

## Deepwater Horizon (MC 252) Oil Spill

### Beached Bird Shoreline Assessment Surveys Field Procedures (SOP #####)

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**Purpose:** To document environmental conditions within the Beached Bird Survey segments in advance of or during shoreline oiling caused by the Deepwater Horizon (MC 252) Oil Spill. The ground surveys will characterize the degree of oiling along shorelines and aid in the determination of the potential for injury and areas of concern for Trustee interests. Teams will survey shorelines and record degrees of oiling observed. Survey team results should lead to the identification of potential monitoring stations for any shoreline assessment studies conducted for the injury assessment phase.

#### Equipment:

- A. Pre-assessment datasheets
- B. 30 meter fiberglass tape measure, marked in cm
- C. Garmin GPS
- D. Field notebook
- E. Shoreline assessment guide
- F. Tide charts (<http://www.saltwatertides.com/pickpred.html>)
- G. Pencils
- H. Digital camera
- I. Pin flags
- J. Photo Scale (15 cm)

**Procedure:** Conduct a systematic ground survey of a 30 meter section of shoreline at up to two locations along each of the Beached Bird Survey segments. One shoreline assessment should be conducted at the beginning of each segment. If no oil is observed at the beginning of each segment, a second survey should be conducted if oil is found elsewhere on the segment. Conduct the ground surveys on all of your segments within the current Beached Bird Study. If surveys are to be conducted on tribal, state, federal or private lands it will be necessary to coordinate access to the property.

- 1.) Before you go in the field, consult local tide charts (<http://www.saltwatertides.com/pickpred.html>) so you can estimate the tide levels in the field based on the time of day the survey is conducted. Proceed to the eastern end (starting point) of your survey segment. Record the segment name, date (mm/dd/yyyy), time, and team members' names (print) on the data sheet. Record the current tide as high, medium, or low.
- 2.) Find the mean high tide line. Mark this point with a pin flag. This will be the center point for the shoreline assessment. Record the coordinates in DD.MMMMM° (Datum WGS 84) on your datasheet. **DO NOT MARK WAYPOINTS ON THE BEACHED BIRD SURVEY GPS.**

- 3.) From the center point, measure 15 meters parallel to the shoreline in each direction and mark both ends with a pin flag (Figure 1). This is your sampling area. Return to the center point.
- Write your team name, segment name, and date on the white board. Take a photo of the white board and record the photo number on the datasheet.
  - Stand facing inland with the water behind you. Take a photo and record the photo number on the datasheet.
  - Turn 90 degrees to your right and take a photo of the shoreline capturing the pin flag 15 meters away. Record the photo number on the datasheet.
  - Turn 90 degrees to your right and take a photo of the water. Record the photo number on the datasheet.
  - Turn 90 degrees to your right and take a photo of the shoreline capturing the pin flag 15 meters away. Record the photo number on the datasheet.
  - Take a photo of the ground at the center point at a 90° angle to the ground capturing the pin flag in the photo. (Take a step back if necessary to avoid capturing your feet in the photo.) Record the photo number on the datasheet.

DO NOT USE THE CAMERA PROVIDED FOR THE BEACH BIRD SURVEYS.  
USE THE CAMERA PROVIDED IN THE SHORELINE ASSESSMENT KIT.

- 4.) Assess the beach shoreline type using the illustrations in the Shoreline Assessment Guide (SAG) in your kit (SAG 1). Carefully observe the sampling area including the adjacent water within those boundaries. **If no oil exists on the shore or on the water then data collection is complete.** If oil is observed then proceed to step 5.

- 5.) If oil is present on the shoreline:

- Determine the number of oil bands on the shore (SAG 2). There may be more than one (Figure 1). For example, two distinct bands of oil may be present at high tide and one at mid-tide level. Measure the width of each band in centimeters.
- Estimate the surface oil distribution based on percent cover for each band (SAG 3 to 6).
- Record the type of surface oil present in each band: Fresh, Mousse, Tar Ball, Tar Pattie, Tar, Surface Oil Residue or Asphalt (SAG 7 to 10).
- Visually estimate the surface oil thickness (SAG 11 to 13).
- Take two photos of the oil on sediment using the 15 cm scales in each photo. From normal standing position, take one photo at normal zoom and one zoomed in. Record the photo numbers.

- 6.) If no oil is visible on or in the water from shore, proceed to step 7. If oil is present, record the type visible.

## Shoreline Assessment Ground Surveys

- 7.) Complete the recommendations for physical samples and all team members must sign the top of the data form.
- 8.) Record any observed dead or stranded wildlife (mammals, fish, sea turtles, crabs, etc.) and the GPS coordinates. Take photos and record the photo numbers.
- 9.) This section is for the data entry person to sign. Do not sign here.

**NOTE: DO NOT ATTEMPT TO COLLECT ANY OIL SAMPLES ON THE WATER SURFACE OR FROM THE SHORELINE.**

Figure 1 was adapted from the Shoreline Assessment Manual, third edition produced by NOAA.

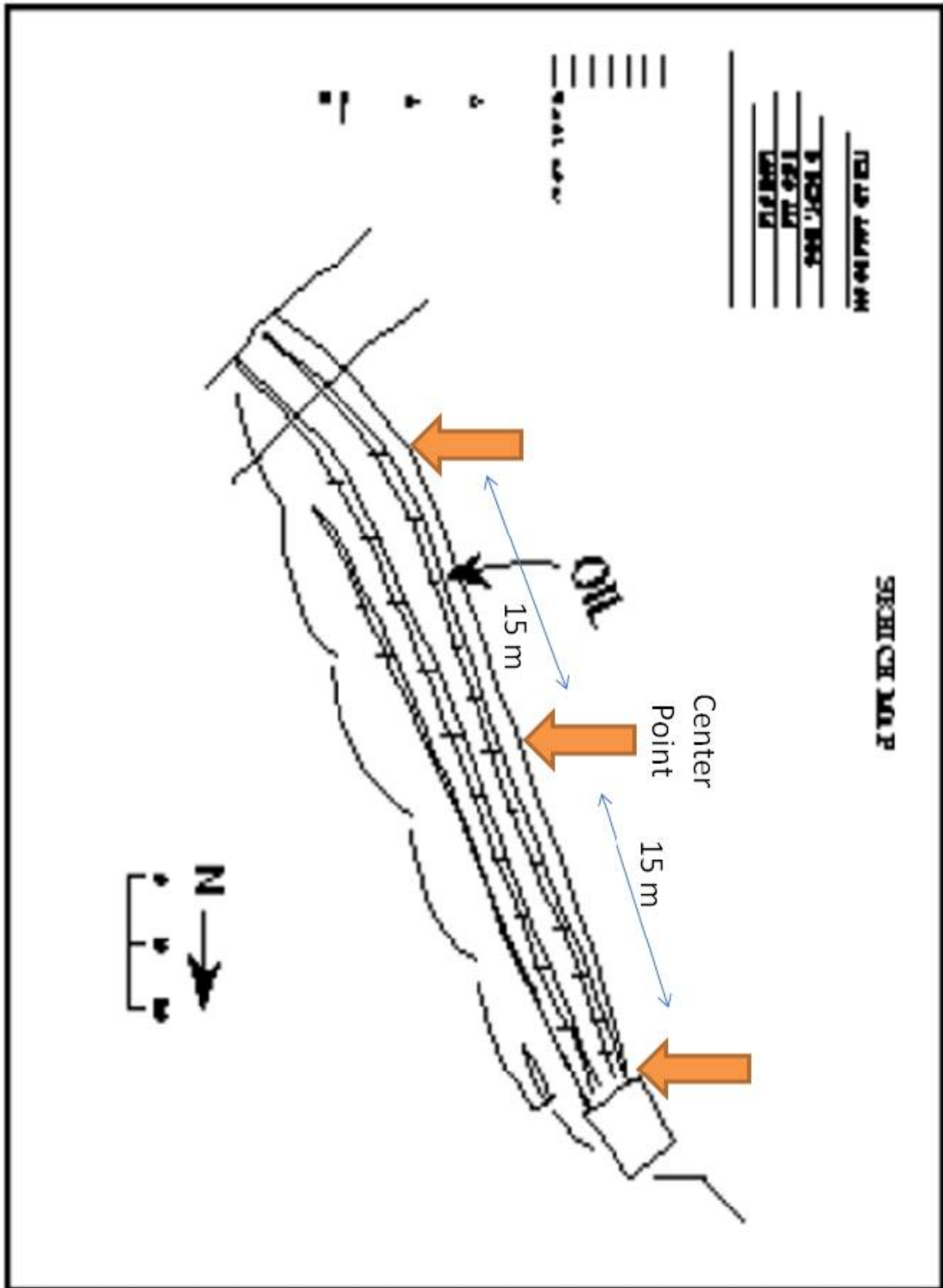


Figure 1. Sketch showing three distinct bands of oil on a beach and an example of how to set up the pin flags (orange arrows) to identify the area