Section 9421

Shoreline Cleanup and Assessment (SCAT) Response Tools

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ESTABLISHING A SHORELINE ASSESSMENT PROGRAM

Our shorelines are the source of environmental, cultural, and economic vitality. Physically removing oil from the shoreline must be done with great care, using trained workers, to avoid additional harm to environmental or cultural resources, or injuries to workers. Strategies for removing oil from impacted shorelines should strike a balance between environmental impact and benefit. The appropriate balance will vary between spills, dependent on the values of stakeholders. Decisions on how - or even if - to remove oil from shorelines are made with input from stakeholders, and using information that is gathered through a systematic and scientific process. This process is called Shoreline Cleanup Assessment Technique (SCAT).

The purpose of a SCAT Program is to:

- Systematically survey and document the area affected by oil to provide rapid and accurate geographic descriptions of the shoreline oiling conditions and real-time issues or clean up constraints;
- Recommend treatment or cleanup options for oiled shorelines to OPS and UC;
- Engage with stakeholders to build consensus around net environmental benefit based cleanup endpoints; recommend shoreline cleanup endpoint standards to OPS and UC;
- Monitor and evaluate shoreline treatment;
- Provide inspection teams for segment sign off; and,
- Manage data collected from shoreline surveys.

This "Establishing a Shoreline Assessment Program" document was prepared by the Northwest Area Committee (NWAC) to provide guidelines for setting up a Shoreline Assessment (i.e. SCAT) Program during an oil spill incident and is designed to assist spill response managers to establish a SCAT program, from reconnaissance activities through the treatment endpoints and sign off process.

The information provided within this document is NOT intended to be policy or to be prescriptive and may be modified as appropriate with subsequent updates to the Northwest Area Contingency Plan. The document is designed to be generic and generalized, and it is expected that spill response managers will modify as appropriate to the conditions of each incident.

This document includes:

- Two organizational charts (one for a small spill and one for a large spill) with color-coded descriptions of the roles and responsibilities of positions working in support of a SCAT function.

- A work flow/timing diagram highlighting the major milestones in a SCAT program (which also serves as a short-form SCAT Coordinator checklist) and a depiction of key SCAT tasks as they relate to the ICS planning "P."

- A process flow diagram depicting information flow from the field to decision makers through each SCAT step.

- A long-form SCAT Coordinator Checklist that is designed to aid users in establishing a SCAT program at an oil spill that has or will likely impact shorelines. The checklist is divided into three sections (Reconnaissance, Systematic Survey, and Monitoring/Inspection) to reflect the major phases in the SCAT process. The checklist is further organized by position-specific responsibilities and includes Best Practices where applicable.

- A list of select SCAT resources available for download that can provide further information for responders.

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ABBREVIATIONS & ACRONYMS

Abbreviation	Definition
CESG	Cleanup Endpoints Stakeholder Group
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EU	Environmental Unit
EUL	Environmental Unit Leader
FOSC	Federal On-Scene Coordinator
FTP	file transfer protocol
HAZWOPER	hazardous waste operations and emergency response
GIS	geographic information system
GPS	global positioning system
IAP	incident action plan
ICS	Incident Command System
IMT	Incident Management Team
NEB	net environmental benefit
NFT	no further treatment
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NOO	no oil observed
NRDA	Natural Resource Damage Assessment
NWAC	Northwest Area Committee
OP	operational period
OPS	Operation Section
PDA	personal digital assistant
PPE	personal protective equipment
PSC	Planning Section Chief
QA/QC	quality assurance/quality control
RP	responsible party
RPIC	Responsible Party Incident Commander
RRT	Regional Response Team
SCAT	shoreline cleanup assessment technique
SIR	shoreline inspection report
SOSC	State On-Scene Coordinator
STAG	Shoreline Treatment Advisory Group
STR	shoreline treatment recommendation
SU	Situation Unit

UC	Unified Command
USCG	United States Coast Guard
USGS	United States Geological Survey

SMALL SPILL ORGANIZATIONAL CHART

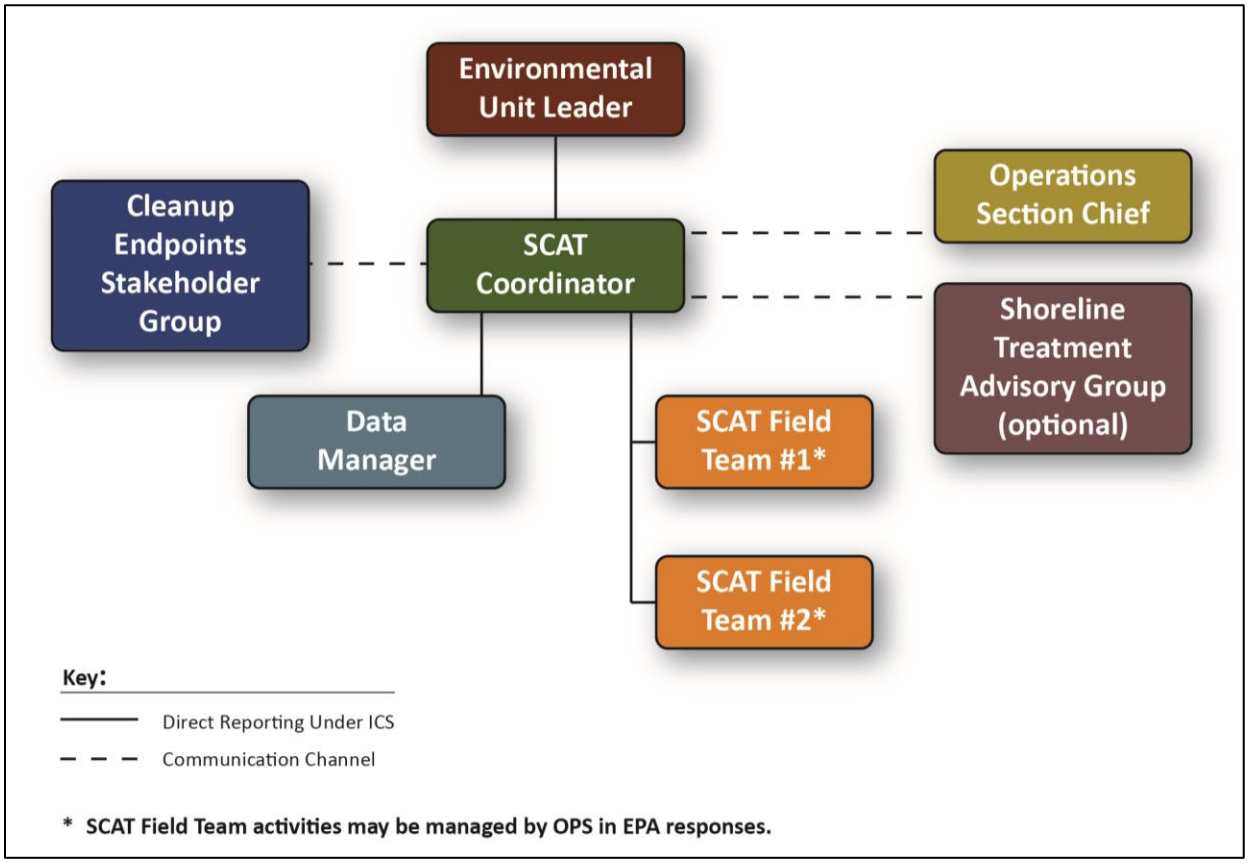

Figure 1: Small Spill Organizational Chart. Please refer to pages 8 and 9 of this document for a description of the responsibilities associated with each position.

LARGE SPILL ORGANIZATIONAL CHART

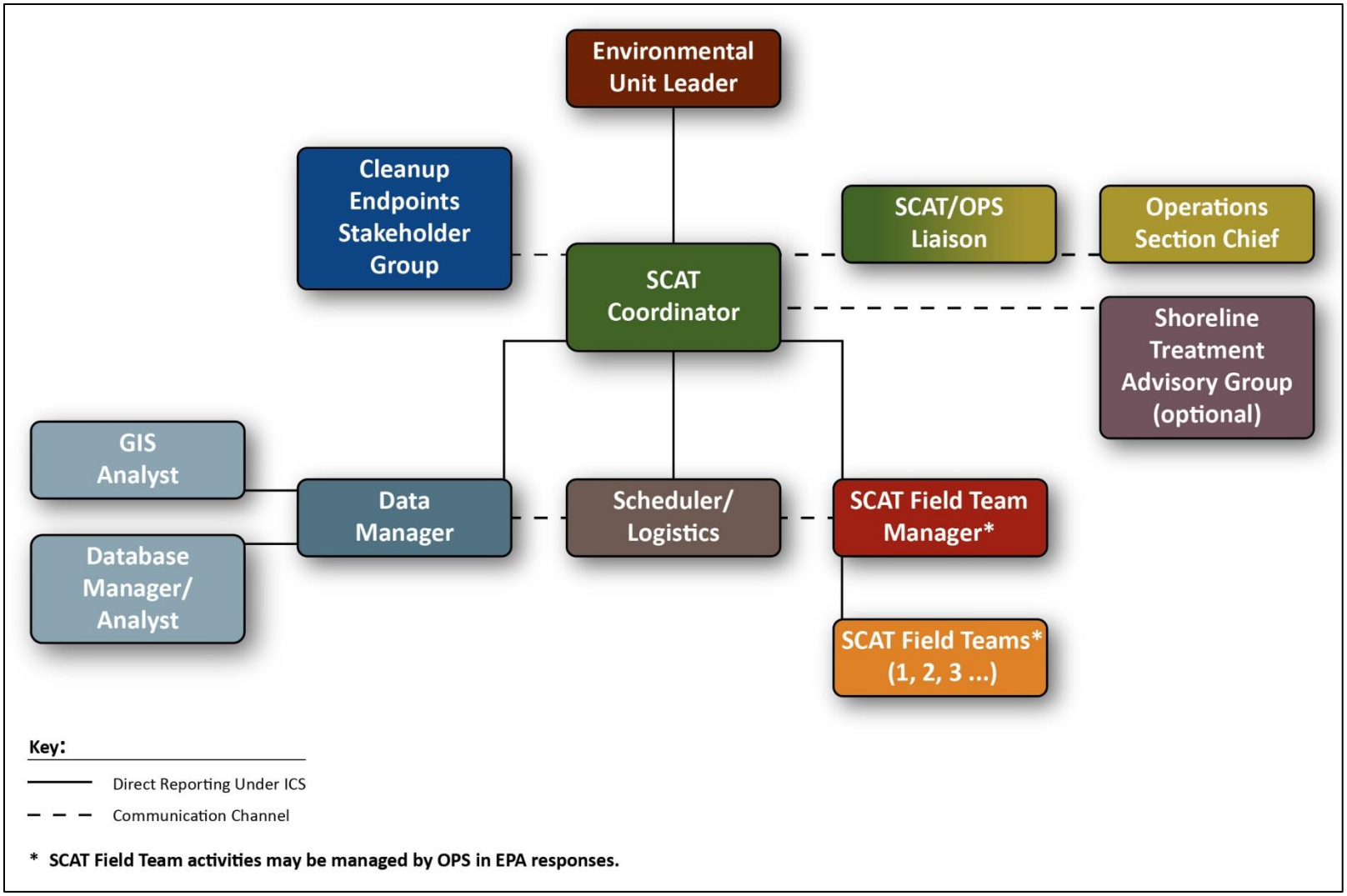

Figure 2: Large Spill Organizational Chart. Please refer to pages 8 and 9 of this document for a description of the responsibilities associated with each position. Some positions are not described (GIS Analyst, Database Manager/Analyst Scheduler, SCAT Logistics Coordinator) because their responsibilities are covered by others in the SCAT Program.

ROLES & RESPONSIBILITIES

Environmental Unit Leader

- Establishes SCAT Coordinator
- Communicates Command objectives to SCAT Coordinator
- Communicates SCAT progress and challenges to PSC and/or IMT members
- May provide SCAT recommendations into IAP process

SCAT Coordinator

- Conducts reconnaissance to determine scope of shoreline oiling issues
- Develops a survey and reporting schedule to produce survey results in time for incorporation into the Incident Action Plans
- Sets SCAT field objectives
- Serves as the primary point of contact for all SCAT activities
- Coordinates development of treatment recommendations and cleanup endpoints for Command approval, possibly with the assistance of a Shoreline Treatment Advisory Group (see below) Leads the evaluation of treatment methods and cleanup endpoints and modifies them as necessary
- Works with Operations Section on implementation of cleanup method recommendations
- Attends tactics meetings as appropriate to help provide SCAT input into IAP development
- Briefs the IMT on issues raised by SCAT, particularly where cleanup methods must be modified to increase effectiveness or decrease impacts
- Coordinates with other members of the response effort with concerns on shoreline assessment to optimize data sharing, including NRDA team
- Integrates cleanup concerns of the various resource agencies and managers into the decision-making process, possibly through a Cleanup Endpoint Stakeholder Group.

Deputy SCAT Coordinator (optional position or may be fulfilled by the SCAT Coordinator)

- An optional, early phase position primarily responsible for establishing and maintaining communication for mutual understanding and cooperation between SCAT program and Division leaders in OPS
- May conduct work in the command post and/or in the field facilitating the implementation of early cleanup recommendations
- This position may function as a SCAT/Ops Liaison
- Additional duties as requested by SCAT Coordinator

SCAT Field Team Manager (May be combined with SCAT Coordinator)

- Serves as the primary point of contact for all SCAT field-based activities
- Develops daily assignments for each team
- Assigns SCAT teams to meet SCAT field objectives
- Ensures that teams use proper terminology and apply guidelines uniformly
- Ensures that all teams have the necessary representation and all members have the necessary training, equipment and transportation.
- Helps the team reach consensus and reports dissenting opinions when consensus is not reached to SCAT Coordinator
- Conducts briefings with SCAT team members as needed
- Ensures adequate data is collected and communicated
- Communicates physical location of SCAT teams to OPS, SO & others
- Verifies that all SCAT field teams return at the end of the day
- Receives reports from field teams and synthesizes them into a daily summary for SCAT Coordinator.

ROLES & RESPONSIBILITIES

Data Manager

- Ensures dataflow meets OPS and Planning needs
- Provides SCAT data entry forms and field manuals to field teams
- Reviews daily SCAT forms for completeness and consistency
- Enters or supervises the entry of daily SCAT data
- Conducts data QA/QC; identify common data problems and train SCAT members how to prevent future problems
- Generates daily summary reports, maps, and data summaries
- Maintains an archive of all SCAT data, forms, photographs, GPS data, etc.

SCAT Field Team

- Surveys shorelines as assigned by the SCAT Field Manager to evaluate oiling conditions, identify sensitive resources, determine cleanup needs, and recommend oil treatment/cleanup methods.
- If delegated by SCAT Coordinator, Field Team develops shoreline treatment recommendations
- Attends SCAT briefings as required

Operations Section Chief (or Designee)

- Coordinates on the development of treatment recommendations (may be done via STAG participation)
- Directs and oversees shoreline cleanup activities
- Coordinates specific information needs with SCAT Coordinator
- Requests SCAT cleanup verification once shoreline has been cleaned to designated endpoint

Cleanup Endpoints Stakeholder Group

- A stakeholder group external to the IMT whose input and comments are sought by the SCAT Coordinator regarding the general cleanup endpoints for Command approval.
- Coordinated by Liaison Officer with assistance from the SCAT Coordinator
- The group may be comprised of Federal, Tribal, State, Local, non-governmental organizations (such as an environmental advocacy group), or other interested parties

Shoreline Treatment Advisory Group (STAG) – Optional

- Optional workgroup typically comprised of staff from OPS and Planning Sections. Develops treatment recommendations and cleanup endpoints for Command approval
- Facilitated by SCAT Coordinator

Scheduler/Logistic Coordinator – Optional

- Works with Data Manager, SCAT Coordinator, and SCAT Field Team Manager to determine where SCAT Field Teams should deploy.
- Submits requests for field supplies, equipment, personnel, and transportation through the Logistics Unit
- Develops and maintains a SCAT Calendar.
- Ensures property access agreements are obtained and adhered to.

WORKFLOW & MILESTONES

RECONNAISSANCE PHASE
(Ramping Up to Full SCAT Program)

1. Consider deploying early assessment/rapid response/ "hot shot" SCAT teams to gather initial shoreline impact information, if available.
2. Establish communication and coordination with OPS and Safety Officer.
3. Provide initial shoreline cleanup recommendations to OPS on day 1.
4. The Environmental Unit Leader will establish a SCAT Coordinator.
5. Establish objectives of the Shoreline Assessment Program using the objectives established by Unified Command as guidance.
6. Determine the scope and scale of the initial area to be surveyed by SCAT teams.
7. Determine the initial number of SCAT field teams and appropriate level of Command Post staff.
8. Map and segment the survey area.
9. Establish a data management system.
10. Select the appropriate SCAT forms to be used.
11. Develop a survey and reporting schedule as appropriate to provide key survey information as needed for incorporation into the Incident Action Plan.
12. Identify incident specific health and safety considerations for SCAT operations and communicate them to the Safety Officer.
13. Identify and request that Logistics assemble the essential equipment for the Field Teams.
14. Begin drafting a shoreline cleanup assessment work plan, including treatment and endpoint recommendations.
15. Identify and/or develop initial treatment and endpoint recommendations.

SYSTEMATIC SURVEY
(Full SCAT Program Implementation, Active Shoreline Treatment Ops)

1. Determine which areas should be surveyed and in what order always staying at least a day ahead of cleanup crews.
2. Ensure that all elements of the shoreline cleanup assessment work plan have been completed.
3. Prepare, deploy, and manage SCAT Field Teams conducting shoreline oiling surveys.
4. Establish process for summarizing SCAT field data and communicating data as appropriate.
5. Develop procedures for translating data into shoreline treatment recommendations (STRs) and having STR's approved.
6. Consider establishing a "Shoreline Treatment Advisory Group" (STAG) and continue leading the effort to develop shoreline treatment guidelines.
7. Coordinate with Liaison to establish the "Cleanup Endpoint Stakeholder Group" (CESG) and lead the effort to review shoreline treatment and cleanup endpoint recommendations.
8. Monitor locations and effectiveness of cleanups.
9. Develop periodic SCAT Reports. The frequency will be determined by the EUL.

MONITORING/INSPECTION
(After Cleanup Activities are Completed)

1. Establish a communication protocol with OPS that notifies the EUL and/or SCAT Coordinator when clean up treatments have been completed on a given segment.
2. Evaluate the need for establishing a pre-sign off inspection process prior to final sign off inspections with the land owners/managers and develop as necessary.
3. Implement the formal sign-off inspection and approval process/procedures.
4. Deploy Sign-Off Teams to conduct post-cleanup inspections to confirm endpoint has been achieved.
5. Ensure that all of the completed inspection/ recommendation documents are collected and archived appropriately.

Day 1 – ~ Day 2 | **Day 3+** | **Day 4 – Weeks/Months**

Figure 2: SCAT Workflow and Milestones (Short SCAT Coordinator Checklist). For more detailed information please refer to SCAT Program Implementation Checklist.

SCAT IN THE PLANNING "P"

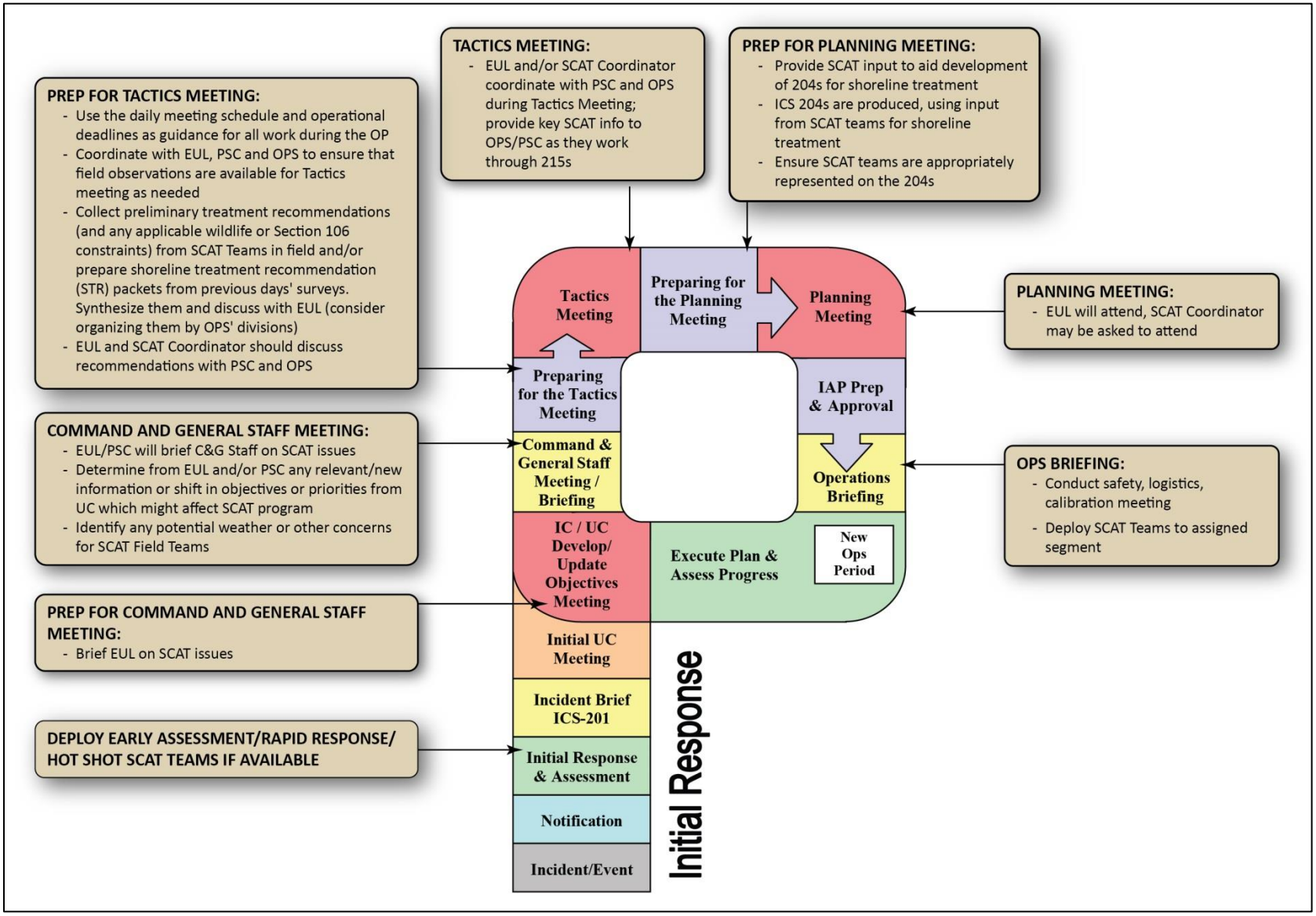

Figure 3. SCAT in the Planning "P."

SCAT Process Flow

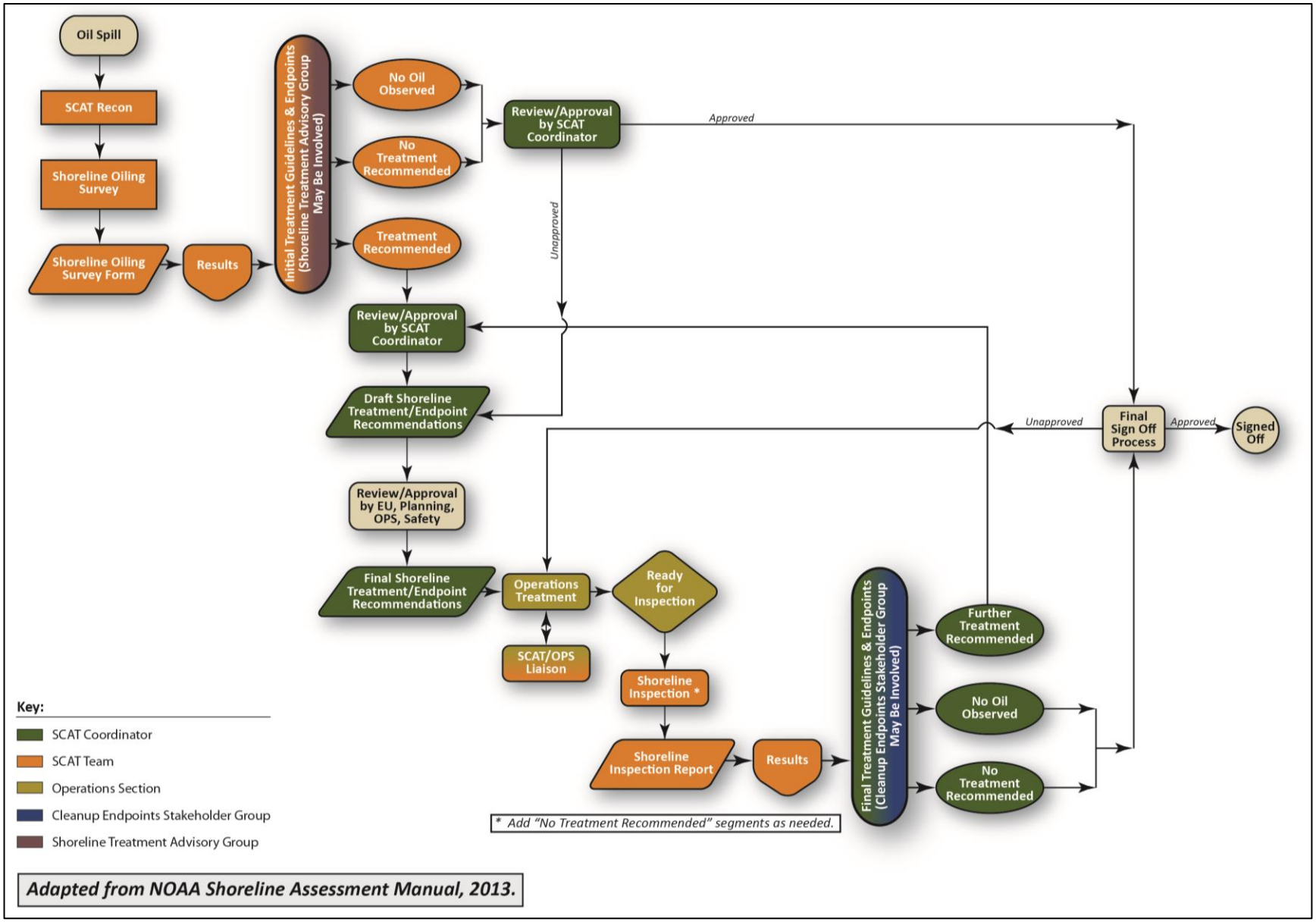

Figure 4. SCAT Process Flow.

SCAT PROGRAM IMPLEMENTATIONCHECKLIST

The following program implementation checklist is designed to aid users in establishing a SCAT program at an oil spill that has or will likely impact shorelines. The checklist is divided into three sections (Reconnaissance, Systematic Survey, and Monitoring/Inspection) to reflect the major phases in the SCAT process. The checklist is furthered organized by position-specific responsibilities and includes Best Practices where applicable.

RECONNAISSANCE PHASE CHECKLIST

The Reconnaissance phase begins when initial responders first receive notification that a spill has occurred. This phase typically lasts no more than a few days after the incident is reported and is comprised of planning and preparation for the Systematic Survey phase.

ENVIRONMENTAL UNIT LEADER

- ❑ **Consider deploying early assessment/rapid response/"hot shot" SCAT teams to gather initial shoreline impact information, if available.**
  - The goal is to obtain a general snapshot of the impacted areas or areas that may be impacted. These teams can provide valuable information that will support planning activities for the formal SCAT process as well as near-real time information to OPS. Any assessment conducted by these teams should be broad in scope and scale.
  - Reconnaissance should include:
    - Location and thickness of oil
    - Observed oil movements
    - Potential access points
    - Areas where no oil is observed

BEST PRACTICE: Start aerial reconnaissance as early as possible in the response.

BEST PRACTICE: Consider recommending the use of "hot shot" cleanup crews that are able to implement passive and other low-impact methods to prevent re-oiling.

- ❑ **Establish communication and coordination with OPS and Safety Officer.**
  - Determine the most appropriate point of contact in OPS. This may be the OPS Section Chief, or Division/Group Supervisor (e.g. Shoreline Cleanup Supervisor).
- ❑ **Provide general shoreline cleanup recommendations to OPS on day 1. This may be done on the ICS 204. Specify the passive and low impact techniques as well as ecological constraints. Refer to the Potential Initial Cleanup Guidelines on the following page.**

Potential Initial Cleanup Guidelines

For Collection of Oil Floating Adjacent to the Shoreline and Pooled Bulk Oil on the Shoreline:

- ❑ Highest priorities for oil removal are areas with thick, mobile oil that is at risk of re-mobilizing and contaminating clean areas.
- ❑ Do not stage boats such that shoreline vegetation is crushed. Boats should not be resting on or pressed against vegetation at any time.
- ❑ During flushing and herding, use the lowest pressure that is effective and prevent suspension of bottom sediments (do not create a muddy plume). All flushing adjacent to marshes is to be conducted from boats; there will be no foot traffic in marshes.
- ❑ In areas with intertidal and subtidal seagrass, avoid flushing oil over the seagrass and boat operations that results in anchor or prop-scarring of the vegetation.
- ❑ Sorbents may be placed at the water edge to recover floating oil. Sorbents should be used as a secondary treatment method after gross oil removal, and in sensitive areas where access is restricted. Recovery of all sorbent material is mandatory.
- ❑ Maintain a buffer of 100 yards from marine mammals (whales, sea lions, seals). If approached by a marine mammal, put the engine in neutral and allow it to pass.

For Gross Oil Removal from Shorelines:

- ❑ Use only established routes to access areas to be cleaned. No new roads or trails can be created unless specifically approved by the Environmental Unit.
- ❑ Establish work zones and access in a manner that reduces contamination of clean areas.
- ❑ Conduct flushing operations on the shoreline only when the lower intertidal zone is covered with water, to prevent contamination of these areas, which are usually clean or lightly oiled. Use only low pressures to remove bulk oil.
- ❑ Minimize removal of unoiled sediments during cleanup. Dig no deeper than necessary to remove the surface layer of heavily oiled sediment.
- ❑ Do not enter or attempt to clean oil in the interior of marshes or vegetated shorelines unless specifically approved by the Environmental Unit. Vacuuming pooled oil on the marsh edge, working from boats, is allowable.
- ❑ Do not walk in marshes and mudflats. Use wood plank walkways where possible if needed to cross vegetated areas.
- ❑ Do not cut, burn, or otherwise remove vegetation unless specifically approved by the Environmental Unit.
- ❑ Do not remove clean wrack; instead, move large accumulations of clean wrack to above the high-water line to prevent it from becoming contaminated.
- ❑ Remove all trash or anything that would attract wildlife to the site on a daily basis.
- ❑ Report oiled wildlife sightings to the Wildlife Hotline number (xxx-xxx-xxxx). Do not attempt to capture oiled wildlife. **Confirm incident specific wildlife reporting and collection procedures with wildlife and/or NRDA staff.*

RECONNAISSANCE PHASE CHECKLIST

- ❑ **The Environmental Unit Leader will establish a SCAT Coordinator.**

  - This position may be filled by a government agency, trustee agency, RP representative, or other stakeholder representative.
    - Considerations for SCAT Coordinator Selection:
      - Specific policy within appropriate area contingency plan, if one exists.
      - Level of training and experience with SCAT implementation and/or coordination.
      - Ability to maintain consistent participation throughout duration of response.
      - Ability to coordinate effectively and appropriately with NRDA.
      - Perception of government oversight and leadership.

  - If warranted by SCAT coordination workload, consider employing Deputy Coordinators to assist with various SCAT coordination functions. The decision to add a deputy may be based on incident specific circumstances such as the scale of the incident or the anticipated workload.

  - The SCAT Coordinator will establish and maintain the SCAT Program for a response. The SCAT Coordinator must be trained in SCAT and must have experience in implementing SCAT methodologies during a spill. The SCAT Coordinator also needs to be familiar with the ICS process and structure. This person needs to understand the role that SCAT recommendations from the field play in the planning cycle and the need for coordinating this information with the timing of the development of the IAP and the 204s for shoreline treatment.

BEST PRACTICE: When selecting SCAT Coordinators (or other SCAT positions), consider the need to swap individuals on a 2-3 week rotational calendar. Maintaining continuity of personnel is an important goal as SCAT is typically one of the longest lasting activities in a response.

RECONNAISSANCE PHASE CHECKLIST

SCAT COORDINATOR (or DEPUTY) /FIELD TEAM MANAGER

- ❑ **Ensure Operations has received Potential Initial Cleanup Guidance.**

- ❑ **Establish objectives of the Shoreline Assessment Program using the objectives established by Unified Command as guidance.**

  - Example SCAT Program Objectives (see the shoreline cleanup assessment work plan for more info):
    - Collect comprehensive information on shoreline oiling conditions using standard protocols and mechanisms;
    - Utilize shoreline oiling data to enhance and expedite shoreline treatment planning, decision-making, and response activities; and
    - Assure that a "net environmental benefit" (NEB) for an oiled shoreline can be achieved by shoreline treatment.
    - Ensure that impacts to tribal and cultural resources as well as endangered species and essential fish habitats are minimized.

BEST PRACTICE: Be clear about the objectives of the SCAT program to avoid mission creep – avoid assigning SCAT extra duties beyond the established objectives (e.g. sampling, NRDA).

- ❑ **Determine the scope and scale of the initial area to be surveyed by SCAT teams.**

  - Conduct reconnaissance via air, land, and/or water and use trajectory models, tides, winds, river flow, and other relevant environmental conditions to establish the boundaries of the initial survey area. Information collected during reconnaissance may help direct OPS to sites of immediate concern either for deployment of protection measures, or, where mobile or pooled oil on the shoreline has the potential for remobilization.

BEST PRACTICE: The total survey area should extend somewhat beyond the extent of the oiled areas.

BEST PRACTICE: Conducting reconnaissance via aircraft, boat, or land will greatly aid in the initial SCAT planning. Try to reserve a spot on an aircraft as soon as possible and establish a standing reservation on a routine flight to observe the extent of the oil. If possible, reserve a dedicated SCAT helicopter.

  - Select the appropriate initial survey method(s). Surveys may be conducted by different methods and at different scales depending upon the size of the affected area, character of the shoreline type, and level of detail that is required. Select a survey method which meets incident objectives and is achievable with the resources available.

RECONNAISSANCE PHASE CHECKLIST

- ❑ **Determine the initial number of SCAT field teams and appropriate level of Command Post staff.**

  - Determine the initial positions that need to be filled (SCAT Field Manager, Data Manager, SCAT Teams, other SCAT Support staff, etc.) and by whom. The exact number of roles and individuals to fill those roles can vary widely from spill to spill and during a spill as conditions change.

BEST PRACTICE: Conduct early outreach to organizations that may be asked to provide SCAT personnel.

BEST PRACTICE: Consider engaging an oil geomorphologist to assist in the Command Post as well as in the field.

  - All personnel must meet or exceed incident specific health and safety requirements for field work and training as defined by the Safety Officer. Individual employers may require training that exceeds the incident specific standards.

  - SCAT personnel should have:
    - Safety training that meets or exceeds applicable regulations under 29 CFR 1910 (e.g. 4, 8, 24, or 40 hour HAZWOPER training with current refresher and possibly enrolled in medical monitoring program) and the incident specific safety plan
    - Familiarity/experience with oil spill response
    - Basic ICS training
    - Basic SCAT training

  - At minimum, the field SCAT teams should consist of an:
    - RP Representative
    - State government representative
    - Federal On Scene Coordinator representative or designee

  - Other field SCAT team members may include:
    - Tribal government representative
    - Landowner or manager
    - Local government
    - Technical specialists

  - A variety of technical specialists can support SCAT operations. Depending on the circumstance of the spill, individuals with the following skills should be considered:
    - <u>Oil Geomorphologist</u>: A specialist experienced in identifying the physical processes affecting oil on a shoreline.
    - <u>Ecologist/Biologist</u>: A specialist capable of identifying biological concerns/constraints and providing input on treatment options and endpoints.

- Archeologist or Cultural Resource Specialist: An individual who can advise on precautions and constraints to protect cultural resources, if needed.
- Oil Spill Response Cleanup Expert: An individual well-versed in oil removal and remediation techniques. May be an Operations Section representative.

BEST PRACTICE: Keep SCAT teams as small as practicable (e.g. 3-5) for safety and logistical reasons. Where possible, try to use individuals who can fill multiple specialty roles.

- Be sure to consider biological (ESA Section 7 and EFH) and/or cultural/historical (NHPA Section 106) constraints. Review the ICS 232 Resources at Risk Summary form(s). Determine the need to have a wildlife biologist and/or a cultural resources specialist join the SCAT Field Teams during surveys on shoreline segments that have been identified as having potential ESA or cultural concerns. Key information for complying with ESA and NHPA are located on the following pages.

- Consider including tribal representative(s) on SCAT teams as appropriate. Try to include tribal representatives that have received health and safety training appropriate for SCAT team activities (in compliance with the incident specific safety plan). Regulations under 29 CFR 1910 may or may not apply depending on who the tribal representatives are working for.

- Maintain continuity of staff to the extent possible, throughout the duration of the SCAT program. Develop a staffing calendar with 2-3 week rotations for team.

BEST PRACTICE: To improve consistency on teams, stagger rotations so that not all team members rotate at the same time.

BEST PRACTICE: Consider the long-term staffing needs for SCAT early. Continuity in assigning teams is a good practice. Avoid calibration drift (staff assigned months into the incident can have a different perspective). Consider developing training/guidance document for staff rotation during long-term responses. Training could include visits to oiled shorelines or photo history of a segment.

ESA- Section 7 Compliance

Complying with Section 7 of the Endangered Species Act (ESA) During Oil Spill Response

- ESA provides protection for listed species and their designated critical habitats.
- Section 9 of the ESA prohibits "take" of individual animals or adverse modification or destruction of critical habitat.
- Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.
- Federal agencies must ensure that their actions don't jeopardize the continued existence of listed species or destroy critical habitat.
- The FOSC (either USCG or USEPA), as the Lead Federal Agency, must determine whether or not listed species and/or critical habitats are present within the area of the operation.
- Action is defined as "…all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas."
- Federal agencies conduct interagency consultation, (aka Section 7 consultation), with the US Fish and Wildlife Service and National Marine Fisheries Service either formally or informally on any action that may affect listed species.
- Section 7 Team generates Best Management Practices (BMPs) for response-related activities to minimize impacts to listed species and critical habitats. These become part of the shoreline treatment recommendations that are issued to the Operations Section.
- Depending on the spill conditions, these recommendations may require special agency field monitors during operations to document compliance with the BMPs
- Furthermore, there may be a need to document SCAT compliance with any BMPs that have been developed for SCAT teams to follow during their field surveys.

NHPA –Section 106 Compliance

Complying with Section 106 of the National Historic Preservation Act (NHPA) During Oil Spill Response

- Under Section 106, Federal agencies are required to take into account the effects of their undertakings on historic properties that are listed in, or eligible for, inclusion in the National Register of Historic Places (NRHP).
- The FOSC (either USCG or USEPA), as the Lead Federal Agency, must determine whether or not NRHP-eligible Historic Properties are present within the area of the operation.
- If Historic Properties are present, the Lead Federal Agency must then determine whether or not the undertaking will have an adverse effect on them.
- This determination is made by consulting with State Historic Preservation Offices (SHPOs), Native American tribes, Federal land managers, and other stakeholders on the presence of and potential adverse effects to Historic Properties prior to the start of cleanup operations.
- After consultations, the FOSC, the SHPO, and other stakeholders reach an agreement on how the adverse effects on Historic Properties will be addressed. This could include avoidance, monitoring, mitigation, or some other procedure.
- A Historic Properties Specialist oversees the Section 106 process during the development of shoreline treatment recommendations and develops recommendations to be implemented by SCAT and Operations during their work. Examples include:
  - No Known Cultural Concern – Work can proceed without archaeological monitoring. If cultural concerns are discovered, work must stop and Section 106 Team must be notified.
  - Potential Cultural Concern – Project area requires archaeological survey before work can proceed.
  - 250 Meter Sensitivity Zone – Project is within 250 meters of a known cultural resource. Archaeological monitoring required during the undertaking.
- There is a Programmatic Agreement under the National Contingency Plan whereby this process is expedited during oil spill emergencies.
- One of the recommendations may be having archaeologists and/or tribal representatives on the SCAT teams to identify unknown historic sites, confirm current condition of known sites, and make sure that SCAT team activities do not disturb such sites.

RECONNAISSANCE PHASE CHECKLIST

- ❑ **Map and segment the survey area.**

  - An essential first step of a SCAT survey is to divide the coastline into working units called segments, within which the shoreline character is relatively homogeneous in terms of physical features and sediment type.

  - Each segment is assigned a unique location identifier. Segment boundaries are established on the basis of prominent geological features (such as a headland), changes in shoreline or substrate type, a change in oiling conditions, or establishment of the boundary of an operations area.

  - In general, most segments in oiled areas would be in the range of 0.2 – 2.0 km in length but this will be determined largely by the nature of a given shoreline. Segment lengths should be small enough to obtain adequate resolution and detail on the distribution of oil, but not so small that too much data is replicated (i.e. if multiple adjacent segments are of the same shoreline type, then it would be useful to create larger segments to facilitate quickly assessing them).

  - If applicable to the response, identify shoreline access points, restricted areas, and hazards that affect SCAT activities and ensure this information is communicated to SCAT Field Teams.

BEST PRACTICE: Create a map of the entire survey area that includes sensitive areas and is updated regularly.

BEST PRACTICE: Check to see if the survey area has been pre-segmented (e.g. in an Area Plan or by local industry).

BEST PRACTICE: When determining segment boundaries, coordinate with OPS on their shoreline Division Boundaries. To minimize confusion during planning, avoid creating segments that span multiple divisions whenever possible. If an area has been pre-segmented recommend that OPS select division boundaries that coincide with segment boundaries. In order to reduce confusion, segments and corresponding Divisions should use the same basic reference designations (Division A, Segment A1).

References: The following documents contain additional guidance on developing segment boundaries that may be useful:

- Shoreline Assessment Manual – 4th Addition. NOAA August 2013 http://response.restoration.noaa.gov/sites/default/files/manual_shore_assess_aug2013.pdf

- The UK SCAT Manual: A field guide to the documentation of oiled shorelines in the UK. John Moore, April 2007. Sec. 1.3.1 www.dft.gov.uk/mca/corp119ext.pdf

RECONNAISSANCE PHASE CHECKLIST

- ❑ **Establish a data management system.**

  - Consider appointing a SCAT Data Manager or refer to the Reconnaissance Phase Data Management checklist (page 23 of this document) for steps to accomplish this task.

  - Determine which types of data need to be collected for the response. Examples include:
    - Oiling conditions
    - Geospatial data
    - Photographs/Video
    - Field cleanup observations (e.g. treatment application by OPS)
    - Command post documentation
    - Access agreements (may be handled by EU, Logistics, or Liaison)

  - Considerations for determining best data management organization:
    - Which type of system best meets the response needs and/or scale (e.g. electronic vs. paper-based)?
    - Is it readily available?
    - Existing policies?
    - What are the long term issues in availability of and access to SCAT data? NRDA? Potential litigants? Scientific community? Public?

- ❑ **Select the appropriate SCAT forms to be used.**

  - Use forms appropriate for the conditions of the spill (marine, river, winter, tarball, etc.).

  - Adjust forms as necessary to meet the conditions of the spill.

  - Links to commonly used SCAT Forms are available below:
    - NOAA: http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/shoreline-cleanup-and-assessment-technique-scat.html
    - Owens Coastal Consulting: http://www.shorelinescat.com/
    - Polaris Applied Sciences. Inc.: http://www.polarisappliedsciences.com/

BEST PRACTICE: Ensure SCAT forms and associated data collection documents/tools are available and appropriate.

- ❑ **Develop a survey and reporting schedule as appropriate to provide key survey information as needed for incorporation into the Incident Action Plan.**

  - Consider the established meeting schedule and the data needs for ICS meetings.

- For large spills, you should consider long-range planning (strategic timeframes of weeks/months) and rolling tasks (5 to7 day task schedule) in addition to daily tasking.

BEST PRACTICE: Work with EUL to coordinate with IAP development and relay time-critical information as appropriate within the Command Post.

- ❑ **Identify incident specific health and safety considerations for SCAT operations and communicate them to the Safety Officer.**

- ❑ **Identify and request that Logistics assemble the essential equipment for the Field Teams.**

BEST PRACTICE: Try to ensure to that equipment (Cameras, GPS, Phones, etc.) is set to record the same time and coordinate units to ensure for data / logistical consistency.

- ❑ **Begin drafting a shoreline cleanup assessment work plan, including treatment and endpoint recommendations. When complete, the work plan should describe or include, at minimum:**
  - The purpose of the SCAT program including objectives and guiding principles
  - Health, safety, and environmental considerations specific to the SCAT operations
  - Organization, staffing, and schedules
  - Survey methods to be employed
  - Field documentation and data management processes
  - Acceptable treatment options
  - Cleanup endpoint standards (these will be preliminary).
  - Approval from EUL and/or UC.

BEST PRACTICE: Begin process of developing treatment method and endpoint recommendations early to ensure that OPS has clear guidance in place as on water recovery ramps down and they are ready to ramp up shoreline treatment.

- ❑ **Identify and/or develop treatment and endpoint recommendations.**
  - See Example SCAT Work Plan Appendix E: Example Recommended Treatment and Endpoint Plan, and resources listed at the end of this section.

- Considerations for treatment and endpoints:
  - Balancing values of stakeholders
  - Impacts of oil on environment versus impacts of clean-up activities (e.g. foot traffic, heavy machinery) on environment
  - Functions within the ecosystem that will naturally restore the environment
  - Persistence in environment versus immediacy of human or wildlife use of that environment
  - Set achievable endpoints.

- Recommended Components of Endpoint Criteria
  - Shoreline Characteristics
    - Shoreline use (high public use area, private, etc.)
    - Shoreline substrate (sand, pebble, cobble, per NOAA Guide) Shoreline type by ESI Rank (exposed rocky shores, tidal flats, swamp, marsh, wetland, etc.)
  - Location of oil (e.g. overbank oiling, intertidal, etc.
  - Oiling thickness
  - Oil Characteristics (fresh, sticky, etc.)
  - Oil type (Light, medium, heavy crude, bunker, diesel, etc.)
  - % Cover
  - Operational Endpoints
    - E.g.: cease water deluge when no brown or black oil appears, only an iridescent film; wipe stems until no sticky material can be removed

BEST PRACTICE: Use the same terminology for endpoints as the SCAT teams use to describe oiling conditions.

BEST PRACTICE: Consider establishing a "Shoreline Treatment Advisory Group" (STAG)" to assist in developing initial generic treatment recommendations and endpoints. The STAG should be comprised of staff from OPS and Planning.

Reference: The following documents contain additional guidance on developing treatments and endpoints:

- Guidelines for Selecting Shoreline Treatment Endpoints for Oil Spill Response (Environment Canada, 2007) http://publications.gc.ca/collections/collection_2011/ec/En4-84-2008-eng.pdf

- Selection and Use of Shoreline Treatment Endpoints for Oils Spill Response(Sergy and Ownes, 2008) http://www.shorelinescat.com/Documents/Publications/15%202008%20Shoreline%20Treatment%20End%20Points.pdf

- Options for Minimizing Environmental Impacts of Freshwater Spill

Response (NOAA, API 1994)
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_freshwater.pdf

BEST PRACTICE: A variety of permits (e.g. for shoreline access) may be required during the survey process. Coordinate with the EUL to identify applicable permits and constraints and include them in the work plan as appropriate. Private property access permission/agreements must also be obtained. Coordinate with the Liaison Officer to obtain these.

RECONNAISSANCE PHASE CHECKLIST

DATA MANAGEMENT

- ❑ **Establish general expectations, procedures, and accountability for SCAT data management tasks. Depending on the scale of the response, these responsibilities may be handled by SCAT Coordinator or a delegated Data Manager.**
  - Address data sharing protocols and data access issues between stakeholders (i.e. Fed/State/RP) when making these determinations.
  - Each agency/organization representative working on SCAT data should be familiar with their own organization's data policy and be able to discuss any critical issues including public disclosure requirements.

BEST PRACTICE: Be sure to discuss the following: frequency of data archiving, who can access the data and how, will copies be permitted, etc. If needed, consult NOAA for other data management considerations.

- ❑ **Ensure that the appropriate SCAT forms and associated data collection documents/tools are available, based on the stated needs and objectives of the SCAT program.**
  - Define the specific types of data SCAT teams will and will not collect (e.g. Photos, Pits/Trenches, Samples, Oiled wildlife observations, etc.).
  - Modify the forms to meet incident specific needs as appropriate. To the full extent possible, changes in standards must be done at the beginning of the spill, otherwise there is lack of consistency/reproducibility over time.
  - Ensure SCAT teams/forms are using standardized location naming conventions (e.g. shoreline segment identification numbers) that can be integrated into geodatabases/GIS systems being developed, and that are consistent with Operations Division naming conventions.
- ❑ **Evaluate equipment requirements/standards for data collection and management**
  - Coordinate this review with the SCAT Program Field Team Manager or Coordinator as appropriate.
  - Common data collection equipment may include: Digital cameras, hand-held GPS units, Forms, PDAs, Tablet Computers, etc.

BEST PRACTICE: Ensure that any equipment being used meets or exceeds accepted data quality standards.

RECONNAISSANCE PHASE CHECKLIST

BEST PRACTICE: Ensure that any devices deployed accurately reflect the local time. If possible, cameras should have the date and time set to match that of the associated team's issued GPS. It is a good practice to take a picture of the team GPS time screen with the digital camera prior to (and after) each deployment. This can then be used to post-process pictures if necessary.

- ❑ **Develop a document management system and/or SCAT database (if appropriate).**
  - Establish process for collecting and archiving paper documents.
  - For an electronic document management system or database:
    - Establish file directory structure and file naming conventions for managing documents, data, and photos.
    - Establish both on-site backup and an off-site, secure repository for all data and documentation. Coordinate with Documentation Unit for final archiving.
    - Determine/establish appropriate permissions for database access and editing.
- ❑ **As appropriate, identify predetermined standards for data verification, analysis, and reporting.**
  - Identify and put in place verification SOPs & checklists such as standard query language verification queries (auditing of data) and reporting SOPs & procedures and requirements.
- ❑ **Obtain and manage geospatial information.**
  - Coordinate data and map transfers with the SU and EU (e.g., base maps, overflight maps, etc.) as appropriate.
  - Acquire the spatial data and maps necessary to meet the data needs of the SCAT Program and (in particular) the field teams.
  - Create base maps for field planning and use.

BEST PRACTICE: Consider the need to have a dedicated SCAT mapping capability (separate from the SU) as part of SCAT data management. Ensure the maps are consistent with SU mapping systems.

- ❑ **Develop and maintain contact list for SCAT Team members.**

SYSTEMATIC SURVEY PHASE CHECKLIST

The Systematic Survey Phase may begin between one and several days into the response, depending on spill-specific conditions. This phase involves field surveys, data collection/analysis, treatment/cleanup endpoint recommendations, as well as shoreline treatment monitoring.

SCAT COORDINATOR (or DEPUTY)/FIELD TEAM MANAGER

- ❑ **Determine which areas should be surveyed and in what order always staying at least a day ahead of cleanup crews.**
  - Initial assessment from SCAT team should triage each segment into one of three categories:
    - Deferred – no oil observed or no treatment recommended at this time
    - Standard –the initial or generic shoreline treatment recommendations are appropriate
    - Holding – Segment requires special consideration, and will need a unique shoreline treatment recommendation from SCAT
  - Coordinate with the Operations Section.

BEST PRACTICE: Stay at least a day ahead of cleanup crews if possible, but not get too far ahead as conditions may change.

  - Continue to re-assess the scope and scale of the survey areas and adjust as needed.

BEST PRACTICE: Daily surveys should be prioritized based on shoreline oiling conditions noted during aerial reconnaissance flights. Segments where heavy oiling has been observed or which are of specific ecological importance should be prioritized for surveys first.

BEST PRACTICE: Ideally, surveys should be conducted during daylight hours and at low tide (if applicable). If the area had been flooded, remember to survey the extent of the flooding which may be well beyond the shoreline.

- ❑ **Ensure that all elements of the shoreline cleanup assessment work plan have been completed.**
- ❑ **Prepare, deploy, and manage SCAT Field Teams conducting shoreline oiling surveys. (may be managed by SCAT Field Team Manager). A variety of tools to help manage SCAT Teams are available in Appendix F of the Example SCAT Work Plan.**

- Assemble SCAT teams to meet SCAT field objectives and ensure that all teams have the necessary representation, training and equipment.

- Ensure that team assignments are made daily or as appropriate. Be sure the assignments are reflected in the 204s and passed on to the teams.

- Identify and ensure field team safety and logistical needs (transportation via helicopter or boat? PPE issues? Communication via radios, mobile or satellite phones? Lunch? Etc.) are met daily.

- Obtain weather, tidal charts and/or river flow data from credible sources such as NOAA (weather and/or tides) or USGS (river flow data) and distribute to field teams.

- Conduct joint calibration trip for SCAT teams prior to initial assessment.

- Conduct SCAT tailgate safety meeting at the beginning of shifts (as appropriate):
  - Review any special considerations that may exist for each team such as: site access (e.g. have legal access agreements been signed?; need for vehicle, boat, or aircraft), problematic terrain (streams, cliffs), special safety considerations, communications, limitations, etc.

BEST PRACTICE: Conduct calibration training with SCAT field team members on a periodic basis before sending teams in to the field. Ensure that teams use proper terminology and apply guidelines uniformly.

- Conduct debriefings with SCAT team members (or designated team member) and other SCAT associated members of the EU at the end of shifts. Debriefings may include the following topics:
  - Work completed during the shift.
  - The need for consensus among team members. Signatures on the assessment forms document consensus. If consensus is not reached in the field, make sure that conflicting opinions are documented.
  - Ensure that documentation and equipment for SCAT teams (maps, photography equipment, gear, communications, etc.) are adequate and all set to the same recording units prior to next deployment.
  - Solicit observations from the field team regarding cleanup processes, successes, failures, etc.
  - Discuss assignments for the next operational period.
  - Ensure that data is being collected and recorded appropriately.

❑ **Establish process for summarizing SCAT field data and communicating data as appropriate to meet the following needs:**

- Situation Unit updates:
  - Oiling degree and distances.

- Command And General Staff Meeting:
  - Determine from EUL and/or PSC any relevant/new information or shift in objectives or priorities from UC which might affect SCAT program.
  - Identify any potential weather or other concerns for SCAT Field Teams.

- Pre-Tactics and Tactics Meeting
  - Coordinate with EUL, PSC and OPS to ensure that field observations are available for Tactics meeting if that information may influence where cleanup crews are deployed.
  - Collect preliminary treatment recommendations (and any applicable wildlife or Section 106 constraints) from SCAT Teams in field and/or collect shoreline treatment recommendation (STR) packets.
  - Synthesize them and discuss with EUL (consider organizing them by OPS' divisions).
  - EUL and/or SCAT Coordinator coordinate with PSC and OPS during Tactics Meeting; provide key SCAT info to OPS/PSC to help develop 204s (treatment recommendations, safety constraints, etc.).

- Planning Meeting
  - 204s for shoreline treatment are produced, using input from SCAT teams and shoreline treatment recommendation forms.
  - 204s for continued SCAT team deployments are produced.
  - EUL typically attends, SCAT Coordinator may be asked to attend.

BEST PRACTICE: Coordinate with the EUL to ensure that there is a process for SCAT oiling data and STRs to get to OPS for consideration in the IAP process.

- Post-OPS Briefing
  - Conduct safety, logistics, calibration meeting
  - Deploy the SCAT Teams to assigned segments

BEST PRACTICE: Assist EUL in developing data sharing opportunities with NRDA and others.

❑ **Develop procedures for translating data into shoreline treatment recommendations (STRs) and having STR's approved. STRs may be developed by the SCAT Coordinator or designee.**

- There are two types of shoreline treatment recommendations and endpoints that are generated by SCAT. One is a generic set of treatment recommendations and endpoints based on shoreline type. This is developed by the SCAT coordinator and incorporated into the IAP process, and will likely not change significantly throughout the response. This is shown as Appendix E in the Example SCAT Work Plan. The second is a segment specific

recommendation. These are called shoreline treatment recommendations and provide guidance for a specific segment. A shoreline treatment recommendation form is included in Appendix B in the Example SCAT Work Plan. In cases where cleanup crews should follow the generic treatment recommendations, the shoreline treatment recommendation will simply reference that.

- Confirm (or establish if necessary) the incident-specific process for developing STRs.

BEST PRACTICE: Typically the process would be for the SCAT Coordinator or designee to develop STRs for each segment based on input from the SCAT Field Team, organize them by Division, and route them through the appropriate parts of the ICS for signatures (Scat Coordinator, Safety Officer, PSC, OPS, Sect 7, Sect 106, UC, etc.). The STRs would then be presented during the Prep for Tactics Work Period and at the Tactics Meetings.

- Ensure that above process is synchronized with IAP development.

BEST PRACTICE: Use shoreline treatment recommendation forms. Once approved, they will also serve as work orders to implement the cleanup recommendations.

- ❑ **Along with STAG (if established) continue leading the effort to develop shoreline treatment guidelines. Later in the cleanup process, the STAG will also contribute to the development of cleanup endpoints.**

BEST PRACTICE: If any chemical countermeasures, bioremediation, or in-situ burn are being considered by a SCAT Team, work with EUL and PSC to seek RRT approval.

- ❑ **Coordinate with Liaison to establish the "Cleanup Endpoint Stakeholder Group" (CESG) and lead the effort to review shoreline treatment and cleanup endpoint recommendations.**

  - Determine which agencies/organizations must be involved in treatment and endpoint selection process.
  - Integrate cleanup concerns of the various resource agencies and managers into the process of developing treatment and endpoint recommendations.

BEST PRACTICE: Endpoints are typically selected by shoreline type but some segments may have specific sensitivities which require segment-specific endpoints. In some instances, endpoints may be legally driven by language in an order.

BEST PRACTICE: Take the CESG members on a tour of cleanup operations to ensure everyone understands the state of oiling and the impacts of cleanup operations.

Additional field visits may be beneficial to achieve consensus on difficult segment-specific recommendations.

References:

- Guidelines for Selecting Shoreline Treatment Endpoints for Oil Spill Response. Environment Canada, 2007. http://publications.gc.ca/collections/collection_2011/ec/En4-84-2008-eng.pdf
- Shoreline Assessment Manual – 4th Addition. NOAA. 2013. http://response.restoration.noaa.gov/sites/default/files/manual_shore_assess_aug2013.pdf
- Shoreline Assessment Job Aid, NOAA. 2007. http://response.restoration.noaa.gov/sites/default/files/jobaid_shore_assess_aug2007.pdf

❑ **Monitor locations and effectiveness of cleanups.**

- Coordinate with the EUL and OPS liaison on any issues raised by SCAT team observations, particularly where cleanup methods must be modified to increase effectiveness or decrease impacts.
- Develop a process to ensure that the treatment recommendations on the 204s for shoreline treatment crews are being properly implemented and are effective. This may be achieved by using SCAT Team members, SCAT-OPS liaisons, or other trained oversight personnel.
    - These personnel are field-based and will work alongside Shoreline Operations/Cleanup to ensure SCAT instructions are understood, applied properly, and are effective. They are the eyes/ears in the field supporting the SCAT Coordinator.

BEST PRACTICE: Establish a feedback loop during the day to report when field monitors observe ineffective cleanup or when an adverse impact is resulting from an agreed upon treatment technique.

❑ **Develop periodic SCAT Reports. The frequency will be determined by the EUL.**

BEST PRACTICE: Document the highlights of each day for historical and training purposes

SYSTEMATIC SURVEY PHASE CHECKLIST

DATA MANAGEMENT

- ❑ **Implement protocols for the data handling, processing, quality assurance/quality control (QA/QC), outputs, and archiving of the shoreline oiling data collected during the incident.**

- ❑ **Closely coordinate with OPS/PSC to provide SCAT information to the IAP process.**

  - Data collected in the field should be transmitted to OPS for inclusion in 204s

  - Identify the Pre-tactics needs and develop a process for meeting those needs.

- ❑ **Closely coordinate with SU to ensure that maps and other outputs are up to date and accurate.**

- ❑ **As needed, meet with SCAT Teams prior to field mobilizations to instruct/review field documentation protocols and data forms.**

- ❑ **Ensure that QA/QC'd SCAT data are made available for internal use by response agencies and to support public affairs products and events.**

- ❑ **Retrieve data (in all formats) from the Field Teams or Field Team Manager as soon as possible after collection.**

  - Log incoming SCAT field forms, sketches, geo-referenced photos, and other information (films, videotapes, etc.) and review the field information. The review should involve checking to ensure that all sections of the forms have been completed and that the information appears reasonable and consistent.

> **BEST PRACTICE:** GPS units and digital cameras should be surrendered to the Data Manager immediately upon return to the Command Post. GPS track lines and photos should be deleted from the units once they have been saved in a secure repository. Photos should be labeled as soon as possible.

- ❑ **Provide quality control/quality assurance of field-collected data for use in the Incident Command Post.**

  - Manage and QA/QC SCAT Team GPS data capture and waypoints. Ensure GPS tracklogs, data capture, waypoints and digital photos/videos are accounted for, complete, and stored appropriately.

  - Manage and upload digital photos for spatial display as needed by the IMT.

- ❑ **Collect supplemental observations from other sources for survey planning purposes.**

- Other sources such as field observers, OPS, the public, and others may provide useful information on shoreline oiling for consideration and dissemination. This might require a separate system for data storage than that used by SCAT. Consider using a GIS Specialist in the Situation Unit to collect non-SCAT observations. Liaison will also be a resource for collecting supplemental information. It is acceptable to use these reports as a planning tool for survey schedules, but not in lieu of SCAT data.

❑ **Produce SCAT outputs that may include:**

- Maps of shoreline types
- Segment oiling conditions
- Surface oil volumes on the shoreline, changes in volume through time
- SCAT field survey status
- Treatment recommendations
- Cleanup treatment status
- Lengths of oiled shoreline (by oil rating and/or shoreline type)
- Lengths treated (by oil rating and/or treatment method)

BEST PRACTICE: Coordinate data needs with the EUL to ensure that there is sufficient time for data input and processing prior to the Tactics Meetings and Pre-Tactics Work Period.

- Produce daily status reports and maps showing current SCAT deployments and assessment activities.
  - Archive copies for distribution and reference; produce other reports as needed.
  - Confirm with SCAT Coordinator on future field map development needs or SCAT survey targets.

- Ensure production of SCAT maps and make them available in all appropriate formats, including hard copies, PDFs, Google Earth kml/kmz files, and web mapping services.

BEST PRACTICE: Develop and use map templates to standardize the layout elements, file path, reference of site location, map layers and naming conventions for mapping products.

SYSTEMATIC SURVEY PHASE CHECKLIST

- ❑ **With SCAT Coordinator, review data management performance after first SCAT field activities and modify forms and protocols as necessary. Continue coordinating with SCAT Coordinator and SCAT Teams; provide and receive feedback on data management performance at SCAT and Unified Command briefings.**

- ❑ **Maintain and ensure the data integrity/availability of the SCAT databases system and its standardization with other spatial and reporting databases as appropriate.**

- ❑ **Implement data archival strategy (e.g. offsite external drives/FTP/server, used for ongoing reference and long-term documentation). Ensure that a documented process exists for maintaining data consistency across the various repositories.**

- ❑ **Periodically review data requirements with the SCAT Coordinator.**

- ❑ **Ensure all SCAT data is archived with the Documentation Unit.**

MONITORING/INSPECTION PHASE CHECKLIST

The Monitoring/Inspection Phase begins when OPS has completed cleanup of affected shoreline segments and requests confirmation inspections by SCAT Teams and land owner/managers.

SCAT COORDINATOR (or DEPUTY)/FIELD TEAM MANAGER

- ❑ **Establish a communication protocol with OPS that notifies the EUL and/or SCAT Coordinator when clean up treatments have been completed on a given segment.**

- ❑ **Evaluate the need for establishing a pre-sign off inspection process prior to final sign off inspections with the land owners/managers and develop as necessary. A pre-sign off inspection is a particularly valuable practice during larger spills.**

- ❑ **Implement the formal sign-off inspection and approval process/procedures.**

  - Determine which team members have signatory authority and which can only provide comments. One FOSC representative, one SOSC representative, and one RP representative typically sign shoreline inspection report to indicate no further treatment (NFT) or no oil observed (NOO) for a segment. Landowners can comment but will not necessarily be signatories on the shoreline inspection report. In this manner, sign off participants will only be necessary when they will be most productive.

  - Depending on the conditions of the spill, the signatory authority of the team could be limited to simply making the "official" recommendations to UC for their signature or, if appropriate, the team could have the authority to represent the UC and serve as the "final" sign-off authority for a segment.

  - Identify or develop an appropriate segment inspection report (SIR) form to use with input from EUL/PSC/UC.

  - Determine composition of the sign-off team(s). If possible use the original SCAT team plus any additional representatives (e.g. land owner/manager)

  - After the Operations Division Supervisor or Shoreline Supervisor considers that cleanup in a segment has been completed, the segment is inspected by a SCAT team.

MONITORING/INSPECTION PHASE CHECKLIST

BEST PRACTICE: The SCAT Team that conducted the original survey is a good group to conduct the survey as they will have perspective on the original oiling conditions for a given segment.

- ❑ **Deploy Sign-Off Teams to conduct post-cleanup inspections to confirm endpoint has been achieved.**
  - If segment meets endpoints cleanup criteria, then recommend for sign-off/approval by indicating:
    - No oil observed (NOO)
    - No further treatment is recommended (NFT)
  - If segment does not meet endpoint cleanup criteria, then recommend
    - "Segment maintenance by OPS and monitoring by SCAT"
    - Continuation of the original cleanup treatment recommendation
    - Continuation of a modified shoreline treatment.
  - Document the results of the inspection.
- ❑ Consider assigning OPS Hot Shot crew to inspection team to do some final polishing during the sign-off inspection to allow segment to be completed.

BEST PRACTICE: Use a segment inspection report form. Link this form to the original shoreline oiling summary. The Data Manager should be consulted to help determine form type and content.

- ❑ **Ensure that all of the completed inspection/recommendation documents are collected and archived appropriately.**

MONITORING/INSPECTION PHASE CHECKLIST

DATA MANAGEMENT

- ❑ **Continue collecting segment-specific forms and other documentation recording when/if cleanup standards have been achieved.**
- ❑ **Determine the need for additional deliverables of SCAT data that may be needed for "maintenance and monitoring" efforts.**
- ❑ **Ensure that ongoing monitoring efforts adhere to data standards.**
- ❑ **Confirm final archival storage for all SCAT data from field teams, deliverables of maps, photos, GPS data and GIS outputs. Coordinate with all on data distribution list for final delivery of data and analysis.**
- ❑ **Close out all data and GIS deliverables for SCAT mapping and analysis.**
- ❑ **Ensure all SCAT data is archived with the Documentation Unit.**
- ❑ **Identify, evaluate, and report all known gaps, delays, or interruptions of all data deliverables to strengthen future performances in the management and implementation of SCAT data.**

SELECT SCAT RESOURCES

Some useful documents for marine & freshwater spills and where to find them are provided below. Please review the documents prior to using them to ensure that they are consistent with current policy.

Characteristic Coastal Habitats: Choosing Spill Response Alternatives. (NOAA, 2010 - Reprinted March 2013)
http://response.restoration.noaa.gov/sites/default/files/Characteristic_Coastal_Habitats.pdf

Fate and Environmental Effects of Oil Spills in Freshwater Environments. (API publication No. 4675, 1999)
http://www.api.org/environment-health-and-safety/clean-water/oil-spill-prevention-and-response/~/media/0c4e212c65de4a3d9c2eee1a9e604a05.ashx

An FOSC's Guide to NOAA Scientific Support. (NOAA, 2010)
http://response.restoration.noaa.gov/foscguide

Options for Minimizing Environmental Impacts of Freshwater Spill Response (NOAA, API 1994)
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_freshwater.pdf

Selection and Use of Shoreline Treatment Endpoints for Oil Spill Response (Owens, Sergy, 2008)
http://www.shorelinescat.com/Documents/Publications/15%202008%20Shoreline%20Treatment%20End%20Points.pdf

Physical Processes Affecting the Movement and Spreading of Oils in Inland Waters. (NOAA, 1995)
http://response.restoration.noaa.gov/sites/default/files/inland.pdf

Shoreline Assessment Job Aid. (NOAA, 2007)
http://response.restoration.noaa.gov/sites/default/files/jobaid_shore_assess_aug2007.pdf

Shoreline Assessment Manual. (NOAA, 2013)
http://archive.orr.noaa.gov/book_shelf/72_manual_shore_assess.pdf

Field Guide to the Documentation and Description of Oiled Shorelines. (Environment Canada, 1994)
http://publications.gc.ca/site/eng/40483/publication.html

Guidelines for Selecting Shoreline Treatment Endpoints for Oil Spill Response (Environment Canada, 2007)
http://publications.gc.ca/collections/collection_2011/ec/En4-84-2008-eng.pdf

SELECT SCAT RESOURCES

The UK SCAT Manual: A field guide to the documentation of oiled shorelines in the UK. (Environment Canada, 2007)
http://webarchive.nationalarchives.gov.uk/20121107103953/http://www.dft.gov.uk/mca/corp119ext.pdf

Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments (NOAA, 2010)
http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/characteristics-response-strategies.html

Introduction to Coastal Habitats and Biological Resources for Spill Response
http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/coastal-habitats-biological-resources-job-aid.html

Shoreline Countermeasures Manuals (NOAA)
Alaska:
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_alaska.pdf

Freshwater:
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_freshwater.pdf

Temperate:
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_temperate.pdf

Shoreline Assessment Forms (NOAA)
http://response.restoration.noaa.gov/jobaid/shoreline_forms

Oiled Shoreline Assessment Manual (Preparedness for Oil-polluted Shoreline Cleanup and Oiled Wildlife Manuals, Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea, 2012)
http://www.posow.org/documentation/manual/assessmentmanual.pdf

Assorted SCAT Resources:
www.shorelineSCAT.com
www.polarisappliedsciences.com/

This EXAMPLE document is intended to be modified to meet incident specific needs during a response or drill. Content should be edited as appropriate to meet response objectives.

EXAMPLE SHORELINE CLEANUP ASSESSMENT TEAM WORK PLAN

(Insert Incident Name)

This incident-specific SCAT plan is approved:

FOSC	Date
SOSC	Date
RPIC	Date

(insert other UC members as appropriate)

cc: Operations Section, Shoreline Cleanup Supervisor
Operations Section Chief
National Oceanographic and Atmospheric Administration, SSC
U.S. Environmental Protection Agency
U.S. Department of Interior, U.S. Fish and Wildlife Service
State Historic Preservation Officer
State Agencies

Acronyms:
SCAT – Shoreline Cleanup Assessment Team
EUL – Environmental Unit Leader
NEB – Net Environmental Benefit
QA/QC – Quality Assurance/Quality Control
SOS – Site Oiling Survey
STR – Shoreline Treatment Recommendation

This EXAMPLE document is intended to be modified to meet incident specific needs during a response or drill. Content should be edited as appropriate to meet response objectives.

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1. Plan Purpose and Objectives

a. Purpose

Shoreline Cleanup and Assessment Technique (SCAT) is a systematic method for surveying an affected shoreline after an oil spill. The SCAT approach uses standardized terminology to document shoreline oiling conditions. SCAT is designed to support decision-making for shoreline cleanup. It is flexible in its scale of surveys and in the detail of datasets collected. SCAT surveys begin early in the response to assess initial shoreline conditions, and ideally continue to work in advance of operational cleanup. Surveys continue during the response to verify shoreline oiling, cleanup effectiveness, and eventually, to conduct final evaluations of shorelines to ensure they meet cleanup endpoints.

This work plan has been developed to describe the process for initiating and implementing SCAT actions for shorelines impacted by the **XXX** ***Spill/Drill.***

The SCAT process for this incident is intended to:

1. Systematically survey and document the area affected by oil to provide rapid and accurate geographic description of the shoreline oiling conditions and real-time issues or constraints;
2. Recommend treatment or cleanup options for oiled shorelines to OPS and UC;
3. Recommend shoreline cleanup endpoint standards to OPS and UC;
4. Monitor and evaluate shoreline treatment;
5. Provide inspection teams for segment sign off, and
6. Manage data collected from shoreline surveys.

b. Objectives

The objectives of the SCAT process for this incident are to:

1. Quickly collect data on shoreline oiling conditions using standard protocols and mechanisms;
2. Utilize shoreline oiling data to enhance and expedite shoreline treatment planning, decision-making, and response activities; and
3. Assure that a "net environmental benefit" (NEB) for an oiled shoreline is achieved by shoreline cleanup.
4. Ensure that impacts to Tribal and Cultural resources as well as endangered species and essential fish habitats are minimized.

c. Fundamental Principles:

The fundamental principles of the shoreline assessment surveys include:

1. A systematic assessment of all (oiled and non-oiled) shorelines in the affected area;

2. A division of shorelines into homogeneous geographic units or "segments";
3. The use of a standard set of terms and definitions for documentation;
4. A survey team that is objective and trained; and
5. The timely provision of data and information for decision making and planning.

2. Health and Safety

The Site Safety Officer prepares a Site Safety Plan addressing safety issues related to the incident. The Site Safety Plan addresses the principal safety and health hazards from boat and water operations and shoreline assessment and cleanup operations. The site safety plan covers training, equipment safety, protective clothing and equipment, decontamination, and first aid and medical evacuation procedures to be used during the response.

Specific safety considerations for SCAT operations include the following:

- Follow the Site Safety Plan.
- Attend daily safety meetings regarding SCAT work.
- Wear personal protective equipment.
- Use personal flotation devices when transiting across water and review safe boating practices
- Observe careful personal hygiene during the workday.
- Watch for slips, trips, and falls.
- Wear hearing protection when designated.
- Watch for heat and cold stress.
- Avoid interaction with wildlife.
- Protect hands.
- Operate equipment according to instructions.
- Practice good housekeeping in work areas.

3. Organization, Staffing, and Schedule

Organization

The SCAT Coordinator is in charge of the Shoreline Cleanup Assessment Technique operations. The SCAT Coordinator reports directly to the Environment Unit Leader, but must maintain a close working relationship with the Operations Section, resource agencies, and other affected parties. In the field, SCAT teams may receive priorities and technical directions from the SCAT Coordinator via the SCAT Field Team Manager.

Staffing

The field SCAT teams will consist of up to 6 members (plus vessel/aircraft operators as needed), ideally with the following representation (one or more roles may be combined, or not be applicable):

- Federal government representative
- State government representative
- Responsible Party
- Land owner/manager

- Tribal government representative
- Local government and/or oversight organization
- Geomorphologist or individuals with oil spill experience and SCAT training who can identify and document oil on the shore
- Ecologist/Biologist who can document the impacts of oil and recommend priorities, cleanup endpoints, and ecological constraints
- Archeologist or cultural resource specialist who can advise on precautions and constraints to protect cultural resources, if needed

A total of X SCAT teams have been assembled and deployed for the initial stages of this incident, including X aerial survey teams and X teams for ground surveys.

Field SCAT Team participants will be selected from representatives for industry; tribal state and federal agencies; and/or landowners to provide the primary expertise described above. SCAT Field Team members will be assigned for each team. A listing of the current organization (command & field) is outlined below.
The SCAT Data Manager is responsible for the maintenance of the SCAT data base and for the production of maps and tables as needed. The SCAT Data Manager may request the assignment of a SCAT Documentation specialist if the workload demands it.

Command Post

- **SCAT Coordinator (and Deputy, if needed)**
- **SCAT Field Team Manager**
- **Scheduler/Logistics Coordinator**
- **SCAT Data Manager**
    - **SCAT Data Entry**
- **Shoreline Treatment Advisory Group**

Aerial Reconnaissance Team

- **Team Member**
- **State**
- **Federal**

Aerial Video Team

- **Team Member**

Ground Team 1 – SCAT ST1

- **Federal**
- **State**
- **RP**
- **Landowner/manager (if needed)**
- **Archeologist/Cultural Specialist (If needed)**
- **Wildlife Biologist/Ecologist (if needed)**
- **Tribal/Local Gov't reps (if needed)**

Ground Team 2 – SCAT ST2 Team Lead:

Ground Team 3 – SCAT ST3 Team Lead:

Ground Team 4 – SCAT ST4 Team Lead:

Efforts will be made to minimize personnel substitutions and select team members who can stay with the SCAT operations, or to have a systematic schedule of alternates; people who see conditions change through time have a better frame of reference for assessing the success of cleanup operations.

Initial and subsequently new field team members will be "calibrated" by having them visit shorelines of differing morphology to review the agreed-upon shoreline descriptors and to confirm how oil impacts will be described throughout the response process. Currently deployed SCAT Teams have been calibrated.

Team Priority – Areas where heavy oiling has been noted or which are of specific ecological importance will be prioritized to maximize recovery opportunities and to reduce overall impacts.

Schedule
The schedule for SCAT Field Teams will change daily, and be reflected in the 204s as well as on SCAT planning tools (Appendix F).

Example: *Teams will be assigned specific survey locations as outlined on a daily basis in applicable 204s. Daily surveys will be prioritized based on shoreline oiling conditions noted during aerial reconnaissance flights. Areas where heavy oiling has been noted will be prioritized to maximize recovery opportunities as will sensitive areas identified on the ICS-232. Surveys will be completed at low tide to the extent practicable and during daylight hours. Personnel may be relocated to address changing conditions.*

4. SCAT Survey Methods

Shoreline surveys will be conducted for this incident by different methods and at different scales depending upon the size of the affected area, character of the shoreline type, and level of detail that is required. The following table presents a summary of the survey methods that will be used for this incident, key objectives of the survey methods, and the purpose of each survey method.

Table1
Summary of SCAT Survey Methods

Survey Method	Key Objectives	Purpose
Aerial Reconnaissance	Define the overall incident scale to develop regional objectives. Mapping or documentation not required.	Make specific observations, but not to map or document the oiling conditions, so that relatively large areas can be covered in a relatively short time period.
Aerial Survey	Systematically document or map to (i) create segments, (ii) develop regional	Prepare a map or maps that show the locations of stranded oil and the distribution and character of that oil by flying low altitude (<100

	strategies and plans, and (iii) define lengths of oiled shorelines.	feet) in a helicopter using a videotape camera linked to (1) an audio system for a detailed commentary, (2) a real time, moving map display, and (3) a Geographical Positioning System (GPS).
Systematic Ground Survey	Systematically document shoreline oiling conditions in all segments within the affected area.	Systematically document shoreline oiling conditions in all segments within the affected area and to complete shoreline oiling summary ("SOS") forms, generate sketch maps for each oiled segment and complete Shoreline Treatment Recommendations. ("STRs").
Spot Ground Survey	Systematically document shoreline oiling conditions for selected segments within the affected area.	Systematically document oiling conditions for selected segments within the affected area and to complete SOS forms, generate sketch maps for each oiled segment and complete Shoreline Treatment Recommendations ("STR").
Inspection Survey	Evaluate effectiveness of treatment methods employed by Operations in meeting shoreline treatment standards.	Systematically document shoreline conditions after treatment and cleanup of segments within the affected area against the applicable treatment standards and complete shoreline oiling summary forms and generate sketch maps for those segments. Make recommendations for closure or further cleanup actions and complete Shoreline Inspection Reports ("SIRs") for each segment for which "No Future Treatment" is being recommended.

Shoreline Segmentation Strategy

Example 1: *Initial SCAT segments are defined based on the NOAA Environmental Sensitivity Index delineations. In some cases, these ESI-based segments have been subdivided to provide a management length segment. The shoreline between within the response area have been segmented and given identifiers based on Operational Divisions.*

Example 2: *No pre-designated segments exist within the impacted areas associated with this incident. Shoreline segments will be established using methods outlined in The UK*
SCAT manual: Shoreline Cleanup Assessment Technique - a Field Guide to the Documentation of Oiled Shorelines in the UK. The SCAT Coordinator will work with various members of the IMT to identify and characterize shoreline segments.

5. Field Documentation and Information Transfer

Field documentation will consist, where possible, exclusively of standardized forms. Examples include the shoreline oiling summary (SOS) and shoreline treatment recommendation (STR) forms found in Appendices A and B, respectively.

Aerial Surveys
Completed field documents (notes, sketches, videos and photos) from aerial reconnaissance teams are to be provided by the team members and inspected at the Command Post for QA/QC the same day to ensure that any necessary revisions are made prior to the surveys of the next day.

Ground Surveys
The SCAT Field Team Manager and each Field Teams are responsible for ensuring that the following tasks and field documentation are completed.

- Complete SOS Form
- Complete STR Form
- Sketch(es) of the segment if oil is observed
- GPS coordinates of segment endpoints and specific features
- Digital photographs and log date/time/location if oil is observed
- Dig pits/trenches if subsurface oil is suspected

SCAT forms appropriate to the spill conditions (inland, tarball, winter, etc.) will be selected.

The completed field documentation (SOSs, STRs, sketches and photos) from the ground survey teams are to be provided to the Field Team Manager (or Data Manger). This documentation shall be inspected at the command post for QA/QC on the same day as the survey to ensure that any necessary revisions are made prior to the surveys of the next day.

All GPS units and digital cameras will be surrendered to SCAT Data Manger immediately upon return to the Command Post for downloading. The Data Manager will ensure that device times are synchronized and that all waypoints, tracklogs, and digital pictures are erased from each device prior to being redeployed with Field Teams.

In order to facilitate planning, the Team Members will notify the SCAT Field Team Manager on a daily basis if any segments are identified that will require Operations mobilization.

6. Command Post Data Management and Results

Data QA/QC
Data from SCAT field surveys is used to plan cleanup activities for the subsequent shoreline cleanup operations.

The SCAT Data Manager receives and logs incoming SCAT field forms, sketches, and other information (films, videotapes, etc.) and reviews the field information. The review involves a quick check to make sure that all sections of the forms have been completed and that the information appears reasonable and consistent. Any questions regarding missing information or apparent inconsistencies are discussed with the field team members before the next field assignment. After the quality control is complete, forms are copied and distributed as needed and key information is transferred to tables or computer data files.

Data Outputs
In general, the types of data, graphics, and tables that will be generated from the SCAT database may include:

- Maps of shoreline segments and soil/sediment types
- Oiling conditions
- Surface oil volumes, changes in volume through time
- SCAT field survey status
- Treatment recommendations
- Cleanup treatment status
- Lengths of oiled shoreline (by oil rating and/or shoreline type)
- Lengths treated (by oil rating and/or treatment method)
- Area surveyed

Record Keeping
Original SCAT field forms, sketches, and other information (photos, videotapes, etc.) and data, graphics, and tables generated during the incident will be provided by the SCAT Data Manager to the Documentation Section for retention. Only copies of these records will be distributed for use by stakeholders (i.e. RP, USCG, EPA, state agencies, etc.).

7. Spill Cleanup Endpoints Standards

All spills have a point at which active cleanup and removal gives way to the natural degradation of the oil. In many cases, this termination point is developed through a process lead by the SCAT Coordinator (Cleanup Endpoint Stakeholder Group) and formalized by the Unified Command. In most cases, the endpoint will be assumed to have been reached when worker safety would be compromised or the remaining oil presents less of a risk to the community or the resources than the treatment methods available.

The cleanup endpoints for this spill are detailed in Appendix E.

After the Operations Division Supervisor or Shoreline Supervisor considers that cleanup in a segment has been completed, the segment will be inspected by a Sign-Off team, that will (a) determine whether the cleanup criteria have been met and (b) make a

recommendation to the Unified Command regarding that segment. The team will use the criteria outlined in Appendix F to make this determination. At the time of the inspection, the land manager or representative will accompany the team and a segment inspection report (SIR) form will be completed. The Land Manager or representative may add notes in the "COMMENTS" text block on the SIR.

If the SCAT team (in consultation with the land manager) determines that no oil is present in the segment or that the cleanup has met the endpoint criteria, then the members of the SCAT team representing the UC will sign the SIR and forward a No Further Action recommendation to the UC for approval. Note that a determination that cleanup endpoints have been reached does not indicate that the segment is necessarily recovered or restored under the definition of the NRDA process.

If the SCAT team determines that a segment fails to meet the cleanup criteria the team will indicate this on the SIR. They will specify where work is still required in order for the segment to pass inspection and will forward the form to the Operations Section Chief via the SCAT Coordinator and the EUL.

The SCAT signoff process is intended to be a consensus-based team assessment. If, however, the team members are not in agreement regarding whether or not the endpoint criteria are met, then a sheet listing the reasons for disagreement is attached to the SIR and forwarded to the UC for resolution.

SCAT Work Plan Appendix A -
SHORELINE OILING SUMMARY FORM

The following page shows the traditional Shoreline Oiling Summary Form.

The following links provide caches of additional forms which are modified for specific environments.

NOAA: http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/shoreline-cleanup-and-assessment-technique-scat.html

Polaris Applies Sciences: http://www.polarisappliedsciences.com/

Owens Coastal Consulting: http://www.shorelinescat.com/

SHORELINE OIL SUMMARY (SOS) FORM: _____ **Page____ of _____**

1. GENERAL INFORMATION	Date (dd/mm/yyyy) (please use month name)	Time (24h standard/daylight) (00:00 to 00:00)	Tide Height
Segment ID:			L / M / H
Segment Name:		____:____ to____:____	Rising / Falling

Survey By: Foot /ATV/ Boat / Helicopter / Overlook / Other _____ | Weather: Sun / Clouds / Fog / Rain / Snow / Windy / Calm

2. SURVEY TEAM	Name	Organization	Name	Organization
Team Number				

3. SEGMENT	Total Length: m	Length Surveyed: m	Datum**:** WGS84

Survey Start GPS:	WP:	LAT: .	LONG: .
Survey End GPS:	WP:	LAT: .	LONG: .

4a. BACKSHORE CHARACTER: Indicate only ONE Primary type and ALL Secondary types

Cliff/Slope___ Lowland ___ Beach____ Dune___ Wetland___ Lagoon___ Delta___ Channel___ Man-Made____:_____

4b. ESI SHORELINE TYPE: Indicate only ONE Primary (P) and ANY Secondary (S) types. CIRCLE those oiled.

Primary: | Secondary:

5. OPERATIONAL FEATURES	Oiled Debris? Yes / No	Type:	Amount: (bags)
Direct backshore access? Yes / No	Alongshore access from next segment? Yes / No	Suitable for backshore staging? Yes / No	

Access Description / Restrictions:

6. OILING DESCRIPTION: Indicate overlapping zones in different tidal zones by numbering them (e.g. A1, A2)

Zone ID	ESI Type	WP Start	WP End	Tidal Zone				Oil Cover						Oil Thickness					Oil Character							
								Zone Area		1-100%	<1%	Size														
				LI	MI	UI	SU	Length (m)	Width (m)	Distr. %	# per unit area	Avg Size (cm)	Large Size (cm)	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	No

7. SUBSURFACE OILING CONDITIONS: Format: Zone ID dash Trench Number in that Zone, e.g., "A-1, B-1, B-2"

Pit #	WP	Substrate Type Surface / Subsurface	Tidal Zone				Pit Depth (cm)	Oiled Interval (cm-cm)	Subsurface Oil Character										Water Table (cm)	Sheen Color B,R,S,N	Clean Below Yes / No
			LI	MI	UI	SU			OP	PP	OR	OF	TR	TB	SR	AP	NO	%			

8. COMMENTS: Cleanup Recommendations; Ecological/Recreational/Cultural Issues; Wildlife Observations; Oiling Descriptions

Sketch: Yes / No Photos: Yes / No Photo Numbers: (-) Photographer Name:

Combination Form July 2013

Calibration IS VERY IMPORTANT! Do a calibration exercise to make sure that all teams are consistently using the same terminology and estimations.

Units: Use either metric (m, cm) or English (yd, ft, in). Circle the units used.

Tide Height: Circle the two letters indicating the progression of the tidal stage during the survey, either rising or falling.

Segment/Survey Length: Always record both segment and survey lengths on the first survey, especially where the SCAT team creates the segments in the field. On repeat surveys, always enter in the Survey Length, especially if only part of the segment is surveyed.

Start/End GPS: The preferred format for latitude and longitude is decimal degrees, but be consistent among teams. Record the datum if different than WGS84.

SURFACE OILING CONDITIONS

Zone ID: Use a different ID for each oil occurrence, e.g., two distinct bands of oil at mid-tide and high-tide levels, or alongshore where the oil distribution changes from 10 % to 50%. Describe each oil occurrence on a separate line. Record the shoreline type(s) present in each oiled zone using the terminology in section 4 or the ESI code.

Tidal Zone: Use the codes to indicate the location of the oil being described, as in the lower (LI), mid (MI), or upper (UI) intertidal zone, or in the supra (SU) tidal zone (above the normal high tide level).

Distribution: Enter the estimated percent of oil on the surface (preferred), or codes for the following intervals:

C	Continuous	91-100% cover
B	Broken	51-90%
P	Patchy	11-50%
S	Sporadic	<1-10%
T	Trace	<1%

Surface Oiling Descriptors - Thickness: Use the following codes:

TO	Thick Oil (fresh oil or mousse > 1 cm thick)
CV	Cover (oil or mousse from >0.1 cm to <1 cm on any surface)
CT	Coat (visible oil <0.1 cm, which can be scraped off with fingernail)
ST	Stain (visible oil, which cannot be scraped off with fingernail)
FL	Film (transparent or iridescent sheen or oily film)

Surface Oiling Descriptors - Type

FR	Fresh Oil (unweathered, liquid oil)
MS	Mousse (emulsified oil occurring over broad areas)
TB	Tar balls (discrete accumulations of oil <10 cm in diameter)
PT	Patties (discrete accumulations of oil >10 cm in diameter)
TC	Tar (highly weathered oil, of tarry, nearly solid consistency)
SR	Surface Oil Residue (non-cohesive, oiled surface sediments)
AP	Asphalt Pavements (cohesive, heavily oiled surface sediments)
No	No oil (no evidence of any type of oil)

SUBSURFACE OILING CONDITIONS

Oiled Interval: Measure the depths from the sediment surface to top/bottom of subsurface oiled layer. Enter multiple oil layers on separate lines.

Subsurface Oiling Descriptors: Use the following codes:

OP	Oil-Filled Pores (pore spaces are completely filled with oil)
PP	Partially Filled Pores (the oil does not flow out of the sediments when disturbed)
OR	Oil Residue (sediments are visibly oiled with black/brown coat or cover on the clasts, but little or no accumulation of oil within the pore spaces)
OF	Oil Film (sediments are lightly oiled with an oil film, or stain on the clasts)
TR	Trace (discontinuous film or spots of oil, or an odor or tackiness)

Sheen Color: Describe sheen on the water table as brown (B), rainbow (R), silver (S), or none (N).

SCAT Work Plan Appendix B –
SHORELINE TREATMENT RECOMMENDATION FORM

The following page shows the traditional Shoreline Treatment Recommendation Form.

The following link provides additional forms.

Owens Coastal Consulting: http://www.shorelinescat.com/

INCIDENT NAME

Shoreline Treatment Recommendation **STR# ___**

Operational Permit to Work

Segment: Survey Date:

Start Latitude: **End Lat:**

Start Longitude: **End Long:** **Length (m): _____**

Shoreline Type: *Primary* _____ *Secondary*_____

Oiled Areas for Treatment:

Auto entry directly populated from data base of:
Zone: Shoreline Type, L x W, Oil % Dist, Oil Character, Oil Thickness, Oiling Category
e.g. Zone A: Salt marsh, 200 m x 1 m, 10% Fresh oil, pooled, Oiling Category: Heavy

Cleanup Recommendations:

(Use standard terms and definitions from a Word document or populate database with these standard statements)

Staging and/or Logistics Constraints/Waste Issues:

Ecological Concerns:

Cultural / Historical Concerns:

Safety Concerns:

Attachments: ☐ Segment Map ☐ Sketch ☐ SCAT Form ☐ Fact Sheet ☐ Other

Prepared by: _____Date Prepared:_____

Date					
Time					
	to SOSC	to Land Mgr	to SHPO	to EU Leader	to _____

Final Approval _____ _____ _____ **Submitted to OPS**_____

State OSC Rep Federal OSC Rep EU Leader

** When Treatment is completed, send a Segment Completion Report to SCAT **

SCAT Work Plan Appendix C –
SEGMENT INSPECTION REPORT FORM

The following page shows the traditional Segment Inspection Report form.

The following link provides a cache of additional forms.

Owens Coastal Consulting: http://www.shorelinescat.com/

Segment Inspection Report for _____

Segment ID: _____ **Segment Name** _____
Survey Date: _____ **Survey Time:** _____
Tides: _____ **Weather:** _____
Inspection Completed Along Entire Segment: Yes / No
Result/Recommendation:

☐ No oil observed.

☐ Meets cleanup endpoints.

☐ No further treatment recommended.

☐ Further treatment recommended.

(Provide written details of issues and required actions.)

☐ Continued monitoring required.

(Provide written details of frequency and schedule.)

SCAT Team Members:

	Name	Signature
FOSC Rep		
SOSC Rep		
RP Rep		
Landowner/Other Rep		

SCAT Work Plan Appendix D –
PHOTO CONTENT/LOG

SCAT PHOTO LOG FORMAT

These standards should be reviewed and confirmed during each incident by the Data Manager.

Item	Format	Example
Date	Date	dd mmm yyyy
Time	Time	24 hour
Team	Team	N or L
Location Name *	Location Name *	text
Segment Number	Segment Number	LLL-NN
Ops Division *	Ops Division *	N or L
Latitude	Latitude	dd.ddddd
Longitude	Longitude	ddd.ddddd
Waypoint *	Waypoint *	NNN
Subject	Subject	text

* optional

NOTES:

1. Ensure the GPS is on with the "trackline" active. For aerial tracks, use a 5-second fix, for ground/walking use about a 30-second fix. **DO NOT SAVE THE TRACKLINE TO THE GPS** – download tracks to a computer file each day; if you save to the GPS then the track fixes are averaged and so we lose the ability to sync the times of the track fixes to the photos with OziExplorer
2. Ensure GPS and camera times are in sync
3. Take photo of GPS time at least twice a day
4. **The purpose of the photographs is to document the character of any oil observed within a segment**. Do not take too many photos of the oiled zone or location as one or two good photos only are necessary for documentation.
5. If there is **no oil** found within in segment then only take one or two photos. Preferably take a photo alongshore approximately at the High Water Level to record the general character of the segment.
6. Photography would be required if any cultural resources are identified (see Appendix H).
7. **WAYPOINTS**: Not necessary to take a waypoint at every photo location, but is valuable for specific items of interest that are photographed (such as the start and/or end of an oiled area or a pit in which oil is found).
8. **SCALE**: For distant or panorama shots always try to have a person in the middle distance for scale. For close-up shots always use a scale (the back of the field note book scale is preferred rather than a pencil or a coin!!)

SCAT PHOTO LOG

INCIDENT NAME:

Time	Date	Team	Location	Segment	Ops Div	Lat	Long	Waypoint	Subject

SCAT Work Plan Appendix E –
EXAMPLE RECOMMENDED TREATMENT AND ENDPOINT PLAN

The following documents contain additional guidance on developing treatments and endpoints:

Guidelines for Selecting Shoreline Treatment Endpoints for Oil Spill Response (Environment Canada, 2007)
http://publications.gc.ca/collections/collection_2011/ec/En4-84-2008-eng.pdf

Selection and Use of Shoreline Treatment Endpoints for Oil Spill Response (Owens, Sergy, 2008)
http://www.shorelinescat.com/Documents/Publications/15%202008%20Shoreline%20Treatment%20End%20Points.pdf

Options for Minimizing Environmental Impacts of Freshwater Spill Response (NOAA, API 1994)
http://response.restoration.noaa.gov/sites/default/files/shoreline_countermeasures_freshwater.pdf

Shoreline Assessment Manual (NOAA, 2013)
http://archive.orr.noaa.gov/book_shelf/72_manual_shore_assess.pdf

Introduction

All spills have a point at which the active clean-up, removal, and recovery operations give way to natural processes of oil degradation. In most cases, this termination point is qualitative, developed through a consensus-based process and field verified by representatives from the Unified Command (UC) in consultation with the appropriate federal, state, and local trustees. In all cases, the endpoint is reached when responder safety would be compromised or the remaining oil presents less of a risk to the community and natural resources than the response and recovery methods available.

The determination as to cleanup methods, priorities, and termination will be made via UC representatives.

Completion of active shoreline countermeasures is a decision of the On-Scene Coordinator (OSC). Support of the OSC requires recommendations on shoreline countermeasures and also recommendations on when to terminate cleanup operations. Evaluating the results of countermeasures and the recommendation to terminate response efforts requires a consensus of members who may have varying interests and roles. One key element for all parties to examine is to determine if the continued use of a particular countermeasure will result in more damage to the environment than would occur as a result of terminating any active response measures.

The Endpoint Plan provides a cleanup endpoints and constraints for each shoreline type. There may be unique factors in any given segment that will require a different approach. At the end, there is a summary table of this information.

Endpoints for No Further Action

These guidelines establish endpoints for operations for the Phillips 66 Tacoma Earthquake Exercise DRILL, including free product release and containerized product. These endpoints may be amended to address as yet unforeseen circumstances and do not constitute shoreline restoration or full recovery criteria, which may be addressed through a longer-term process. These endpoints define the conclusion of cleanup operations while attempting to minimize overall impact (including those from operations) to sensitive resources.

Stranded Free Oil Product

- Oiled shorelines shall be free of bulk product and not produce rainbow sheen under all weather and tidal conditions.
- There shall be no appreciable mobile oiled debris that is recoverable. Oil film, stain and minor sheening may still be present if best professional judgment of the Environmental Unit determines that further recovery will not produce environmental benefit. Such residual oiling would be allowed to degrade naturally.

Specific Target Cleanup End-Points for Various Habitat Types:

Fine-Grain Sand Beaches

- Beaches shall be free of bulk oil and not produce rainbow sheen during tidal events.
- Light oil stain on beach sediment that does not produce rainbow sheen may be allowed to weather and degrade naturally.
- Some oil stain may still be present on sediments at the end of active cleanup if best professional judgment is that further treatment will not produce environmental benefit.
- Minor residual sheen that is dull in color or silver may remain and weather naturally.

Do not remove unoiled wrack. Access to upland areas must be restricted to prevent additional environmental damage. Snare may be used for passive recovery of sheen adjacent to shoreline.

Bulkheads and Piers

- All hard structures shall be free of bulk oil and not produce sheens that would represent a secondary oil source.
- Oil stains that cannot be removed easily and safely may be left to weather and degrade naturally.
- Minor residual sheen that is dull in color or silver may remain and weather naturally.

Where appropriate, clean-up crews may use a variety of flushing techniques from low pressure ambient water to high pressure/high volume ambient water flushing into containment and collection. High pressure should not be used where attached marine organisms (algae, bivalves, echinoderms) are abundant. Passive snare may be deployed. High pressure flushing will require segment specific approval from the EU.

Marshes /Tidal Mudflats

- These areas shall be free of free floating and potentially mobile oil, including oiled debris and wrack at the fringe marsh.
- There shall be no appreciable sheens released from marsh. Minor residual sheen that is dull in color or silver may remain and weather naturally.
- Oil stained and coated vegetation will not produce sheen or appreciable wildlife threats.
- **Stay out of these areas unless otherwise directed.**

Aggressive cleanup on marshes/mudflats may actually cause greater long- term damage. There must not be any physical cleanup activities in marsh areas that will cause damage to marsh vegetation or entrainment/entrapment of oil product into sediments. Snare boom should be staked along the front edge of oiled marsh for passively recovery of sheens. These snares must be inspected and replaced routinely. Low pressure deluge flushing with ambient water may also be deployed from the upper marsh to flush product into containment and collection. Deployment of this technique should not involve walking into soft sediments or marsh vegetation. Best professional judgment by the Environmental Unit/SCAT will be used to determine if further treatment or cleanup would have no environmental benefit and may delay, rather than accelerate, recovery of the vegetation. This judgment will be based on fact, past

studies or data from previous oil spills.

Riprap/Rubble
Type I Riprap is defined as shorelines that are not commonly accessed by the public or have sensitive wildlife concerns. Type I riprap should meet the following criteria:

- Oiled riprap shall be free of bulk oil and not produce appreciable sheen under all weather conditions.
- Oil stains that cannot be removed safely will be allowed to weather and degrade naturally.
- Some inaccessible patches of oil may not be feasible to remove.
- Safety is paramount. Areas of broken rebar and other damaged materials should be avoided.
- Minor residual sheen that is dull in color or silver may remain and weather naturally.

High Public Use Areas
High Public Use Areas are defined as shorelines that have a greater potential for members of the public (and their pets) coming into direct contact with residual oil pollution and will likely necessitate a higher cleanup standard. The following additional cleanup criteria apply to public use area.

- No oil residues that would present a contact hazard to the public (residents, visitors, or pets).
- No oiling that would easily rub off and stain clothing or pets.
- *High Public Use or Public Access Areas will require "case-by-case" assessment and identification of cleanup requirements.*

Where appropriate, clean-up crews may use a variety of flushing techniques from low pressure ambient water to high pressure/high volume ambient water flushing into containment and collection. High pressure should not be used where attached marine organisms (algae, bivalves, echinoderms) are abundant. Passive snare may be deployed.

Note: Because diesel has many light ends it is very odorous. It is possible that areas may have a lingering smell of diesel after they have met the clean-up end points.

General Shoreline Treatment Recommendations and Endpoints

Additional treatment options may be beneficial or necessary for specific shoreline segments. This will be handled on a case by case basis.

Habitat Type	Cleanup Endpoints	Recommended Cleanup Methods	Constraints
Wetlands	No mobile oiled debris, no rainbow sheen, no brown emulsion. Some silver sheen and stain may persist and be allowed to degrade naturally.	Snare boom should be staked along the front edge of oiled marsh for passively recovery of sheens. Collect heavily oiled debris by small boats at high tide. Any additional cleanup requires EU approval.	Do not disturb vegetated areas, even if oiled No foot traffic in vegetated wetland areas
Vegetated shorelines	No mobile oiled debris, no rainbow sheen, no brown emulsion. Some silver sheen and stain may persist and be allowed to degrade naturally.	Manual removal of oily debris less than 4" diameter. Skimming and vacuum of floating oil on the water surface. Use flushing with sea water along the vegetated fringe to release trapped oil. Where remaining oil poses a significant threat to bird concentration areas, sorbent snare may be deployed. Such areas will be identified by the EU	There will be limited foot traffic in vegetated areas (access points only) During flushing, prevent suspension of bottom sediments (do not create a muddy plume) No cutting of vegetation at this time
Marshes/Tidal flats (mud and/or sand)	No mobile oiled debris, no rainbow sheen, no brown emulsion. Some silver sheen and stain may persist and be allowed to degrade naturally.	Snare boom should be staked along the front edge of oiled tidal flat for passively recovery of oil and rainbow sheens. Collect heavily oiled debris by small boats at high tide, or on foot in firmer areas. Any additional cleanup requires EU approval.	Do not enter tidal flats to recover oil or oily debris if boots sink more than 2 inches into the mud.
Bulkheads and Piers	No mobile oil, as evidenced by silver sheen.	Flooding and low-pressure, ambient water flushing to remove mobile oil; flush only to the point where a silver sheen remains; use booms for containment and skimmers/vacuum for recovery of released oil Minimal use of sorbents	Do not remove or intentionally dislodge organisms on bulkheads or piers.
Rip rap/rubble shoreline	No mobile oiled debris, no rainbow sheen, no brown emulsion. Some silver sheen and stain may persist and be allowed to degrade naturally.	Flooding and low-pressure, ambient water flushing to remove mobile oil; flush only to the point where a silver sheen remains; use booms for containment and skimmers/vacuum for recovery of released oil. Passive snare may be deployed. Minimal use of sorbents	Do not remove or intentionally dislodge organisms on rip rap.
Fine grained sand shorelines, and mixed gravel	No mobile oiled debris, no rainbow sheen, no brown emulsion. Some silver sheen and stain may persist and be allowed to degrade naturally.	Flooding and low-pressure, ambient water flushing to remove mobile oil; flush only to the point where a sheen remains; use booms for containment and skimmers/vacuum for recovery of released oil Minimal use of sorbents, snare is preferred	Use barriers and signs to prevent public access to oiled areas Do not remove unoiled wrack. Access to upland areas must be restricted to prevent collateral damage High Public Use or Public Access Areas will require segment specific recommendations.
Oiled Debris	Removal of all readily accessible heavily oiled debris (releases liquid oil when disturbed)	Manual removal using appropriate hand tools (rakes, pitchforks, etc.) of items less than 4 inches in diameter.	Do not remove clean or possibly oiled debris No cutting of vegetation allowed

SCAT Work Plan Appendix F –
EXAMPLE Management, Planning, and Tracking Forms

The following pages provide example management, planning, and tracking documents that may be used by SCAT staff for: **long-range strategy and survey planning, short-term rolling missions,** and **daily field team tasking and logistics.** Templates for each of these three forms are provided on the following pages. Appendix materials were provided courtesy of Owens Coastal Consulting and are available via http://www.shorelinescat.com/.

1. The **long-range strategy and survey planning table (Table F-1)** provides a survey strategy plan for a period of a month or longer.

    - The survey strategy is developed by the SCAT Coordinator in consultation with the Environmental Unit Leader (EUL).
    - The table is created by the SCAT Logistics Coordinator and enables planning for long-term staffing and logistics support, taking into account factors such as survey priorities, low-tide windows, environmental constraints (e.g. bird or turtle nesting site timing), etc.
    - This same table tracks each mission and activity that has been completed and provides a program history.

2. The table for **short-term rolling mission planning (Table F-2)** covers several days and ensures appropriate data, logistics, and safety support. It requires continuous updating based on survey priorities and on work that has been completed.

    - This process is accomplished with a "SCAT Mission Planner" that is generated by the SCAT Coordinator or designee in consultation with the EUL.
    - This Mission Planner is updated and reissued daily by the SCAT Logistics Coordinator based on the completion of prior missions and provides a rolling 7-day (or 10- or 14-day) plan to accomplish the priorities set by the EUL.
    - Input to the Mission Planner also is provided by Operations (or SCAT Ops Liaison) who indicates when treatment in a segment or zone is nearing target end points, or has been completed, so that appropriate surveys or inspections can be scheduled.
    - This rolling plan is based on the long-range survey strategy as developed in the "SCAT Strategy and Tracking Table"

3. The **SCAT Team Daily Tasking and Logistics Plan (Table F-3)** links the management of the SCAT program to the ICS process and the planning cycle is the "SCAT Team Daily Tasking and Logistics Plan" which describes the planned activities for the following day, i.e. Next Operational Period (Figure 3).

    - The "SCAT Team Daily Tasking and Logistics Plan" is prepared by the SCAT Coordinator or designee and provided to the EUL to be discussed during preparation for the Tactics Work Period and Tactics Meeting during each Planning Cycle.
    - The field activities outlined in this daily tasking plan are part of the package of EU field assignments and activities reviewed in the Tactics Meeting to ultimately aid the

development of the Work Assignments that are captured on the ICS 204 forms (Assignment List) for the Next Operating Period. These field assignments are then included in the Incident Action Plan (IAP).

Additional tables and spreadsheets for program management can be created to track specific activities, such as the status and progress of STRs and of the inspection (PTA) and sign-off (SIR) surveys. One example of a summary table that records completed daily field activities is provided on the following pages. This SCAT Daily Field Activities table (Table F-4) records how many teams were deployed each day and the category of missions that were completed or attempted.

This SCAT Strategy and Tracking Table is populated with fictitious information. Gray rows represented completed missions and activities. The white rows indicate the planned strategy and missions. Typically this table would be used to plan forward up to 30 days or longer.

TABLE F-1:EXAMPLE SCAT STRATEGY AND TRACKING TABLE

	SCAT TEAM # 1	SCAT TEAM # 2	SCAT TEAM # 3
Wednesday, January 02, 2013	Travel Day	Travel Day	Travel Day
	TL = Team Lead	TL	TL
Thursday, January 03, 2013	N Barataria Bay (S4-032) MON LA PL01-029 & LA PL01-036-10 - both passed	Cancelled due to access issues / Wind West Timbalier (S4-027) SIR LA TB04-004-10	Fourchon BP
	TL	TL	TL
Friday, January 04, 2013	Cancelled Due to Small Craft Advisory Night Before Turtle Pen Isle (S4-038) SIR LA SB05-017-10	Cancelled Due to Small Craft Advisory Night Before Calumet Island (S4-035) MON LA LF01-044-30	Fourchon BP
	TL	TL	TL
Saturday, January 05, 2013	N Barataria Bay (S4-032) SIR LA PL01-036-10 - passed	N Barataria Bay (S4-032) PTA LA PL01-034-30 - failed MON LA PL01-053-30 - passed & LA PL01-053-70 - did not get to	Office- OSAT
	TL	TL	TL
Sunday, January 06, 2013	Canceled Due to Access Issues West Timbalier (S4-027) PTA LA LF01-036-20	Canceled Due to Fog Drum Bay (S4-007) partial MON LA SB06-002-10 Turtle Pen Isle (S4-038) SIR LA SB05-017-10	Grand Terre 3 (S4-024) SIR LA PL01-008-10 - passed
	TL	TL	TL
Monday, January 07, 2013	Fourchon Beach (S4-017) PTA LA LF02-007-10 - passed	N Barataria Bay (S4-032) PTA LA PL01-053-20 - passed	Calumet Island (S4-035) MON LA LF01-044-30 - failed
	TL	TL	TL
Tuesday, January 08, 2013	N Barataria Bay (S4-032) SIR LA PL01-029-10 - failed	Keelboat Pass (S4-038) SIR LA SB05-014-20 - passed due to ALARP	N Barataria Bay (S4-032) MON LA PL01-053-70 - passed due to NEB
	TL	TL	TL

Wednesday, January 09, 2013	N Barataria Bay (S4-032) SIR LA PL01-027-10 w/OPS	Grand Isle Augering	Grand Isle Augering
	TL	TL	TL
Thursday, January 10, 2013	N Barataria Bay (S4-032) PTA LA PL01-034-10	N Barataria Bay (S4-032) SIR LA PL01-053-20 - if has passed post treatment inspection	Grand Terre 3 Beach Profiles 1-5 for March and PM site #25
	TL	TL	TL
Friday, January 11, 2013	Augering Check-up at all areas	Grand Isle Augering	Grand Isle Augering
	TL	TL	TL
Saturday, January 12, 2013	Keel Boat Pass (S4-038) SIR LA SB05-015-10 w/ OPS - will need 3 crewboats	Grand Isle Augering	Grand Isle Augering
	TL	TL	TL
Sunday, January 13, 2013	GT- 2 BP	GT- 1 BP	N Barataria Bay (S4-032) SIR LA PL01-053-70 - i if has passed post treatment inspection
	TL	TL	TL

TABLE F-2: EXAMPLE SCAT MISSION PLANNER TEMPLATE

DATE	SCAT TEAM # 1	SCAT TEAM # 2	SCAT TEAM # 3	SCAT TEAM # 4
DD Month YYYY	Location Mission(s) Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead
DD Month YYYY	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead	Location Mission Team Lead

This is a rolling planning table that is updated DAILY and Provides a 7-day plan for upcoming missions.

MISSION KEY

SCAT	Shoreline Assessment Survey
PTA	Post-Treatment Assessment Survey
SIR	Shoreline Inspection Report Survey
OLS	Operations Liaison Support
BP	Beach Profiling
MON	Monitoring
PM	Photo Monitoring

TABLE F-3: EXAMPLE SCAT TEAM DAILY LOGISTICS PLANNER TEMPLATE

SCAT TEAM LOGISTICS for DD Month YYYY Issued : Date Time						
Team	**Staff**		**Survey Area**	**Mission**	**Logistical Arrangements**	**Time**
SCAT #1	Team Lead	Name Cell Phone	*County/Parish* *Place Name* Segment Number(s)			
	FED					
	STATE					
	Safety					
SCAT #2	Team Lead	Name Cell Phone	*County/Parish* *Place Name* Segment Number(s)			
	FED					
	STATE					
	Safety					
SCAT #3	Team Lead	Name Cell Phone	*County/Parish* *Place Name* Segment Number(s)			
	FED					
	STATE					
	Safety					
SCAT #4	Team Lead	Name Cell Phone	*County/Parish* *Place Name* Segment Number(s)			
	FED					
	STATE					
	Safety					

Mission Codes

SCAT = Standard Shoreline Oiling Assessment Survey **PTA** = Post-Treatment Assessment **SIR** = Segment Inspection Report Survey

OLS = OPS Liaison Support **BP** = Beach Profiling Survey **MON** = Monitoring **PM** = Photo-Monitoring

Time

Enter scheduled time for each logistics action.

TABLE F-4: EXAMPLE SCAT DAILY FIELD ACTITVITIES

		CANCELLED MISSIONS			FIELD DEPLOYMENTS							NOTES (*Special Circumstances)
Date	# of Planned Teams	WX or Safety	Logistics (Boat/UTV)	Other (See Notes at Right)	SCAT	PTA	SIR	BP - Beach Profiles	PM Photo Monitoring	Operations Support (OLS)	MON	
1/1/2013	0											New Years' Holiday
1/2/2013	0											Travel Day
1/3/2013	3	3										*Safety - Safety Stand-down Gulfport
1/4/2013	6			2						4		* Other - Office/*OLS - Auguring Meeting
1/5/2013	6	1								4	1	
1/6/2013	6	2								4		
1/7/2013	6	2								4		
1/8/2013	6			1			1			4		*Other- Office due to small craft adv
1/9/2013	6	2								4		
1/10/2013	6	2								4		
1/11/2013	5								1	4		
1/12/2013	6					2				4		
1/13/2013	6			6								*Other- augering meeting Houma
1/14/2013	6	1				1				4		
1/15/2013	9	2					1			6		
1/16/2013	9	3								6		
1/17/2013	9							3		6		
1/18/2013	9			1		0.5	1			6	0.5	*Office- OSAT
1/19/2013	9	2					1			6		
1/20/2013	6		1			1.5	1.5				2	
1/21/2013	10					2		1		6	1	
1/22/2013	9						2			6	1	
1/23/2013	9					2	1			6		
1/24/2013	9							0.5	2.5	6		
1/25/2013	5						4		1			
1/26/2013	4					1	1			2		*OLS- Middle Ground for final data collection
1/27/2013	4			3			1					*other- safety training at Holiday Inn Houma
1/28/2013	11			8			2	1				augering canceled- La One cal
1/29/2013	10	1		7			1	1				augering canceled- La One cal
1/30/2013	10	10										all teams canceled due to Wx
1/31/2013	10					1	2			7		
January	**210**	**31**	**1**	**28**	**0**	**11**	**19.5**	**6.5**	**4.5**	**103**	**5.5**	