Shoreline Cleanup Assessment Technique: SCAT Process Part 1

Shoreline Assessment

Roles and Responsibilities

Overview of the Process

SCAT Activities

- Reconnaissance surveys
- Segmenting the shoreline

SCAT Responsibilities

- Conduct shoreline assessment surveys (generate data on shoreline types, lengths, and oiling conditions)
- Identify sensitive resources (ecological, recreational, cultural)
- Determine the need for treatment
- Recommend shoreline treatment methods (do's and don't)
- Recommend treatment priorities
- Monitor treatment effectiveness and effects

SCAT Data Should Answer the Following Questions:

- Is treatment necessary at this site?
- What treatment methods are appropriate or recommended?
- What constraints are needed to protect sensitive resources?
- What is the priority for treatment at this site?

SCAT Team Members

Agency Reps

- ❑ Federal On-Scene Coordinator rep
- ❑ State On-Scene Coordinator rep
- ❑ Responsible Party rep
- ❑ *Land Managers when surveying Fed or State Lands*
- ❑ *Landowner rep*

Others Skills as needed

- ❑ Safety
- ❑ Archaeologist
- ❑ Operations
- ❑ Local resource experts

SCAT Coordinator

(*on small spills, this will be done by SCAT Team Leader*)

- ✓ Manages all things related to SCAT Teams
- ✓ Participates in developing Cleanup Endpoints and Treatment Methods
- ✓ Participates in Planning Section meetings
- ✓ Participates in the Prep for Tactics and Tactics meetings
- ✓ Prepares Shoreline Treatment Recommendations (STRs)
- ✓ Briefs EU and Operations on issues related to shoreline treatment operations effectiveness and effects
- ✓ Data QA and oversight of all SCAT products
- ✓ Resolution of conflicts among stakeholders

SCAT Team Roles: Team Leader

- ✓ Should be the most experienced person in SCAT*
- ✓ Responsible for management of the team
- ✓ Completes the forms and sketches in the field
- ✓ Guides the team toward **consensus** on cleanup recommendations, priorities, special constraints, and notes dissenting opinions
- ✓ Briefs the SCAT Coordinator, Planning, and Operations staff, as needed
- ✓ Acts as the team Safety Officer

SCAT Team Roles: Agency Representatives

- ✓ Assist in data collection on shoreline types, oiling conditions, and special considerations
- ✓ Provides expertise in resource sensitivity and priorities
- ✓ Recommends site-specific constraints or precautions to be followed during cleanup
- ✓ Makes recommendations on cleanup methods and priorities
- ✓ Monitors effectiveness of cleanup operations

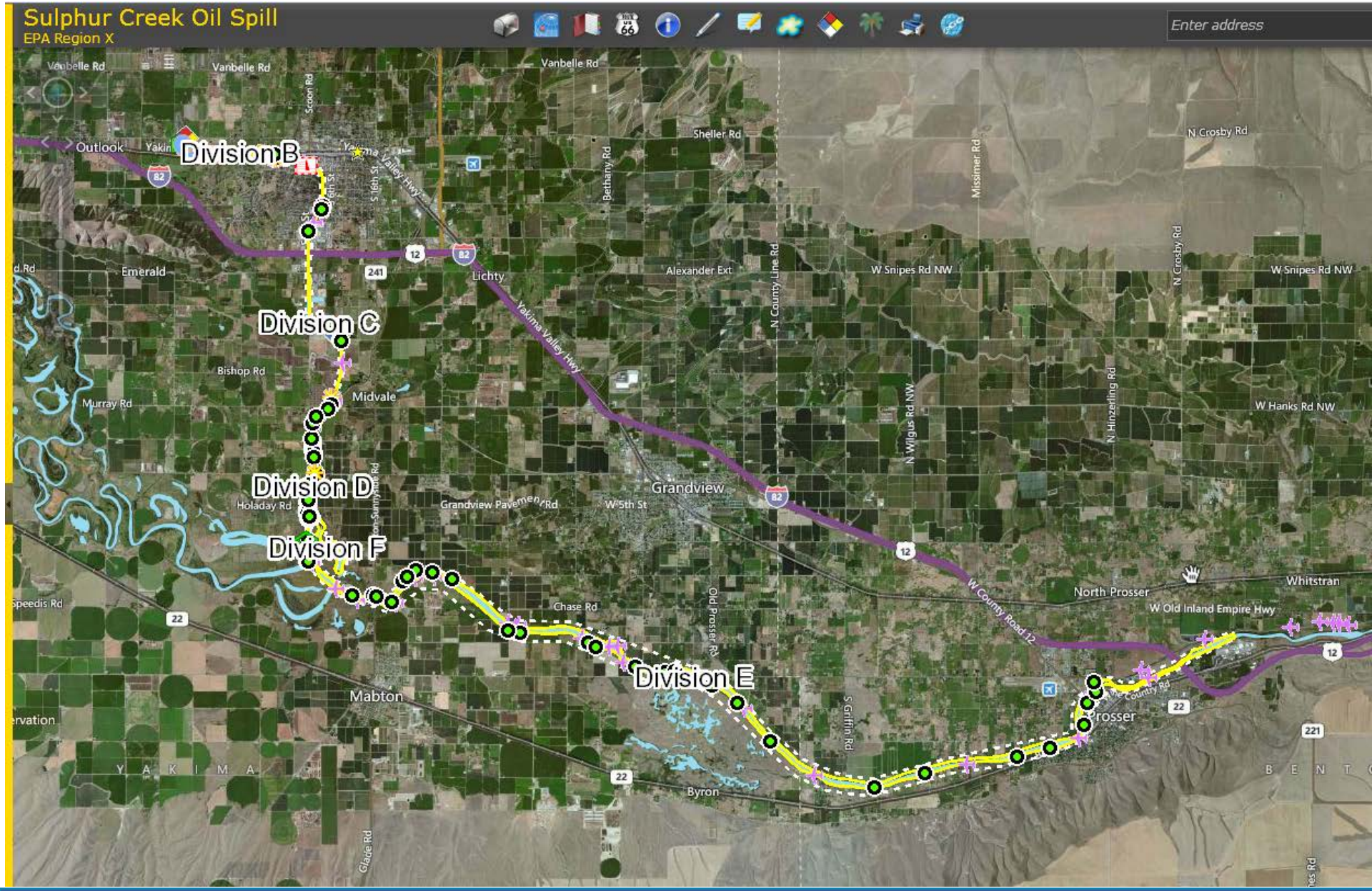
SCAT Team Roles: Operations Representative

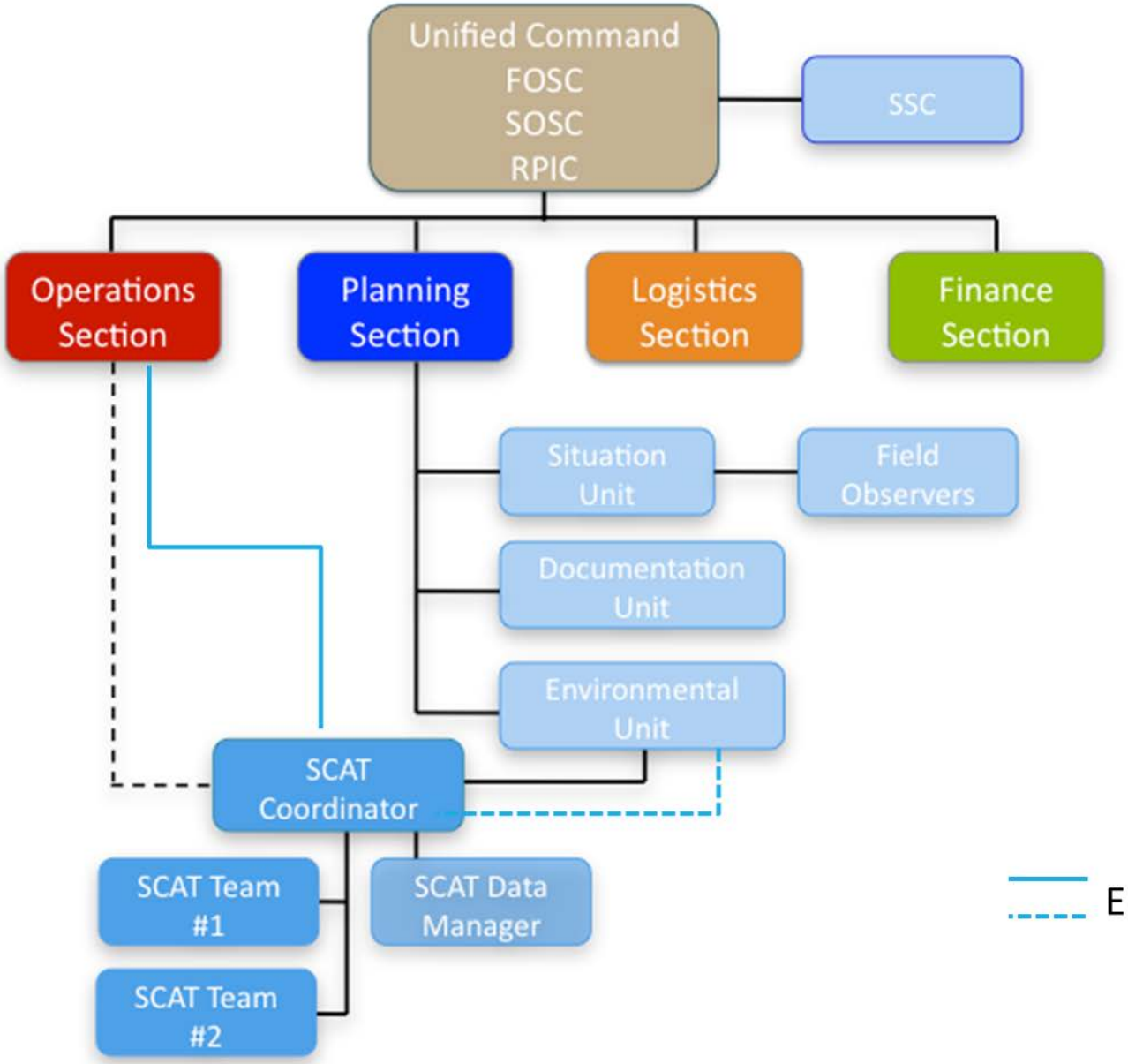
- ✓ Evaluate appropriateness of cleanup techniques
- ✓ Identify logistical constraints and solutions
- ✓ Assist in data collection on oiling conditions
- ✓ Estimate the level of effort needed for cleanup

This role can be taken by one of the team members

SCAT Team Roles: Data Manager

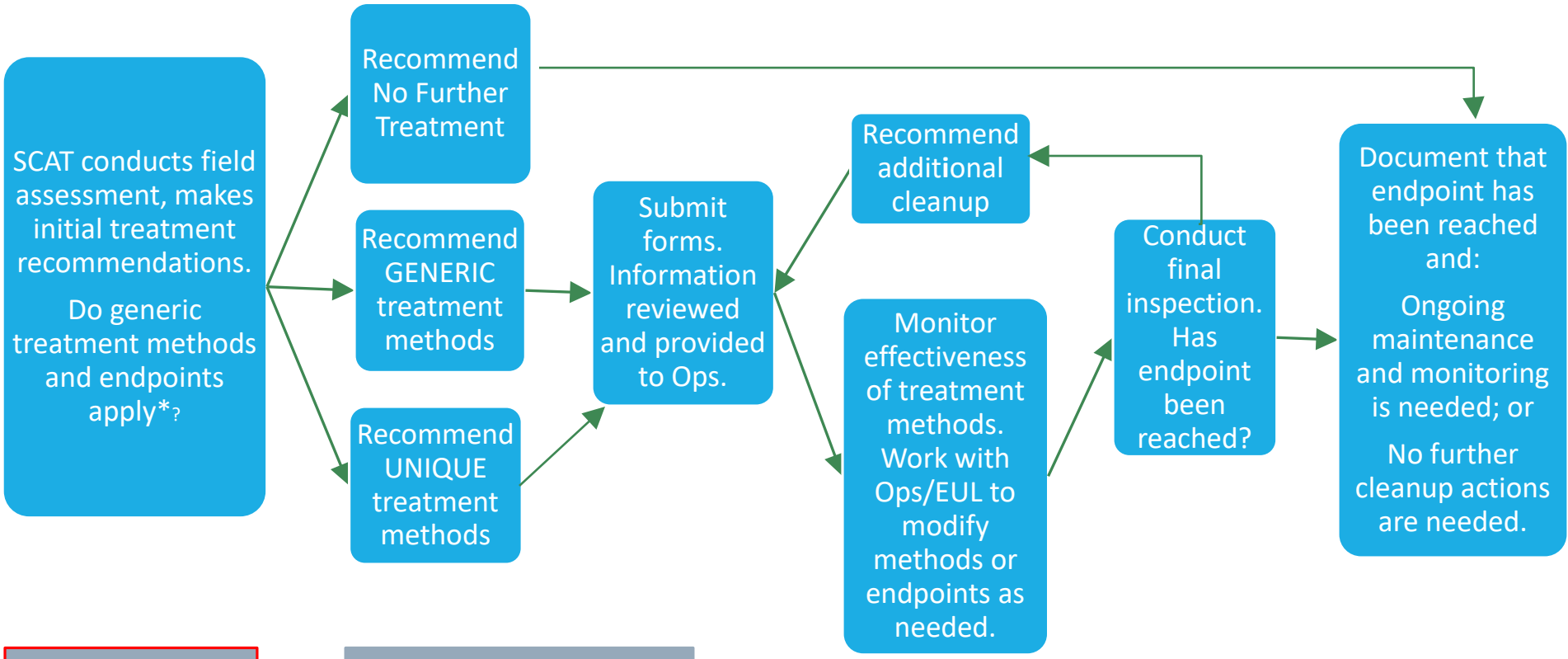
- ✓ Creates base maps with segments, sensitive areas, etc. for SCAT teams to use in recording data
- ✓ Conducts QA of daily SCAT forms
- ✓ Downloads the team's track line to generate maps for the team to delineate segments, zones, treatment areas, pits, etc.
- ✓ Downloads and geo-references SCAT team photographs
- ✓ Enters or supervises the entry of daily SCAT data
- ✓ Generates daily summary reports of shoreline cleanup status, maps of shoreline cleanup status, and specific data summaries requested by the UC


Sulphur Creek Oil Spill
EPA Region X
Enter address
Division B
Division C
Division D
Division F
Division E
Vanbelle Rd
Outlook
Emerald
Lichty
Alexander Ext
Sheller Rd
Bethany Rd
Missimer Rd
N Crosby Rd
W Snipes Rd NW
N County Line Rd
Yakima Valley Hwy
Bishop Rd
Murray Rd
Midvale
Holaday Rd
Grandview
Grandview Pavement Rd
W 5th St
N Wilgus Rd NW
N Hinzerling Rd
W Hanks Rd NW
Chase Rd
Old Prosser Rd
W County Road 12
North Prosser
Whitstran
W Old Inland Empire Hwy
Prosser
S Griffin Rd
Mabton
Byron
Glade Rd
Speedis Rd
YAKIMA
BENT



SCAT within the Unified Command

SCAT TEAM ACTIONS



Shoreline Oiling Summary (SOS) for Assessment

Shoreline Treatment Recommendation (STR)

Shoreline Inspection Report (SIR)

* Generic Treatments and Endpoints provided in SCAT Workplan.

SCAT Activities

1. Reconnaissance survey
2. Segmenting the shoreline
3. Developing spill-specific cleanup guidelines and endpoints
4. Pre-survey planning and team assignments
5. Shoreline surveys

SCAT ACTIVITIES

6. Generate shoreline treatment recommendations, tables, maps, etc.
7. Monitoring cleanup operations
8. Post-treatment inspections
9. Final sign-off of cleanup activities

SCAT Activity 1: Reconnaissance Survey

Objectives

Get an **expedient overall perspective** on habitat types and degree of contamination

Determine the **extent of oiling** in the impacted areas

Identify **logistical constraints** for **access** for **both SCAT and cleanup teams**

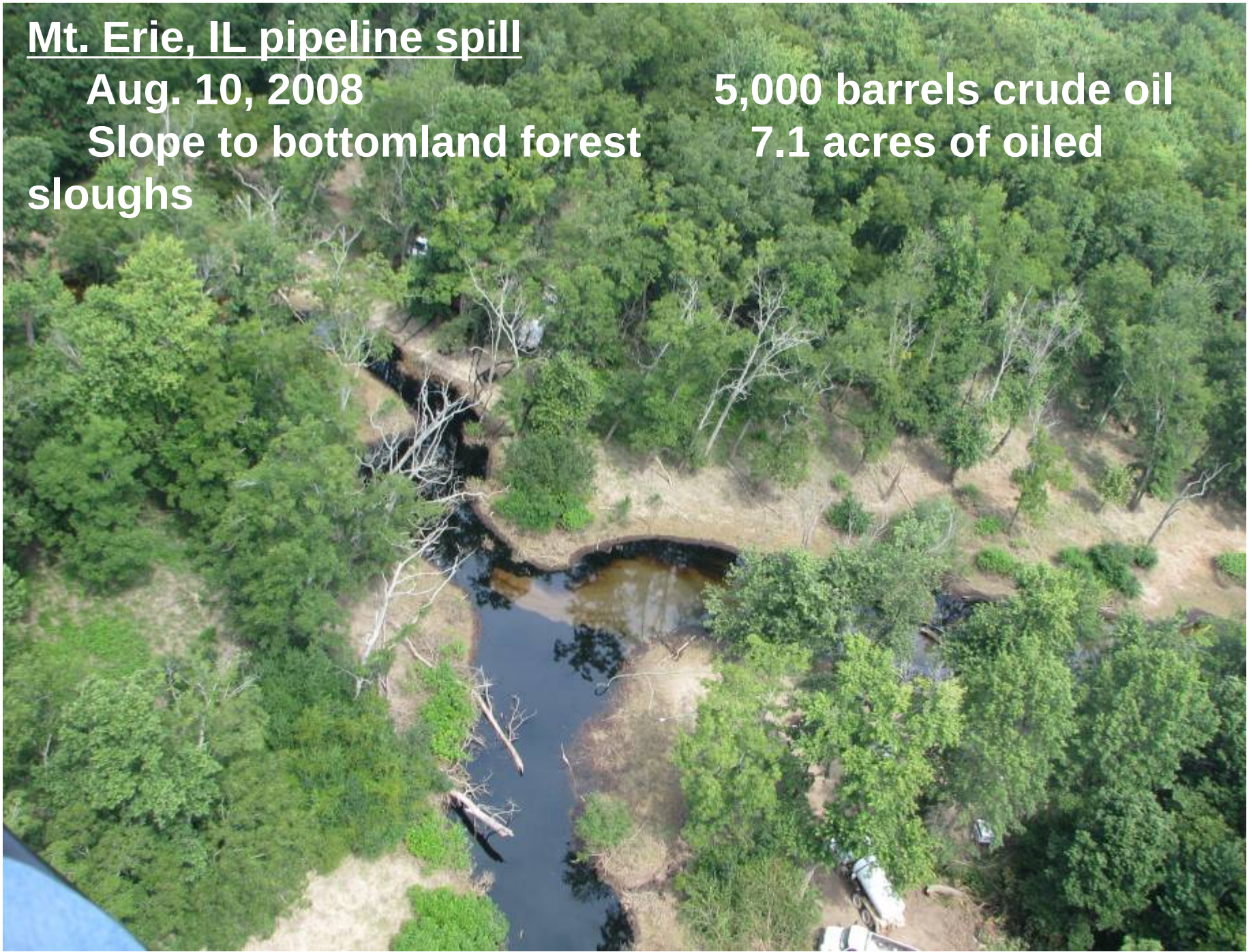
SCAT Activity 1: Aerial Reconnaissance Survey

Methods

Fly entire impact area at 400-500 feet and 70-80 knots in helo or high-wing aircraft

Use aerial photographs, maps, GPS to record:

- Flight path, including date and time
- General areas and degree of oiling
- References to photographs/video taken


Mt. Erie, IL pipeline spill
Aug. 10, 2008
5,000 barrels crude oil
Slope to bottomland forest
7.1 acres of oiled sloughs

SCAT Activity 1:
Land Based Reconnaissance Survey

Methods

Access impacted area on foot or by ATV

Use geo -tagged photographs or GPS and photos to record:

- Potentially sensitive habitats
- General areas and degree of oiling
- Potential access points for removal operations

SCAT Activity 1:
Water Based Reconnaissance Survey

Methods

Access impacted area from water side via john or air boats

Use geo -tagged photographs or GPS and photos to record:

- Potentially sensitive habitats
- General areas and degree of oiling
- Potential access points for removal operations

Will require periodic stepping onto shoreline

Shubuta Oil Spill

Recon Case Study

213 barrels of crude oil from tank battery in the North Yellow Creek Field Wayne County, MS (originally reported as 15 bbls)

Impacted 600 feet overland, ~ 2 miles of Nickleson and Eucutta Creeks, and ~10 miles of Chickasawhay River

“SCAT” Team recon on Day 1 and 2

Recon Photos

Tank battery

Hillside

Recon Photos

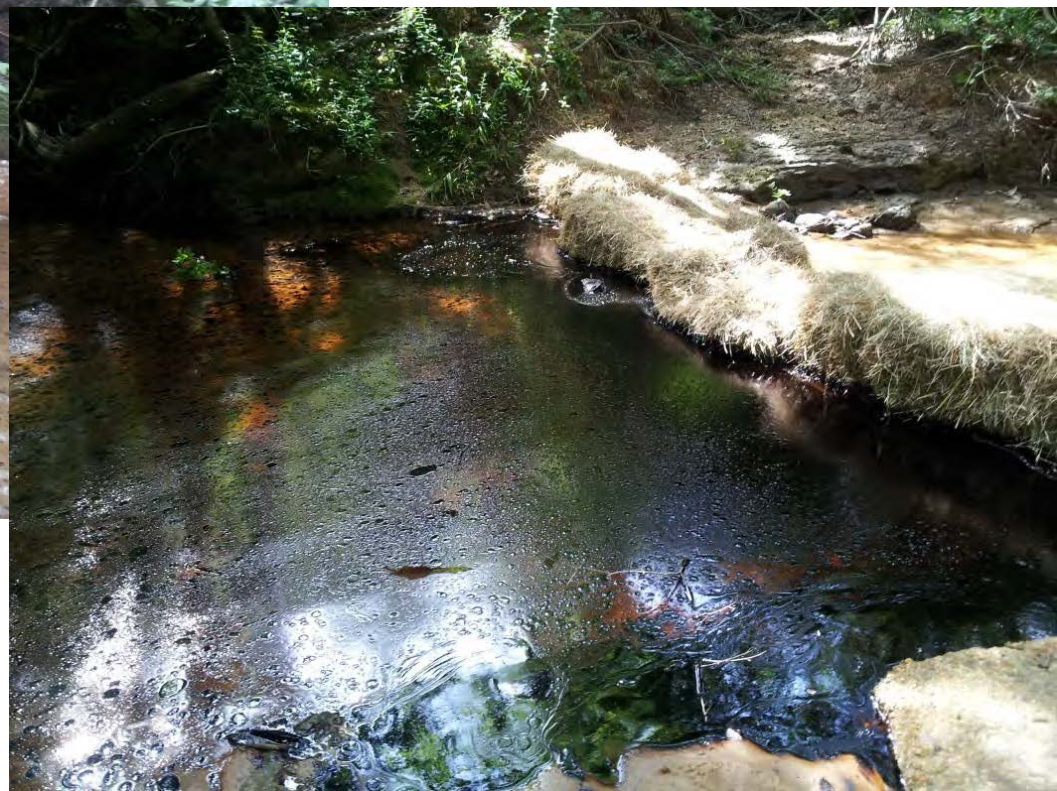
Unnamed tributary to Nickelson Creek

Flow of oil into Nickelson Creek

Recon Photos

Oil in Nickelson Creek

Oil in Nickelson Creek



Report Descriptions

Location: Division A

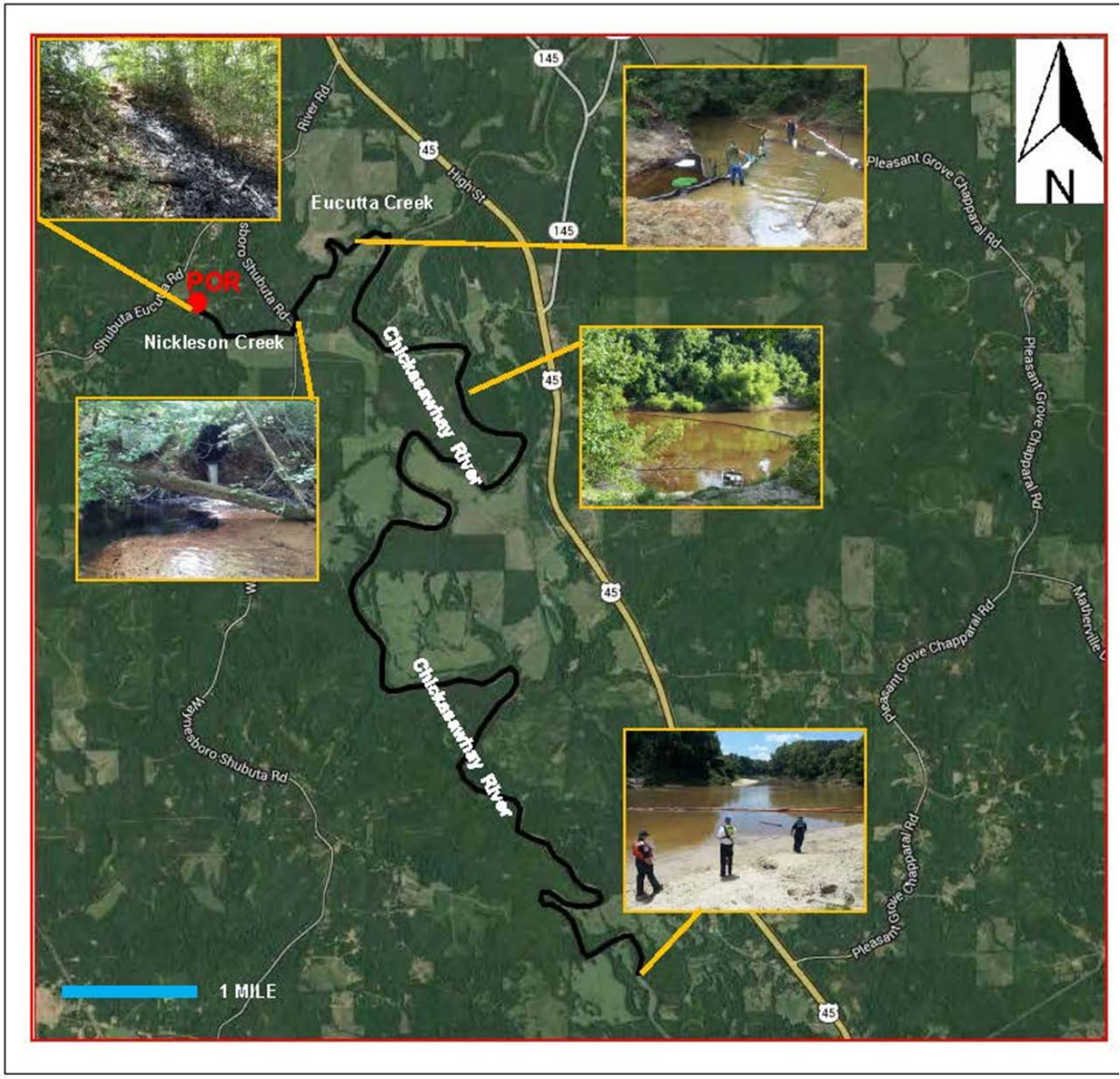
Priority: **Highest**

Access: Moderate to Difficult

Notes: Approximate 600 feet of heavily oiled hillside. Large amounts of bulk oil in containment and unnamed tributary (access limited) still actively discharging to Creek (needs containment). Collection point near Waynesboro Shubuta Road is accessible from road by vacuum truck.

Photos: DSCN2705, DSCN2706, DSCN2707, DSCN2709, DSCN2710

The Map


Eucutta Creek
Nickleson Creek
POR
Chickasawhay River
Chickasawhay River
River Rd
High St
Pleasant Grove Chapparal Rd
Pleasant Grove Chapparal Rd
Pleasant Grove Chapparal Rd
Pleasant Grove Chapparal Rd
Shubuta Eucutta Rd
Waynesboro Shubuta Rd
Waynesboro Shubuta Rd
Matherville
145
45
1 MILE
N

SCAT Activity 2: Segmentation

Objective

Divide survey area into units, called segments, for recording and tracking survey data, Operations activity, and final sign off

In a simple case, segments might just include divisions, in a more complex case, divisions could be segmented further

This will be covered in more depth on Day 2.

SCAT Activity 2: Segmentation

Methods

Use appropriate map scales for consistent coverage

Mark segments based on habitat types and degree of oiling (from recon surveys)

Coordinate with Ops on segment naming

Should include locals familiar with area

SCAT Activity 2: Segmentation

Methods (cont.)

Segment boundaries should be readily recognizable in the field

Size appropriate to spill conditions (0.2-2 km)

Pre-number segments with alphanumeric code

Example of Simple SCAT Segments

Example of Complex SCAT Segments

End of 2a