

SCAT, Operations & the Environmental Unit

Jordan Stout

NOAA Scientific Support Coordinator

Office: (510) 437-5344

Cell: (206) 321-3320

24-hour Spill Line: (206) 526-4911

E-mail: jordan.stout@noaa.gov



Overview

ICS Reminder

Introduction to SCAT, the SCAT Process, and How it Drives Cleanup Activities

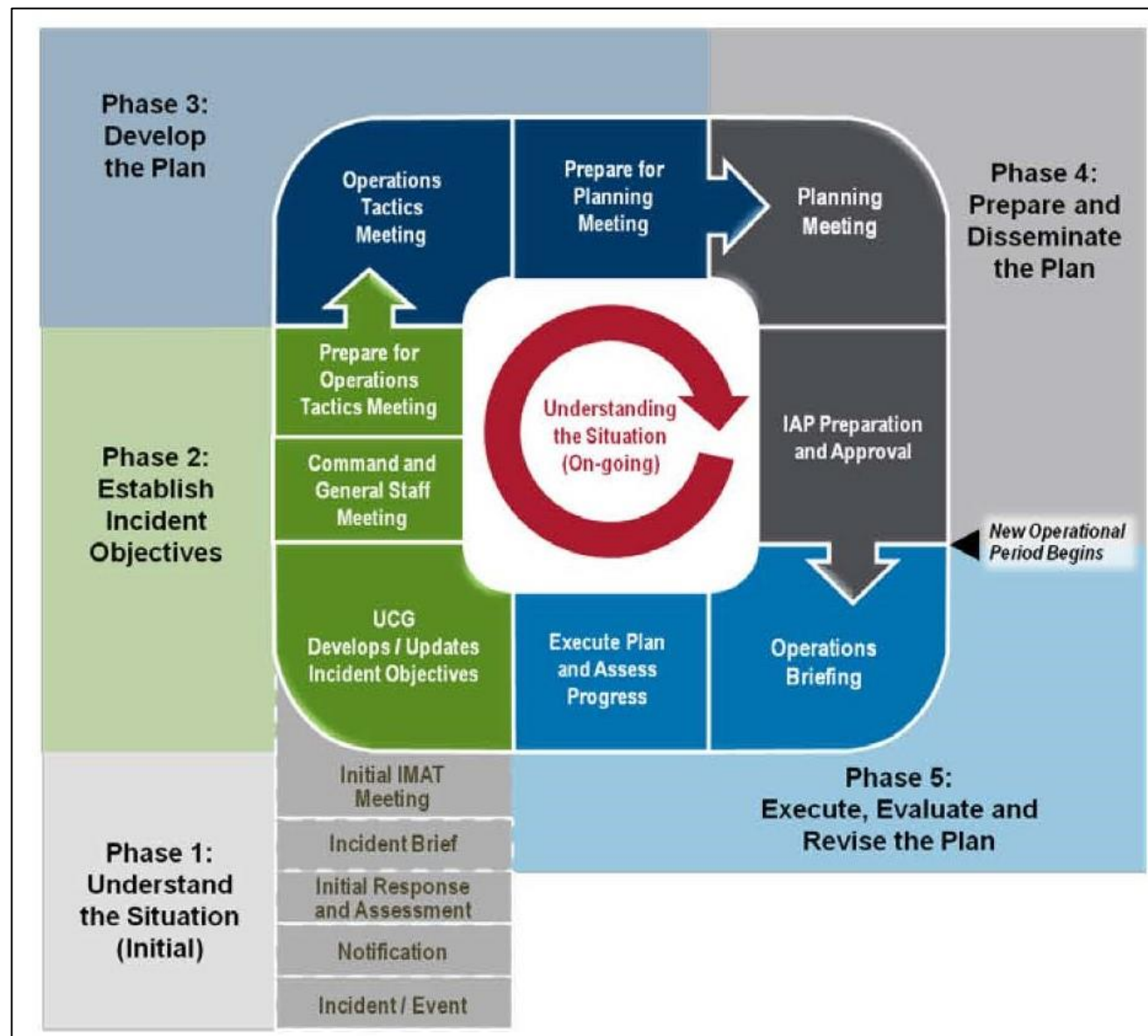
Some Shoreline Cleanup Methods

Historic/Cultural Resource Protection

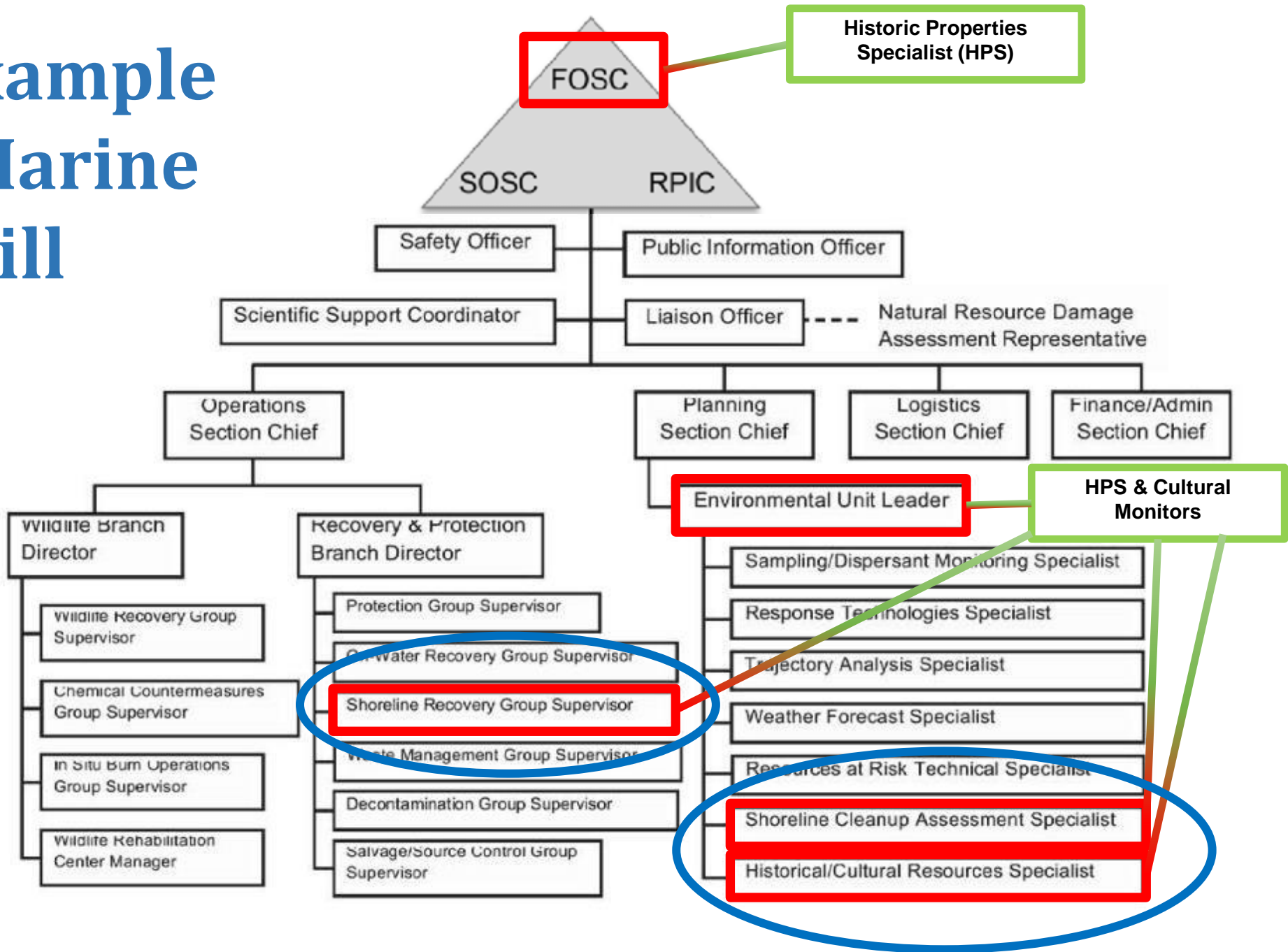
- With SCAT developing shoreline treatment recommendations
- With Operations during treatment



ICS Planning “P”



ICS Example of a Marine Oil Spill



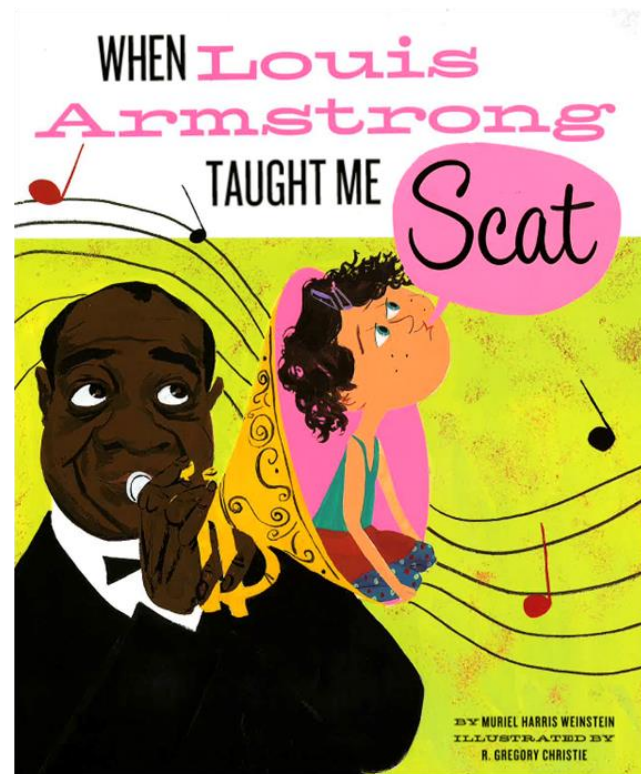
Introduction to SCAT



What is SCAT?...

The word “scat” may be:

- Verb: To go away quickly
- Noun: Animal feces
- Noun: Jazz singing w/nonsense syllables



But, the oil spill acronym “SCAT” is:

Shoreline **C**leanup **A**ssessment **T**echnique

What is SCAT?

It is a systematic approach using standard terminology to:

- Describe shoreline type & oiling conditions
- Identify sensitive resources
- Determine need, priorities, and constraints for cleanup
- Recommend cleanup techniques that minimize impacts & enhance environmental recovery

It is flexible in scale & level of detail

It is a multi-agency, multi-disciplinary effort



SCAT is... the ICP's eyes in the field



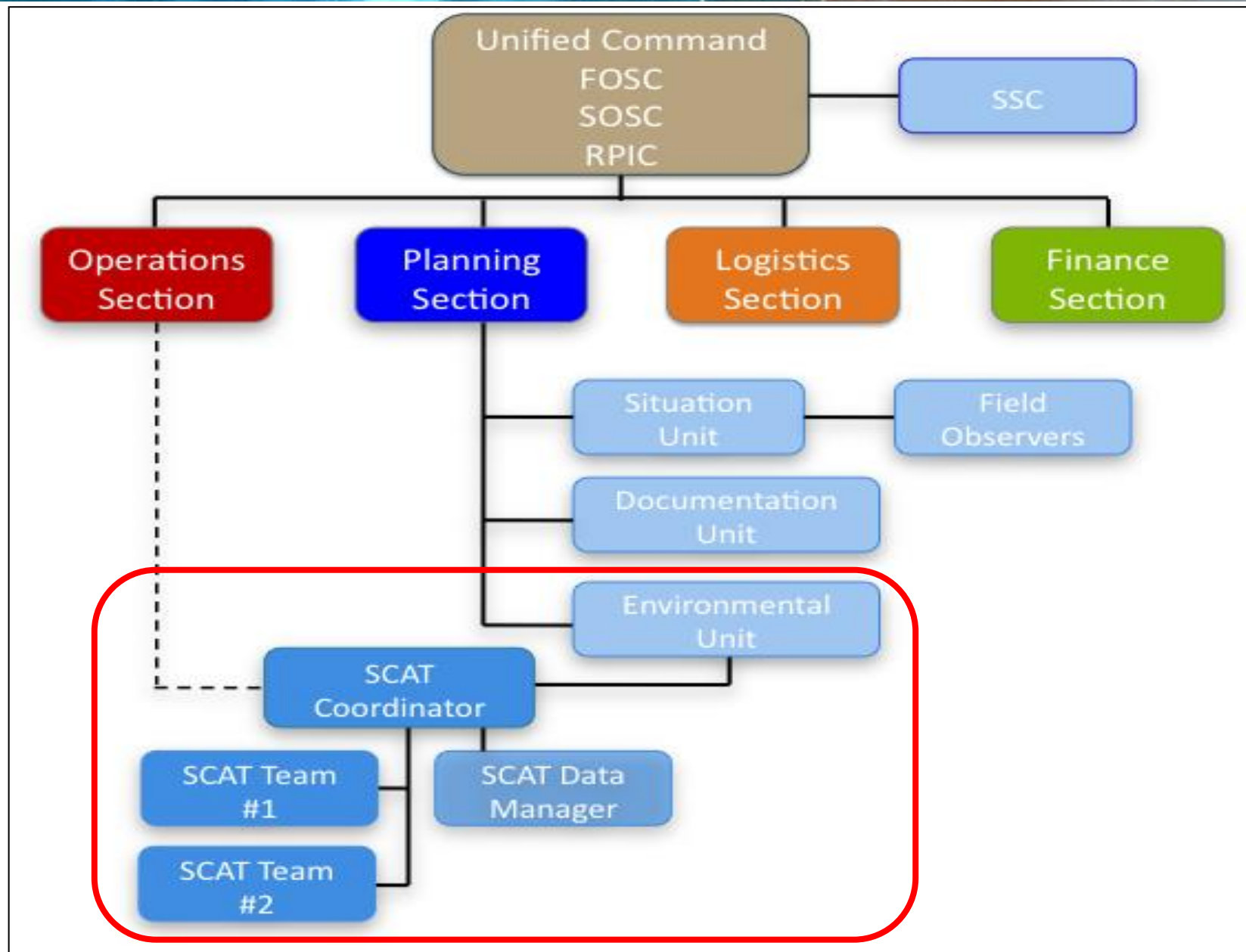
SCAT is NOT...

Wildlife Response

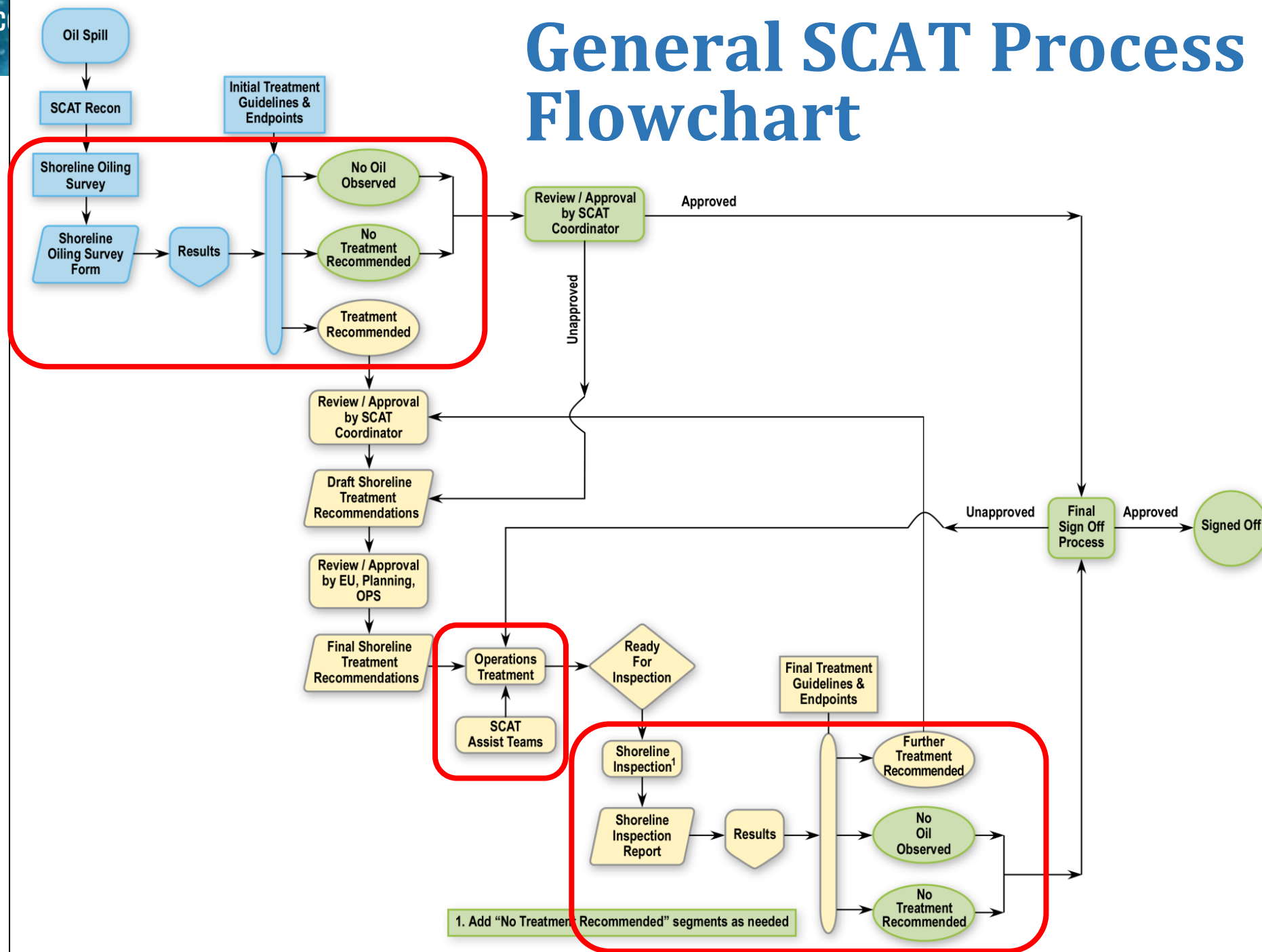


Natural Resource Damage Assessment (NRDA)

SCAT in ICS



General SCAT Process Flowchart



Role of SCAT

Conduct shoreline assessment surveys (generate data on shoreline types, lengths, and oiling conditions)

Identify sensitive resources (ecological, recreational, cultural)

Determine the need & priorities for treatment

Recommend shoreline treatment methods (do's & don'ts)

Monitor treatment effectiveness & effects



SCAT Data Should Answer the Following Questions:

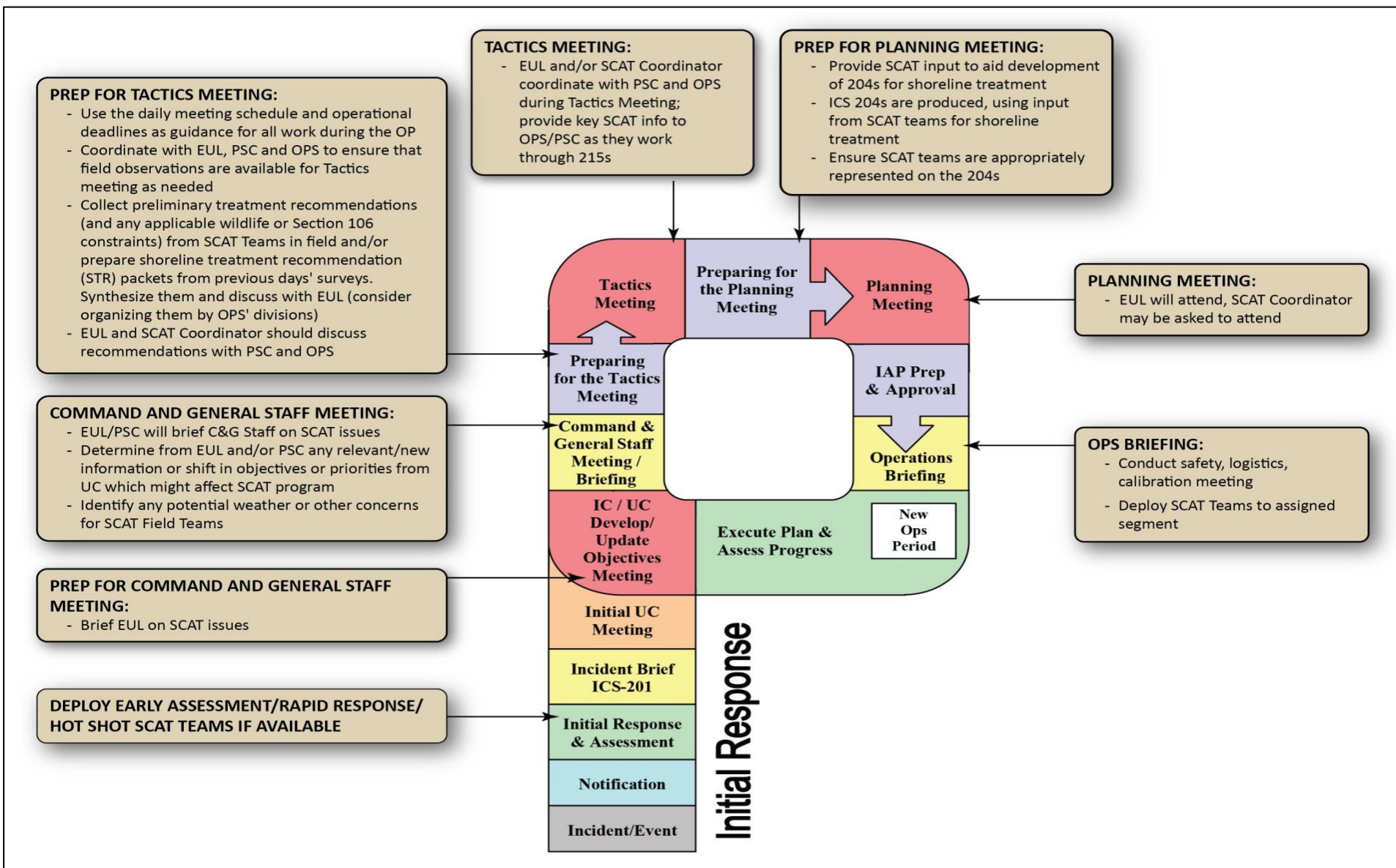
Is treatment necessary at this site (shoreline segment)?

What treatment methods are appropriate or recommended?

What constraints are needed to protect sensitive resources?

What is the priority for treatment at this site (shoreline segment)?





Standardized Description of Shoreline Oiling

Shoreline type (ESI)

Sediment type/grain size

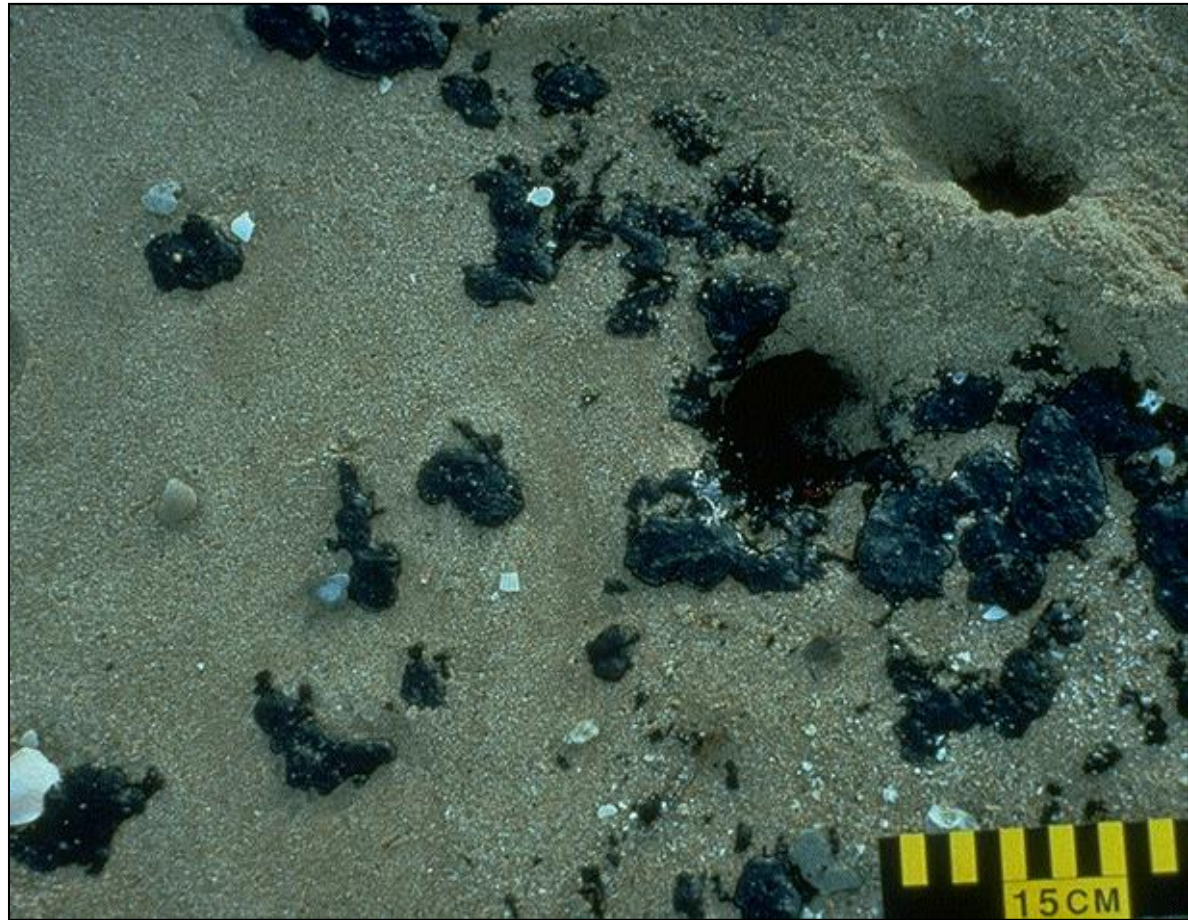
Surface oil distribution

- Length
- Width
- % Cover

Surface oil description

- Type
- Thickness

Subsurface oil description



References



Shoreline Assessment Job Aid

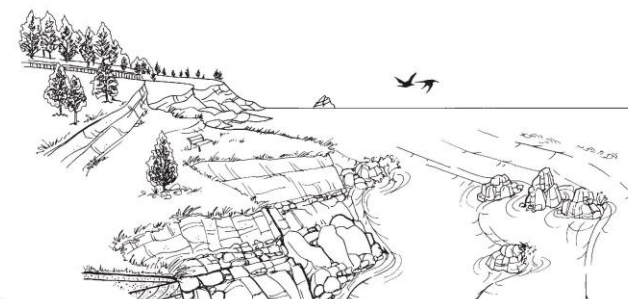
National Oceanic and Atmospheric Administration • NOAA Ocean Service
Office of Response and Restoration • Hazardous Materials Response Division



NOAA Shoreline Assessment Manual

4th Edition

Characteristic Coastal Habitats Choosing Spill Response Alternatives



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Emergency Response Division

Revised 2010
Reprinted March 2017

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Emergency Response Division



August 2013



SCAT Program Includes

In the ICP:

SCAT Coordinator

SCAT Data Manager(s)

In the field:

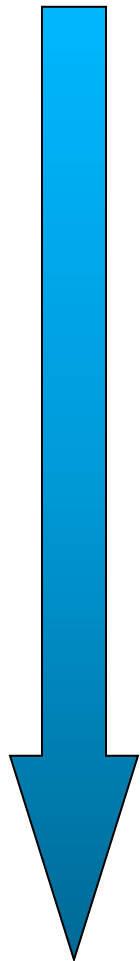
Team Leader & Team Members

Others

- Technical Specialists (e.g. wildlife, archaeologist/HPS, land manager)
- Operations
- Safety



SCAT Activities

- 
1. Reconnaissance survey (SCAT Coordinator)
 2. Segment the shoreline (SCAT Coordinator)
 3. Pre-survey planning & team assignments (SCAT Coordinator)
 4. Shoreline surveys (SCAT Teams)
 5. Develop spill-specific cleanup guidelines & endpoints (EU Group)
 6. Submit reports to the Planning Section (SCAT Coordinator & Data)
 7. Monitor cleanup effectiveness (SCAT Teams)
 8. Post-cleanup inspections (SCAT Teams)
 9. Final sign-off of cleanup activities (SCAT Teams +)





SCAT ACTIVITY: Shoreline Segments

ERMA® | Southwest

LEGEND

Spill Location

✖ Spill Location

Offshore Oil Platform [State] (OSPR, 2007)

👑 Offshore Oil Platform [State]

Offshore Oil Platform [OCS] (BOEM, 2011)

👑 Offshore Oil Platform [OCS]

Offshore Oil and Gas Pipeline Locations (B)

📡 Oil and Gas Pipeline Locations

ACP SCAT Segment Names - Statewide (O)

● ACP SCAT Segment Names - Statewide

ACP SCAT Segment Boundary - Statewide

📡 ACP SCAT Segment Boundary - Statewide

Esri World Topo

Shoreline Survey Forms

Consistent descriptions from all teams

Modified to fit the needs of the incident

Specialty forms include:

- Tarballs
- Streams
- Wetland
- Arctic
- Mangroves
- Coral Reefs

[illegible]

Segment ID: NORTH BEACH
Segment Name: CC-1A
Date (dd/mm/yy): 30 JULY 2007
Name: MOH / JM / IB

Checklist

- ✓ North Arrow
- ✓ Scale
- ✓ Oil Distribution
- ✓ High Tide Line
- ✓ Low Tide Line
- ✓ Substrate Types
- ✓ Trench Locations

Legend

1△

Trench Number.
No Subsurface Oil

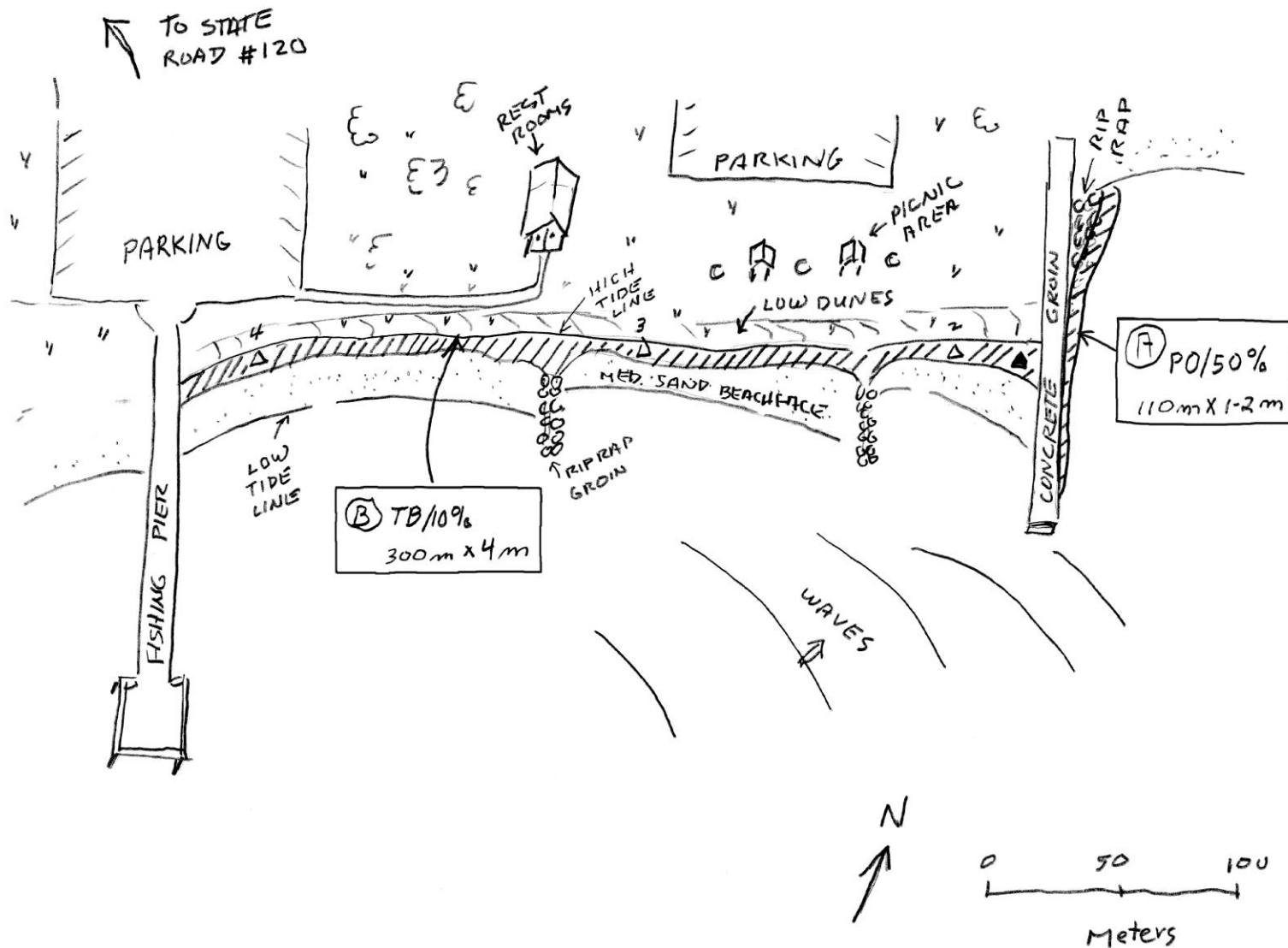
2▲

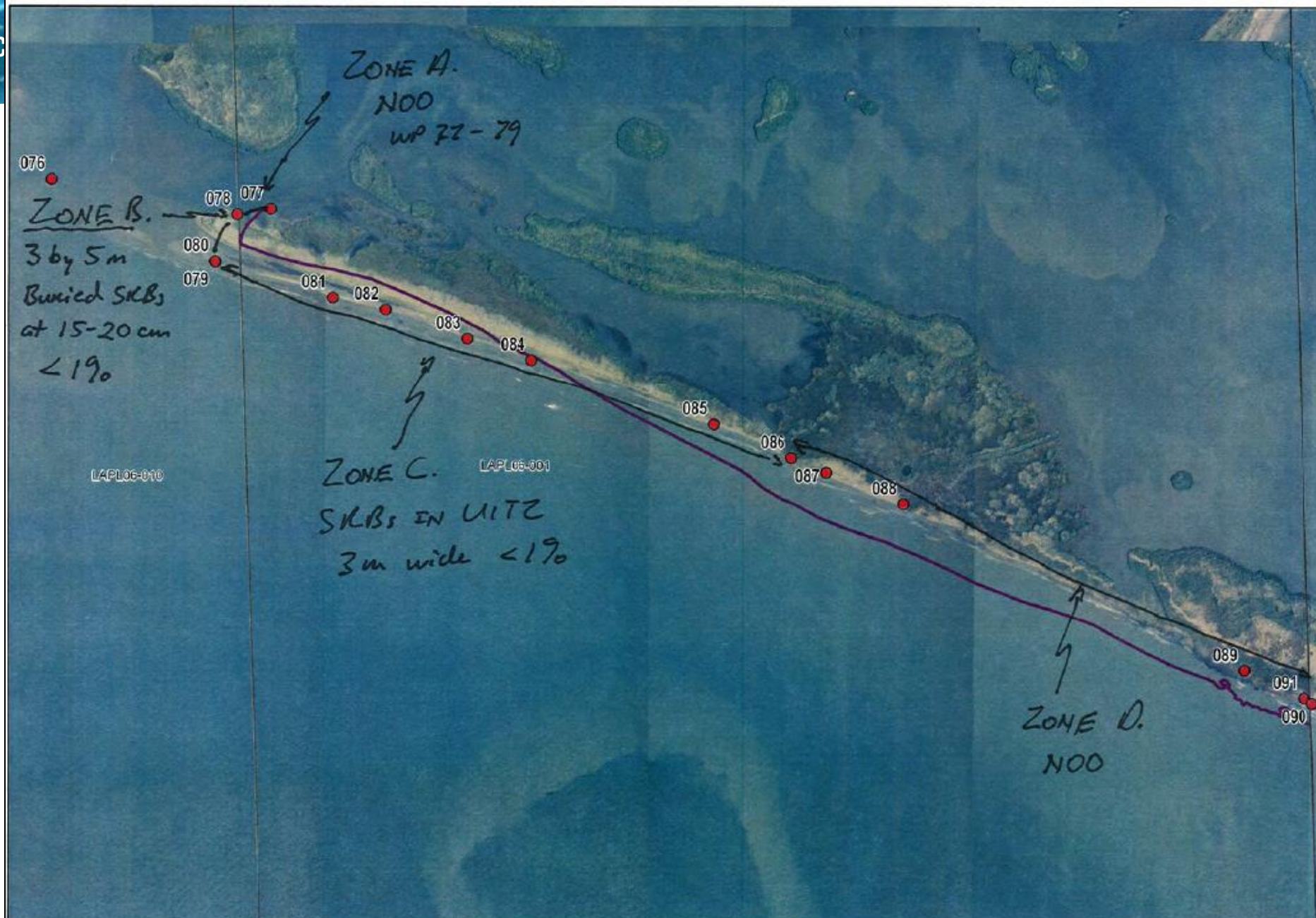
Trench Number.
Subsurface Oil

● →

●

Photo Location
Direction and
Frame No.





December 2004

Response Division



Photos

(Segment SKN11 from M/V Selendang Ayu incident)

August 2005



May 2006





Zone C
22 x 620 ft
PO/CV thickness TB/TP
Surface, patchy - broken 40%

Snowy Plover
Nesting Area

Result of a SCAT Survey

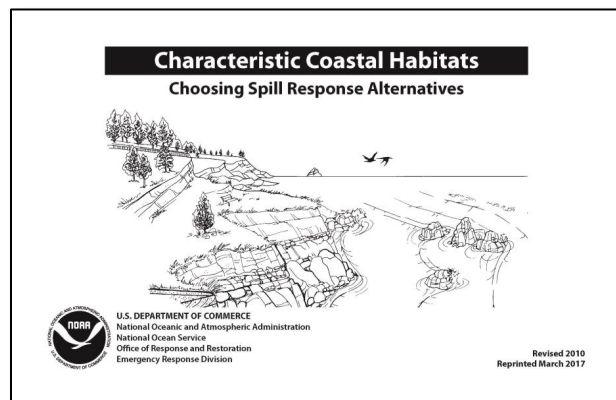
No Oil Observed (NOO)

No Further Treatment (NFT)
recommended

Shoreline Treatment Recommendation
(STR)



Cleanup Matrix for Sand Beaches



| Response Method | Oil Category | | | |
|---------------------------------------|--------------|----|-----|----|
| | I | II | III | IV |
| Natural Recovery | A | B | B | C |
| Barriers/Berms | B | B | B | B |
| Manual Oil Removal/Cleaning | D | B | A | A |
| Mechanical Oil Removal | D | B | B | B |
| Sorbents | – | B | A | A |
| Vacuum | – | – | B | A |
| Debris Removal | – | A | A | A |
| Sediment Reworking/Tilling | D | B | B | B |
| Vegetation Cutting/Removal | – | C | C | C |
| Flooding (deluge) | A | A | A | B |
| Low-pressure, Ambient Water Flushing | B | B | B | B |
| High-pressure, Ambient Water Flushing | – | – | – | – |
| Low-pressure, Hot Water Flushing | – | – | C | C |
| High-pressure, Hot Water Flushing | – | – | – | – |
| Steam Cleaning | – | – | – | – |
| Sand Blasting | – | – | – | – |
| Solidifiers | – | – | B | – |
| Shoreline Cleaning Agents | – | – | C | C |
| Nutrient Enrichment | – | A | A | B |
| Natural Microbe Seeding | – | I | I | I |
| In-situ Burning | – | – | C | C |

Download from: https://response.restoration.noaa.gov/sites/default/files/Characteristic_Coastal_Habitats.pdf



Some Shoreline Cleanup Methods



Characteristics of Response Strategies:

A Guide for Spill Response Planning in Marine Environments



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Emergency Response Division

Revised 2010
Reprinted March 2013



Why SCAT Needs to Know about Cleanup Methods

SCAT Teams recommend specific cleanup methods, constraints, and habitats to avoid

SCAT are the eyes of the EU in the field; they observe and report back when the recommended methods are:

- Not being properly implemented
- No longer effective
- Causing more harm than good



Natural Recovery



Natural Recovery on the T/V JULIE N Spill Portland, ME

1996



1997



Natural Recovery on the Deepwater Horizon Spill

3 July 2010



27 July 2010



Barriers & Berms



Manual Removal



Manual Removal





Lots of Manual Labor



Mechanical Removal



Mechanical Removal



Mechanical Removal



West Dauphin Island Deep Clean – 13 Jan 2011
Excavation of sand from a depth of 4 ft; stockpiling the sand,
allowing it to dry; then screening it

Sorbents



Sorbents





Sorbent Materials to Reduce Re-Oiling

Vacuum



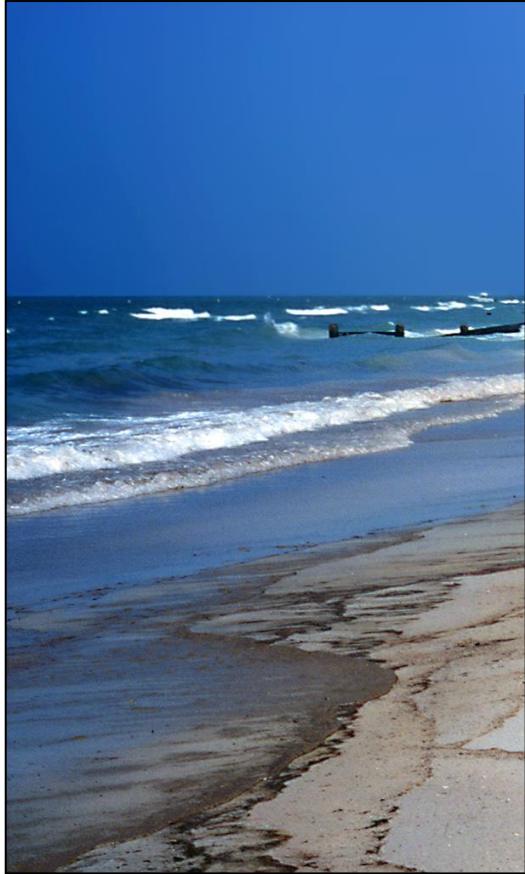
Vacuum



Debris Removal



Sediment Relocation (Surf Washing)



Tilling

Bring subsurface oil to the surface for removal by sifting



Break up larger oil particles to speed degradation



Wet Sediment Re-working/Tilling



Vegetation Cutting



Flooding/Deluge



Flooding/Deluge



Low-pressure, Ambient-temperature Flushing



High-Pressure Flushing



High-Pressure, Hot-Water Flushing



Sand (Dry Ice) Blasting



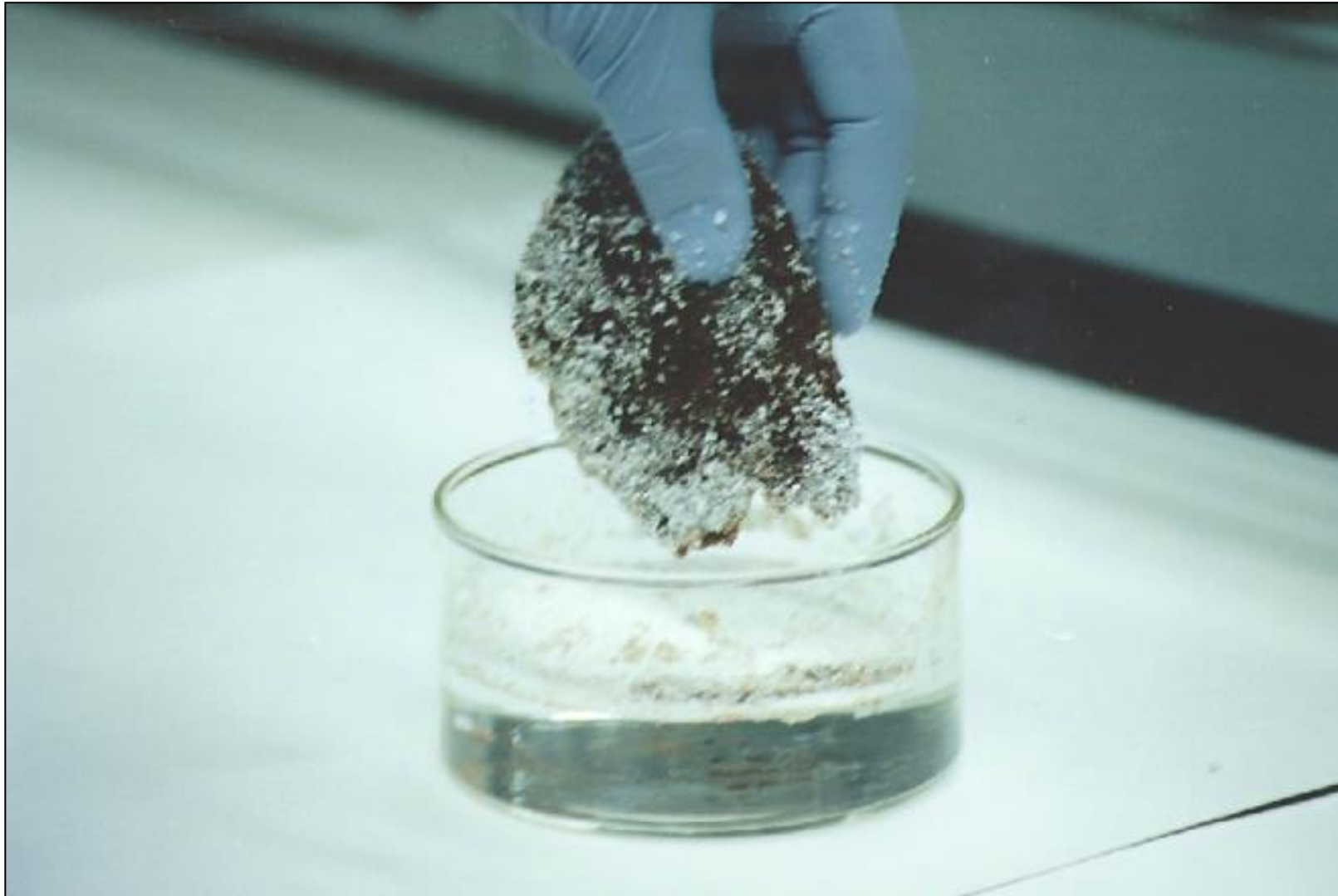
Tactics that Require RRT Approval



Some OSCAs (Oil Spill Clean-up Agents) covered under NCP Subpart J (40 CFR 300.900) and other things required by some RCPs:

- Solidifiers
- Loose sorbent application
- Shoreline cleaners (surface washing agents)
- In-situ burning

Solidifiers



Loose Sorbent Application: DM932 Spill, New Orleans



Before



During Blown Application

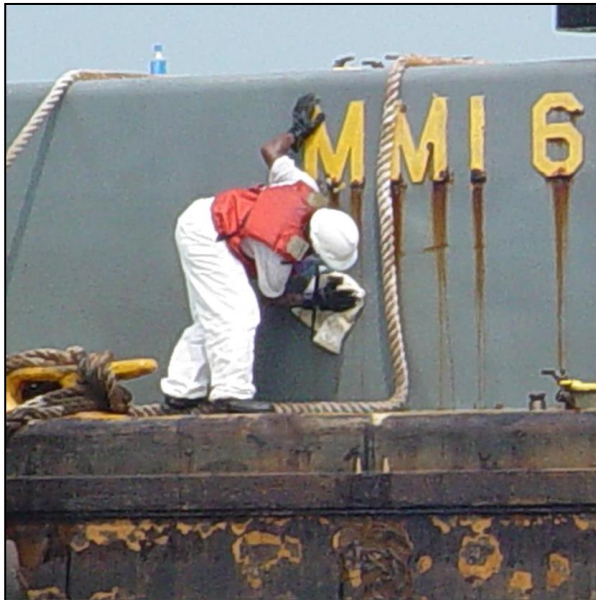


After

Loose Natural Sorbent Application



Surface Washing Agents



SWAs on Cultural Resource Substrates

The National Park Service, National Center for Preservation Technology and Training (NCPTT) is currently conducting lab studies of the effectiveness and effects of SWAs on cultural resource substrates and a report is being generated:

- Two different crude oils
- Seven different SWAs, selected from EPA's Product Schedule of approved products
- Different substrates
 - Brick
 - Sandstone
 - Timber
 - Concrete



In-Situ Burn





Chevron Empire spill: 1.42 million gallon spilled during/following Hurricane Katrina





Chevron Empire spill: 5 days post-burn

Shoreline Treatment Recommendation (STR)

| Habitat Type | Cleanup Endpoint | Allowable Cleanup Methods |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sand Beaches | Sand Beaches should be visibly free of all oil and oil residue. No oil odor should be evident and there should be no subsurface oil existing. | <ul style="list-style-type: none">• Manual removal with shovels/rakes; minimize removal of clean sediments on/under oiled layers• Use of heavy equipment will require additional approval.• Passive recovery of sheen with sorbents. |
| Marshes <i>Vegetated Spoil Banks Scarps</i> Forested Wetlands | General: No potentially mobile oil as evidenced by sheen remaining on substrate. Residual oil does not rub off on contact (no oil greater than stain). | <ul style="list-style-type: none">• Remove loose oiled debris (use best mgt guidelines).• Passive removal using snares on a rope or other sorbent material as appropriate.• Minimize foot traffic, and avoid disturbance and removal of peat mat or soil• Other options to be determined on a site-specific basis include flushing, manual pickup of pooled oil, and monitoring.• Aggressive cleanup methods should not be employed.• Natural recovery should be considered |





Local Name: Keel Boat Pass Islan STR #: S4-009.r.2

Survey Date:

Segment Name

LASB05 - 014-20

LASB05 - 015-10

Location: Keel Boat Pass Island St. Bernard Division 5

Shoreline Type: Salt- and brackish-water marsh
Mixed sand and shell beachesTreatment Type: ☒ Surface ☐ Subsurface ☐ Submerged ☒ Manual ☐ Mechanical

Oiled Area For Treatment:

Zone A: salt marsh with 30 yd x 5 yd topographic low with pooled mousse and oiled organic material (coffee grounds).

Zone B: salt marsh, 230 yd x 1-2 yd area with heavily oiled wrack and patches of pooled mousse.

Zone C: salt marsh/shell berm, 150 yd x 2-3 yd area with heavily oiled shell hash, heavily oiled wrack, and patches of pooled oil.

Zone D: salt marsh/shell berm, 130 yd x 4 yd area with heavily oiled shell hash, heavily oiled wrack, and patches of pooled oil.

Zone E: salt marsh/shell berm, 10 yd x 3 yd area with heavily oiled shell hash, heavily oiled wrack, and some pooled oil.

Zone F: salt marsh/shell berm, 15 yd x 4 yd area with oiled shell hash.

Zone G: salt marsh/shell berm, 115 yd x 1 yd area with heavily oiled shell hash and pooled oil in numerous locations

Zone H: salt marsh/shell berm, 85 yd x 2 yd area with heavily oiled shell hash with pooled oil.

New Zones in r.2 with similar oiling conditions:

Zone B1: 50 yds

Zone I: 200 yds

Zone J: 612 yds

Zone K: 64 yds

Refer to the attached map.

If oiling conditions similar to those described above are observed in other shoreline locations on this island, these areas can be treated under this STR. The SCAT teams and SCAT-Ops Liaisons can assist with decisions regarding additional treatment areas if such oiling conditions are observed.

Cleanup Recommendation:

Manually remove the heavily oiled shell, oiled wrack that is tacky and poses risk to wildlife, oiled coffee grounds, and pooled oil using shovels, rakes, other appropriate hand tools, and/or gloved hands.

Loose sorbent materials can be used to remove/reduce pooled surface mousse or liquid oil. In areas of higher concentrations and minimal live vegetation, loose organic sorbent materials (e.g., bagasse, kenaf, etc.) can be applied and raked across the area to increase the oil sorption, both on the surface and where the oil is soaked into the soil. The oiled sorbent material will then be raked up and bagged. All sorbents applied to pooled oil and oil-saturated sorbent materials must be removed. In areas with lower concentrations or more vegetation, and as a final treatment step in the raked areas, a thin layer of the loose organic sorbent materials can be applied in a targeted and judicious manner, to any remaining tacky oil residues on the substrate and/or vegetation, as a means of short-term wildlife protection. This material can be left in place to naturally degrade (as approved by the RRT on 8 April 2011). The on-site monitors

Local Name: Keel Boat Pass Islan STR #: S4-009.r.2

Survey Date:

will advise on the appropriate thickness of the loose sorbent to be left on the surface in the treatment areas.

Minimize disturbance to live marsh vegetation in oil removal locations.

Minimize the removal of clean shell material.

Do not disturb or remove any natural debris, beach wrack, or other organic materials that are not oiled unless they are blocking access to or are mixed with oiled sediments. Where blocking access, unoiled wrack or other materials should be moved as little as necessary to the nearest tidally influenced area.

If the cleanup crews will be walking in the marsh, past the firm shell/sand edge of the platform, the on-site SCAT-Ops Liaison should determine whether to require walking boards to avoid marsh impacts in soft areas.

To limit disturbance to pelicans and other birds, manual work crews should be limited in size and number to the minimum number of crews and personnel needed to get the work done in a reasonably efficient time frame. Have work crews and personnel work as closely together as possible during cleanup operations, rather than spread across the entire work area.

Keep all foot traffic, vehicles, and equipment out of all other marsh areas.

Staging and Logistics:

Operations shall provide advance notification to the parish representative (Bill Kappel, CEI, 504-280-4082 office or 225-892-3246 cell) at least 24-hours prior to the start of work on this STR, so that a parish representative may monitor cleanup activities.

Ecological Concerns:

WILDLIFE CONCERNS

Certain species of colonial nesters believed to utilize this island may initiate nesting during the continuation of this work; therefore, Louisiana Department of Wildlife and Fisheries (LDWF) survey the island at regular intervals and determine whether the proposed activity will create a disturbance to wildlife. Contact Matthew Weigel (985 665 1083) with LDWF for assistance with avoiding disturbance to pelicans and nesting birds during on-site cleanup operations.

Piping plover, a federally listed species, as well as other migratory shorebirds and nesting birds, may occur in the area. The U.S. Fish and Wildlife Service (USFWS) has representatives in each of the Louisiana Branches. The USFWS or its representatives shall coordinate with LDWF staff to assist operations in the implementation of all BMPs to minimize impact to vegetated areas, the wrack line, tidal foraging habitat, and natural beach topography. This effort may include establishing temporary exclusion zones, delineating travel corridors, and recommending adaptive measures to minimize disturbance. They can also be contacted for technical assistance with avoiding disturbance to shorebirds in this area.

Refer to the March 17, 2011 "Guidance for Avoiding and Minimizing Disturbance of Nesting Migratory Birds and Listed Birds Near Shoreline Cleanup Areas" for all response activities. NRAs/READs will continue to document all BMPs that were, and were not, complied with by any and all Response personnel on the BMP Implementation Checklist and in their 214/DUD reports, including those exceptions specifically pre-arranged in an STR.

All STRs and Field Plans require NRA and/or READ staffing for implementation to ensure compliance with trust resource laws and regulations. As specified in the BMPs, Section 7 in consultation with Section 106 will provide recommendations regarding the appropriate number/type of NRAs/READs required based on geography, needs of trust resources, safety and methodologies used by Operations.

Cultural / Historical Concerns:

Read and follow the instructions provided in the attached Section 106 Consultation Signature Sheet.

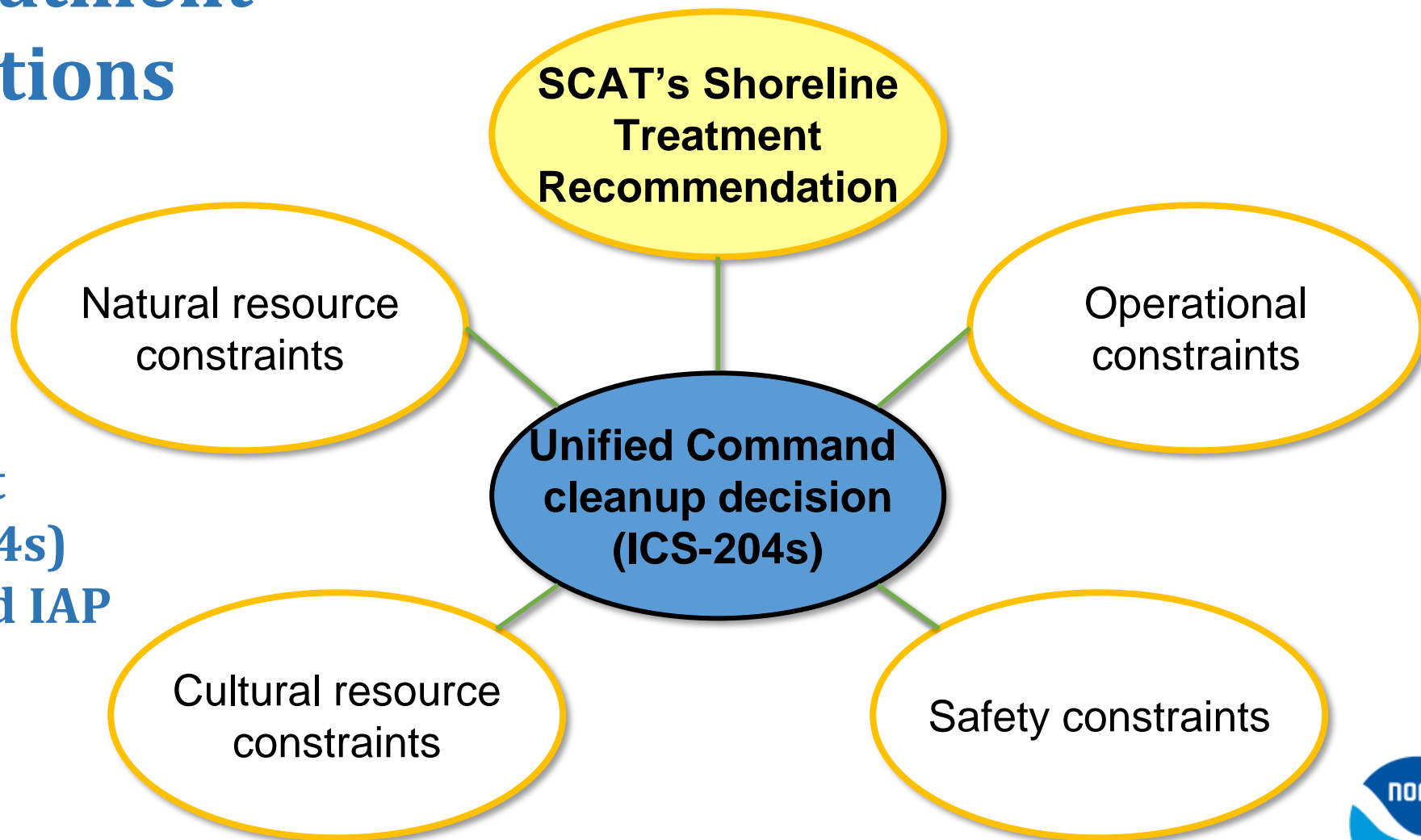
Additionally, in the event that unanticipated archaeological sites, historic or prehistoric artifacts, graves,



Shoreline Treatment Recommendations



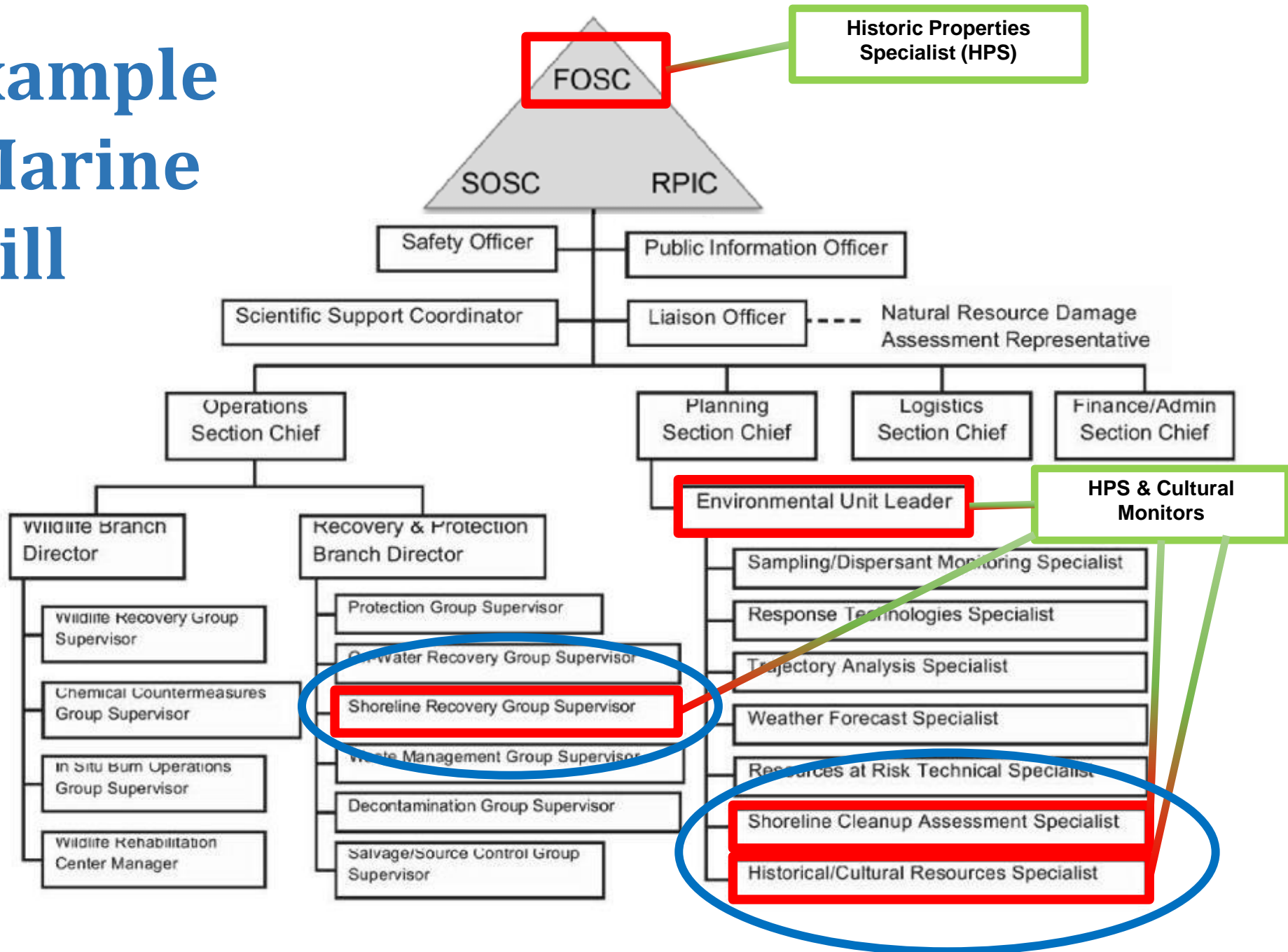
Shoreline Treatment assignments (ICS-204s) included in approved IAP



Historic/Cultural Resource Protection



ICS Example of a Marine Oil Spill



SCAT & Historic Property Considerations

SCAT Coordinator & Team Leads should coordinate Section 106 compliance through FOSC-appointed HPS, if activated

SCAT activities potentially adversely affecting historic properties

- Any subsurface testing: e.g. pits, trenching, coring,
- Travel corridors
- Staging areas
- Forward operation bases
- Vessel corridors & landing locations

If SCAT teams encounter artifacts, inadvertent discoveries, they should report it to the HPS. Consider special instructions/BMPs for SCAT Teams.

Maintain site & artifact location confidentiality



SCAT & Historic Property Considerations

Can embed cultural resource READs as part of a SCAT team. To record any oiling or other damages to resources, or to record their conditions prior to being impacted

Can embed Tribal monitors, too

Cultural materials should not be disturbed or collected

Follow protocols/BMPs as established by the HPS for the incident



SCAT Activity 7: Monitoring Cleanup Operations

SCAT Teams may:

- Assist Operations with implementation of the treatment recommendations, as requested
- Conduct field assessment to evaluate new methods or equipment



Assisting Operations During Treatment

HPS, READs, and/or Cultural Monitors may also:

- Assist Operations with implementation of the treatment recommendations, as requested
- Conduct field assessment to evaluate new methods or equipment

When needed to protect Historic & Cultural Resources



Shoreline Treatment Recommendation

Deepwater Horizon MC252
Shoreline Treatment Recommendation Operational Permit to Work
Local Name: **East Ship** STR #: **MS-4-019a** Survey Date: **16-Oct-2011**

| Segment Name | Start LAT | Start LONG | End LAT | End LONG | Length (m) |
|--------------|-----------|------------|----------|-----------|------------|
| MSHR5 - 015A | 30.23257 | -88.89334 | 30.23408 | -88.89102 | 276 |
| MSHR5 - 015B | 30.23408 | -88.89102 | 30.23818 | -88.88431 | 785 |
| MSHR5 - 016 | 30.23818 | -88.88431 | 30.24124 | -88.88015 | 522 |
| MSHR5 - 017 | 30.24124 | -88.88015 | 30.24559 | -88.87445 | 734 |
| MSHR5 - 018 | 30.24556 | -88.87446 | 30.24783 | -88.87433 | 627 |
| MSHR5 - 019 | 30.24783 | -88.87433 | 30.24138 | -88.88357 | 1221 |
| MSHR5 - 020 | 30.24138 | -88.88357 | 30.23952 | -88.88834 | 542 |
| MSHR5 - 021 | 30.23952 | -88.88834 | 30.23257 | -88.89334 | 973 |

Total Length: 5680 meters

Location: East Ship Island segments previously under STR MS-3-023 and 015A under MS-3-033

This amendment is for the purposes of the MS 2012 Post Nesting Season Barrier Island Plan, to increase the total number of personnel allowed on the island to 60, and to include NPS-recommended language concerning targeted delineation and manual recovery of subsurface oil.

Shoreline Type:

The shorelines in the STR are characterized by:

- a) West and east tips are broad sand tidal flats/overwash terraces, with a tidal lagoon on the east end.
- B) South central portion of the island is a wide active sand barrier beach with some drowned tree stumps and patches of peat.
- C) North central portion is a narrow sand beach with stumps, trees, patches of peat backed immediately by vegetated sand.
- D) A permanent and vegetated lagoon/marsh is located on the north side.
- E) A number of washover channels run from the south side to the north side.

Treatment Type: ☒ Surface ☒ Subsurface ☐ Submerged ☒ Manual ☐ Mechanical

Oiled Area For Treatment:

Surface oil in intertidal to supratidal zones with SRBs extending into the vegetated patches at the base of the dunes (see Figure 1). General oiling conditions are as follows:

SURFACE OILING

Zone A - INTERTIDAL (ITZ)

SRB's (Surface Residue Balls) may be in the intertidal zone in a very light (<1%) distribution (20-300 SRBs/segment up to 10cm).

Zone B - SUPRATIDAL (SUTZ)

Scattered SRBs/SRPs generally 1%, particularly along edge of vegetation and washover channels.

Zone C - UPPER SUPRATIDAL (Upper SUTZ)

Very light (<1%) distribution of SRBs generally located near or within vegetation line/toe of dunes. SRBs in this area can be covered with wind deposited sand and may re-appear when winds erode the sand that may cover the SRBs.

SUBSURFACE (BURIED) OILING

UPPER INTERTIDAL (UITZ) to SUPRATIDAL (SUTZ):

Buried SRBs/SRPs have been observed between 0 and 30 cm, generally in the supratidal. Buried oil that exceeds NPT is limited and occurs mostly in toe of dunes and vegetated areas within to top 10 cm. There is a high potential of resurfacing following north winds.



Shoreline Treatment Recommendation

Deepwater Horizon MC252

Shoreline Treatment Recommendation Operational Permit to Work

Local Name: East Ship

STR #: MS-4-019a

Survey Date: 16-Oct-2011

Cleanup Recommendation:

Non-Amenity Special Management Beach

This STR addresses the cleanup of residual surface oiling and buried oil where this is found at surface or from surface treatment and can be followed to depths not greater than 6 inches.

1) The cleanup criteria defined for segments under this STR is based on the MC 252 2011 SCAT Plan for Alabama/Florida/Mississippi (March 2, 2011). The NFT standard for non-amenity special management beaches is <1% visible surface oil and oiled debris, and no SRBs > 2.5cm (~1 inch), or as low as reasonably practical considering the allowed treatment methods and net environmental benefit. For buried oil the NFT is: No subsurface oil exceeding 3 cm (~1¼") in thickness and more than patchy (<50%) distribution that is greater than Oil Residue or as low as reasonably practical considering the allowed treatment methods and subject to direction of special area management.

2) Clean-up will be performed by one Operational Patrol team limited to 6 cleanup workers onshore. The Patrol Team will include one Archeological READ and one Tribal Monitor. The onshore team will be supported by vessel-based team members to include EMT and natural resource READ. Only two Operational Patrol Teams are allowed on the island at the same time.

3) The onshore Operational Patrol team is limited to one pass of the shore and will be limited to time on beach (as indicated by the READ) to minimize disturbance to eagle nesting. The team will move as a group, at a steady pace picking up oil as they travel alongshore. The team should be composed of individuals that are prepared to walk at a working pace, without stopping, from the drop-off point to pick-up point with allowance for breaks per Safety Plan and conditions onshore.

4) The Operational Patrol team will remove residual surface oiling using manual methods only. Hand tools used will be evaluated for effectiveness and modified to maximize efficiency. Balloon-tire wheelbarrows, or similar, may be used by the team.

4a) The MS GUIS MC252 Division Group Supervisor and the MS Operations Supervisor will coordinate to review operational plans prior to field deployments.

4b) During the collection of residual surface oiling product, if product (SRB/SRP) that exceeds NFT continues below the surface it can be collected to a depth not greater than 6 inches.

4c) Should subsurface oil (deeper than 6 inches) be located that exceeds NFT, the natural resources READ shall be immediately notified who will then report findings to NPS. NPS will determine if further treatment is recommended. Approved treatment can then proceed within the delineated area with a READ monitor.

5) Beach wrack shall not be removed unless oiled and ONLY after consultation with a READ.

Cleanup Frequency:

Initially, the Operations Patrol teams will traverse each segment in the STR once per week. Optimum work conditions for Operations Patrol teams are during periods of receding tide and following north wind events or conditions producing waves of 1.5 ft or greater.

The Operations Patrol team will document the amount of oil collected, in pounds at least, per segment. This data will be provided to the Situation Unit in the Branch. SCAT, Planning, and Operations will review the recovery data, by segment, to evaluate trends. SCAT, Planning, and Operations will determine if the recovery rate trends indicate that a change in patrol frequency or scale of activity is necessary or recommended. SCAT and Planning, in consultation with Operations, can recommend frequency changes under this STR upon prior consultation with NPS. If an agreement with the stakeholder over a change in frequency cannot be reached, then the issue will be referred to the Unified Command.



Shoreline Treatment Recommendation

Deepwater Horizon MC252

Shoreline Treatment Recommendation Operational Permit to Work

Local Name: **East Ship**

STR #: **MS-4-019a**

Survey Date: **16-Oct-2011**

In addition to the scheduled patrols, a patrol by the Operations team can also be initiated after a storm event. For the purpose of this STR, a storm event is defined as any weather pattern which results in winds / waves that could be expected to result in the re-exposure of residual oil.

The National Park Service as Gulf Islands National Seashore reserves the right to re-address any and all shoreline treatment measures or prescriptions.

Operational Reporting Requirements:

Each Operations Patrol team will document, for each day of activity:

- 1) Number of workers on a crew,
- 2) The date,
- 3) The length of segment treated, and
- 4) The amount of oil collected (lbs) on a PER SEGMENT basis.

One report will be prepared for EACH SEGMENT worked. This data will be provided DAILY to the Situation Unit in the Branch.

(Note: Complete a report for each segment patrolled even if no oil was collected)

AMENDMENT:

1) For the purposes of the MS 2012 Post Nesting Season Barrier Island Plan operations commencing in July 2012, treatment will include daily treatment as needed for 14 working days or until criteria are met to address surface oiling as documented by SCAT. Shoreline conditions will to be re-evaluated after 14 days to determine appropriate maintenance frequency and resource levels. The total limit of personnel on the island during this period is 60 people.

2) Upon review and concurrence from NPS, some targeted delineation and manual recovery of subsurface oil where there is no exposed surface oil may be allowed with NPS approval based on prior SCAT survey pit data and Operations recovery history and with a specific delineation plan agreed to by NPS in cooperation with other GCIMT-SCAT, Operations and Environmental program units.

Staging and Logistics:

- 1) The Operational Patrol team will be deployed directly on shore at NPS approved locations (preferably the east or west tip) depending upon the tide (see Cleanup Recommendation 4a, above);
- 2) When the vessel is not deploying or picking up the crew, the vessel is to stay at least 500 feet off shore and progress parallel to shore with onshore team;
- 3) Work breaks should be scheduled per applicable Safety considerations. Lavatories and shelter are to be provided only aboard the vessel;
- 4) Vessel operations and access must comply with the appropriate attached GUIS Mississippi District Vessel Operations Guidelines (attached);
- 5) No vehicle use is permitted on the shoreline.

Ecological Concerns:

This STR requires READ staffing to accompany cleanup crews for implementation to ensure compliance with trust resource laws and regulations.

As specified in the BMPs, Section 7 and Section 106 will provide recommendations regarding the appropriate number/type of READs required and in consultation with the NPS determine the number.



Shoreline Treatment Recommendation

Deepwater Horizon MC252

Shoreline Treatment Recommendation Operational Permit to Work

Local Name: **East Ship**STR #: **MS-4-019a**Survey Date: **16-Oct-2011**

READs will serve as the NPS representative and provide on-scene guidance to protect sensitive GUIs resources. READs will document Operations' compliance with BMPs, including operation of vessels, staging, and placement of crew support areas and travel corridors, and clean-up methods. READs will survey work areas to address protection of resources and communicate protective guidelines to cleanup crews.

A natural resource READ will monitor eagle behavior and advise the clean-up team on any natural resource concerns in conjunction with the Archeological READ on site.

See attached Best Management Practices (BMPs) for avoiding and minimizing impacts to wildlife, including but not limited to shorebirds, raptors, sea turtles, piping plovers, and other protected or managed species. BMPs applicable to this area are checked for easy reference.

Migratory waterfowl and shorebirds will over-winter in the coves, lagoons, and shoreline of the barrier islands. The over-wash flats on the tips of the islands are choice wintering habitat. READs will direct clean-up operations in these areas to prevent disturbance of migrants. Species include ducks, herons, sandpipers and other water birds. The shoreline is classified as critical habitat for the federally threatened piping plover.

Bald eagles nest and over-winter on the GUIs barrier islands and are vulnerable to disturbance by clean-up operations throughout the nesting season. GUIs biologists will monitor eagle behavior on a weekly basis to determine nesting status. Clean-up operations will be modified by NPS biologists and READs in the nest areas as they are identified and established. See the attached GUIs Guidelines for Protection of Bald Eagles during MC252 Clean-up of East Ship Island.

For protection of sea turtles, sea turtle nests and hatchlings, see Sea Turtle Guidance for Mississippi Barrier islands.

Wildlife uses Gulf Islands National Seashore as breeding grounds year-round. Clean-up Operations will be modified or put on hold by NPS Biologists and READs as breeding areas are identified and established. Nesting activities of osprey, shorebirds, sea turtles, and bald eagles will affect Clean-up and P&M Operations. See the appropriate species guidance or consult with a GUIs Biologist.

Cultural / Historical Concerns:

Please read and follow the instructions provided by the Section 106 Team included in this STR.

In the event that unanticipated archaeological sites, historic or prehistoric artifacts, graves, human remains or other cultural resources are discovered in the project area, all work must cease. The on-site Operations supervisor must be notified, who must contact the Section 106 Team.

Work shall not resume until the Operations supervisor has been advised by the Section 106 Team.

Contact the Section 106 Team as follows:

1. On-site Arch READ if one has been assigned,
2. Section 106 Team Leader at section106@bpgom.com, or
3. SCAT Lead Archeologist at 520.850.2944 (24 hrs).

Safety Concerns:

Appropriate Job Hazard Analyses must be followed for all cleanup activities.

Comments:

Attachments: ☐ Segment Map ☐ Sketch ☐ SCAT Form ☐ FactSheet Other: _____



Wrap-up

SCAT assessments & shoreline treatment recommendations drive shoreline cleanup operations

HPS can be a critical EU/SCAT component to:

- Evaluate site-specific risks to Historic/Cultural Resources from oil & cleanup activities
- Assess tradeoffs & cleanup priorities for those resources
- Develop operationally-relevant guidance & constraints that balance effective cleanup & resource protection

HPS & Cultural Monitors can accompany/assist Operations when needed to protect Historic & Cultural Resources



Questions?

Jordan Stout

NOAA Scientific Support Coordinator

Office: (510) 437-5344

Cell: (206) 321-3320

24-hour Spill Line: (206) 526-4911

E-mail: jordan.stout@noaa.gov

