;

- How does the salvage team intend to lift object? One lift or multiple? If it is multiple lifts is object being cut? Is burning required, cold cuts, diamond wire saw?
- Are rigging points established on object?

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- What other tools are required? Examples are burning holes, welding pad-eyes or jetting underneath a section of the object. Ensure the required equipment is on site.
- Verify that crane/rigging is rated for lift.
- Also ask if the crane has a stable platform. Offshore cranes will be on a barge, however inland channels may be too narrow or shallow for a heavy lift crane barge.
- Once object is on the surface what is the next step?
- Float or tow object

Review route and destination. Ensure that the object is in condition to travel the route. Be aware of potential hazards on route, and contingencies for object that may become grounded or sink en route to destination.

- Stow object on Material Barge

3330.60 Salvage Survey

Vessels Name: _____

Official Number: _____

Vessel Type: _____

Flag: _____

Owner/Operator: _____ Ph. _____ Builder:_____

Class Society: _____ Year:_____

L _____ B _____ D_____

Brief description of casualty:

a. Date/Time of casualty:
_____

b. Extent of damage:
_____

c. Hazardous Cargo Spill?
_____

d. Structural details (double bottom):
_____

e. Number of Tanks/Holds (tank soundings):
_____

f. Drafts (strandings) before Fwd: Aft: _____

g. Drafts (strandings) after Fwd: Aft: _____

h. Tides at time of casualty: _____

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i. Type of bottom (mud, sand): _____

j. Condition of vessel's propulsion: _____

k. Aim/Intent of salvage operation:
_____

- If vessel is foreign flag, then USCG will need plans such as Lines Plan, General Arrangement, Tank Tables, T&S Booklet, etc… for detailed calculations

3400 Air Ops

The Air Operations Branch is primarily responsible for preparing the air operations portion of the Incident Action Plan. The Incident Action Plan will reflect agency restrictions that have an impact on the operational capability or utilization of resources such as night flying or hours per pilot. After the Incident Action Plan is approved, air operations is responsible for implementing its strategic aspects, those that relate to the overall incident strategy as opposed to those that pertain to tactical operations like specific target selection. Additionally, the Air Operations Branch Director is responsible for providing logistical support to helicopters operating on the incident. The Air Operations Branch Director reports to the Operations Section Chief.

3410 Air Tactical

This enclosure describes the duties of the Air Tactical Group and the two coordinators that report to the Air Tactical Group Supervisor, the Helicopter Coordinator and the Fixed Wing Coordinator. The Air Tactical Group is primarily responsible for the coordination and scheduling of aircraft operations intended to locate, observe, track, survey, support dispersant applications, or other deliverable response application techniques, or report on the incident situation when fixed and/or rotary-wing aircraft are airborne at an incident. These coordination activities are performed by the Air Tactical Group Supervisor while airborne. The Air Tactical Group Supervisor reports to the Air Operations Branch Director.

3410.10 Helicopter Coordinator

The Helicopter Coordinator is primarily responsible for the coordination of all tactical or logistical helicopter missions while in flight over the mission. The Helicopter Coordinator is also responsible for the coordination and scheduling of helicopter operations intended to locate, observe, track, survey, or report on the incident situation. The Helicopter Coordinator coordinates the application of dispersants, in-situ burning agents and bioremediation agents.

3410.20 Fixed Wing Coordinator

The Fixed Wing Coordinator is primarily responsible for the coordination of assigned airborne fixed-wing aircraft operations at the incident. The Fixed Wing Coordinator is also responsible for the scheduling of fixed wing operations intended to locate, observe, track, survey, or report on the incident situation. The Fixed Wing Coordinator coordinates the application of dispersants, in-situ burning agents, and bioremediation agents.

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3410.30 Aerial Surveillance

When it is required that air surveillance be conducted for a discharge of oil, the Responsible Party will be asked to provide those services and a qualified CG representative will monitor the progress and assess the extent of the damage.

3410.40 Aerial Dispersant Application – Refer to the Regional Response Plan for the use of dispersants

3410.50 Procedures for Temporary Flight Restrictions

A temporary Flight Restriction (TFR) Zone is similar in nature to a COTP safety zone in the maritime environment, and is normally used only when absolutely necessary. There are three situations in which it may be authorized:

- To protect persons and property in the air and on the surface hazards,
- To provide a safe environment for disaster relief aircraft, and
- To prevent an unsafe congestion of sightseeing and other aircraft above an incident or event that may generate a high degree of public interest.

To obtain a TFR, call the Area Manager at Houston Air Route Traffic Control Center; which supervises all FAA facilities in southern Texas, Louisiana, southern Mississippi, southwestern Alabama, and areas in the Gulf of Mexico.

The following information is required when requesting a TFR:

- Name and organization of person recommending or requesting TFR,
- Brief description of the situation,
- Location, size, and altitudes of the restricted area requested,
- Estimated duration of restrictions, and
- Name of agency responsible for on-scene emergency activities and telephone of other communication contact.

3410.60 Permanent Area Restrictions – Not applicable for this COTP zone

3420 Air Support

The Air Support Group is primarily responsible for supporting and managing helibase and heliport operations, and maintaining liaison with fixed-wing air bases. For information on all airports, helispots, helicopter providers, and fuel maintenance sources please reference section 5220.5 of this plan.

3420.10 Airports

Southeast Texas Regional Airport
4875 Parker

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Beaumont, TX 77705
Orange County Airport
2614 Highway 87 South,
Orange, TX
Phone: (409) 883-7740

Jack Brooks Regional Airport
N. Hwy 69 Nederland,
Nederland, TX 77705
Phone: (409) 719-4900

3420.20 Coast Guard Aircraft

Air Support for this area is provided by Sector Houston / Galveston.

3420.21 DOD Aircraft Support

The Coast Guard entered into a MOA with the DOD to provide assistance for dispersant application via fixed wing platforms. Any requests for these or other DOD aviation assets must be coordinated through the Director of Military Support (DOMS) which is the office with primary responsibility.
DOMS (703) 697-0218
Pentagon, BF741 (703) 695-7313 (fax)
Washington, DC 20310-0400

3420.22 Civil Air Patrol (CAP)

The Civil Air Patrol is the Auxiliary of the US Air Force. CAP has a wing in every state. CAP headquarters are at Maxwell Air Force Base in Montgomery, Alabama. CAP is volunteer organization that consists of 55,000 members and 530 corporate aircraft nationwide. CAP primarily operates single engine Cessna 172s and 182s, and a few twin engine aircraft. Member-owned aircraft are also available. Civil Air Patrol, Inc., a congressionally chartered nonprofit corporation, owns all CAP corporate aircraft. National Headquarters assigns its fleet to the various wings (states). Congress funds civil Air Patrol, Inc. through DOD appropriations. The CAP provides aviation services that compliment the waterside services provided by the Coast Guard Auxiliary.

3420.23 Civil Air Patrol (Cap) Contact Info

Contact Pete Kalisky at CAP Headquarters:
HQ CAP and HQ CAP-USAF: (334) 953-4225/4223/4232 (888) 211-1812
Phone: (334) 953-4225
E-mail: pkalisky@capnhq.gov
Visit the CAP webpage: http://www.cap.gov

3500 Staging Areas

Staging areas are locations where incident personnel and equipment are assigned awaiting tactical assignment. Pre-identified staging areas should be established prior to an incident to allow for a smoother transition going into a response and to minimize

downtime while trying to get a staging area established. For information on security at sites please reference section 5220.41 of this plan.

3510 Pre-Identified Staging Areas

Texas

City of Orange Boat Ramps
Orange, TX
W. Harry Reed Ave.

Port Neches Park
Port Neches, TX

End of Merriman Drive - Cross Streets – Merriman and Lee
Broadway Boat Ramp
Sabine Pass, TX
End of Broadway St.

Mesquite Point State Park
Mesquite Point, TX
Hwy 82, South End of Pleasure Island
29-45.871N 093-53.855W

Louisiana

Prien Lake Park and Boat Ramp
Lake Charles, LA
Base of I-210 Bridge – Cross streets – Ihles Road and Park Drive
30-11.43N 093-16.08W

3510.10 Pre-Identified Boat Ramps

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Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Can handle 20' and smaller boats Ramps in excellent condition
Availability restrictions:	None
Location:	Where Pine Street meets Neches River in Beaumont, TX.

Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Can handle 20' and smaller boats Ramps in excellent condition Has 345'X190' parking lot
Availability restrictions:	None
Location:	Port Neches Park at end of Merriman Street in Port Neches, TX

Type of equipment:	Boat Ramps
Quantity:	1
Equipment capabilities:	Cannot handle 25' and larger boats Ramps in excellent condition Has 315'X 80' parking lot
Availability restrictions:	None
Location:	Under the West Port Arthur Bridge on the GIWW

Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Can handle 20’ and smaller boats Ramps in excellent condition Has 251'X 250' X 25' parking lot
Availability restrictions:	None
Location:	South end Sabine Lake at the Hwy 82 bridge separating TX and LA

Type of equipment:	Boat Ramps
Quantity:	3
Equipment capabilities:	Can handle 25' and larger boats Ramps in excellent condition Has 285' X 154' parking lot
Availability restrictions:	None
Location:	In Sabine Pass, TX at the end of Broadway Street

Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Can handle 25' and larger boats Ramps in excellent condition Has 260' X 170' parking lot
Availability restrictions:	None
Location:	Located on the East Side of Pleasure Island Marina on Pleasure Island in Port Arthur, TX

Type of equipment:	Boat Ramps
Quantity:	1
Equipment capabilities:	Can handle 25' and smaller boats Ramps in excellent condition Has 75' X 125' parking lot
Availability restrictions:	None
Location:	Located under the Hwy 73 Bridge where it crosses Taylor Bayou in Port Acres in Port Arthur, TX

Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Cannot handle 25' and larger boats

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	Ramps in fair condition Has 75' X 75' parking lot
Availability restrictions:	None
Location:	Located on the underside of I-10 (West Bank) in Orange, TX. Access to Sabine River via old Sabine River Channel, TX
Type of equipment:	Boat Ramps
Quantity:	2
Equipment capabilities:	Can handle 25' and larger boats Ramps in good condition Has 2 acre parking lot
Availability restrictions:	None
Location:	2006 DuPont Drive, Bridge City, TX. Access to Sabine River via Adams Bayou (Orange Boat Club)
Type of equipment:	Boat Ramps
Quantity:	3
Equipment capabilities:	Can handle 25' and smaller boats Ramps in good condition Has 125' X 200' parking lot
Availability restrictions:	None
Location:	FM 1006 where it crosses Adams Bayou Bridge. Access to Adams Bayou
Type of equipment:	Boat Ramps
Quantity:	1
Equipment capabilities:	Can handle 25' and smaller boats Ramps in good condition
Availability restrictions:	None
Location:	Off Hwy 87 at Cow Bayou Bridge
Type of equipment:	Boat Ramps
Quantity:	1
Equipment capabilities:	Can handle 25' and larger boats Ramps in excellent condition
Availability restrictions:	None
Location:	Blue Bird Fish Camp North Farragut and North Simmons (Orange, TX)

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Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Limestone surface
Availability restrictions:	Poor condition

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Location:	Bayou Blanc, Crowley City Park, Crowley, LA
Type of equipment:	Boat Ramps
Quantity:	2 ramps
Equipment capabilities:	Petroflex surface
Availability restrictions:	
Location:	Bayou Plaquemine, Acadia Parish, Hwy 91, 3 miles south of I-10
Type of equipment:	Boat Ramps
Quantity:	2 ramps
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Bayou Queche, Hwy 13, 9 miles south of Crowley, LA
Type of equipment:	Boat Ramps
Quantity:	2 ramps
Equipment capabilities:	Concrete
Availability restrictions:	
Location:	Mermentau River, Hwy 90, Mermentau, LA
Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Alligator Lake, Alligator Park, 3 miles northeast of Starks, LA
Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Bayou Choupique, Hwy 108
Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Bayou Lacassine, 1 mile north of Hayes in Lorraine Park
Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Bell Drainage Canal, Near Rossignol

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Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Calcasieu River, Hwy 3059 in Goose Ferry Park

Type of equipment:	Boat Ramps
Quantity:	1 lane
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Calcasieu River, in Riverside Park off Miller Avenue

Type of equipment:	Boat Ramps
Quantity:	1 lane
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Calcasieu River, on River Road in White Oak Park

Type of equipment:	Boat Ramps
Quantity:	1 lane
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	English Bayou, at end of Old Highway 171

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	English Bayou, off Goodman Road north of I-10

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Houston River, Highway 379 at Anthony Ferry

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Indian Bayou Canal, on Fruge Road, 2 miles north of Calcasieu Parish line.

Type of equipment:	Boat Ramps

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Quantity:	2 lanes
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	GIWW at Hwy 27

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Old River (Sabine) in Nibletts' Bluff Park

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Prien Lake, LaFleur Park off I-210

Type of equipment:	Boat Ramps
Quantity:	10 lanes
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Prien Lake, at Prien Lake Park

Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Sabine River at Old Hwy 90, 10 miles southwest of Vinton, LA

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Vinton Drainage Canal, on Grays Road, 2 miles south of Vinton

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Dirt surface
Availability restrictions:	
Location:	West Fork of Calcasieu River, at Hwy 378

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	West Fork of Calcasieu River, at

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	Sam Houston Jones State Park
Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Calcasieu River, near Cameron Recreational Center
Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Concrete surface
Location:	Calcasieu Ship Channel, right next to Cameron Ferry Terminal on West Side
Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Johnson Bayou, near Johnson Bayou Recreation Center
Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Shell and concrete ramps
Availability restrictions:	
Location:	Mermentau River, at Grand Chenier Park
Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Rockefeller Refuge, at Hwy 82
Type of equipment:	Boat Ramps
Quantity:	5 lanes
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Sabine National Wildlife Refuge, at Hwy 27
Type of equipment:	Boat Ramps
Quantity:	1 ramp
Equipment capabilities:	Unknown surface
Availability restrictions:	
Location:	Sabine Pass Channel, at East Side of Sabine Pass north of Hwy 82
Type of equipment:	Boat Ramps
Quantity:	1 lane ramp

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Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Bayou Lacassine, at Sportsman's Park in Welsh, LA

Type of equipment:	Boat Ramps
Quantity:	2 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Lake Arthur Dredge Canal, 2 blocks west of Main Street in Lake Arthur, LA

Type of equipment:	Boat Ramps
Quantity:	1 lane ramp
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Lake Arthur, at Lake Arthur Marina in Lake Arthur, LA

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	Mermentau River, at Hwy 14, 1 mile South of Lake Arthur, LA

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Concrete surface
Availability restrictions:	
Location:	GIWW at Hwy 333 in Intracoastal City, LA

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Mayer Canal, at Hwy 685, 8 miles Southeast of Abbeville, LA

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Shell surface
Availability restrictions:	
Location:	Schooner Bayou Canal, at Hwy 82, 6 miles south of Forked Lake Island, LA

Type of equipment:	Boat Ramps
Quantity:	2 lanes
Equipment capabilities:	Concrete surface

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Availability restrictions:
Location: Vermilion River, at Hwy 14 bypass in Abbeville, LA

When necessary adequate security and lighting will be requested from the Responsible Party to ensure the safety and security of all equipment and personnel

3600 Wildlife

For information on fish and wildlife please reference Appendix H in section 9000 of this plan.

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