Sea Turtle Guidelines for Oil Spill Response

Sea Turtle Nesting Beach Survey and Sea Turtle and Nest Protection Protocols for Florida

This document addresses loggerhead (*Caretta caretta*), green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), Kemp's ridley (*Lepidochelys kempii*), and leatherback (*Dermochelys coriacea*) sea turtle nesting beach surveys and turtle and nest protection efforts on Florida's beaches in response to an oil spill.

Potential impacts to sea turtles resulting from an oil spill event could be in the form of surface oil, tarballs and tar mats washing up on the beach. On the beach, surface oil may pose a risk to incubating nests by interfering with normal gas exchange and hydrology. Tarballs and tar mats are more likely to harm sea turtles by sticking to them and interfering with their movements than by outright toxicity to nesting sea turtles and hatchlings on the beach or to sea turtle nests incubating in the sand. Clean up activities can be particularly harmful, particularly conducted at night using lights or if mechanical equipment that penetrates the beach surface are used.

Snare Booms

Snare booms are a serious risk to nesting sea turtles, as they present an entanglement risk, as well as a barrier to the turtles as they move onto the beach to nest. However, if the decision is made to deploy snare booms in an effort to protect human property, the following recommendations apply:

Minimizing impacts of snare booms to sea turtles:

- Run snare boom perpendicular to shore rather than parallel. The perpendicular design of the snare booms can still be effective in trapping oil due to the nature of onshore currents.
- Place perpendicular snare booms no closer than 250 ft apart along the beach.
- Turtle nesting survey crews will monitor the snare booms every morning, recording any impacts to sea turtles such as entanglements or false crawls. In order to monitor effects, the wildlife branch needs to be informed immediately of the exact location and characteristics of the snare booms that are placed.

Nesting Season

The following protocols should be followed during the nesting season:

1. Conducting Nesting Beach Surveys

Until such time as beaches are officially identified and designated as "oiled," nesting surveys will proceed as usual in accordance with existing sea turtle permitting guidelines; please consult the Florida

Fish and Wildlife Conservation Commission's (FWC) Marine Turtle Conservation Guidelines available at http://myfwc.com/WildlifeHabitats/Seaturtle_ConservationGuide.htm. If oil, tarballs and/or tar mats relating to the spill have been documented on a beach and the beach has been identified for clean-up activities, sea turtle permit holders will only be allowed to survey the beach for evidence of sea turtle nesting if they have taken the appropriate hazardous material training. Every effort will be made to ensure continued cooperation with the nesting survey network and to ensure continuity of the survey and nest inventory methods.

2. Encountering Nesting Sea Turtles and/or Exposed Eggs on the Beach

If a nesting sea turtle is encountered on the beach while a sea turtle permit holder is conducting normal activities authorized under their existing sea turtle permits, the turtle should be observed with binoculars from a distance to assess its behavior and condition after egg laying while she is covering her nest. Females that appear weak or injured might not complete the nesting process or may drop eggs on the beach. If a turtle has not yet nested or is in the process of nesting, then wait to check her condition. She may still be able to lay a clutch even in a distressed condition.

Any uncovered eggs in a nest on the beach should be carefully covered with damp sand. Loose eggs on the sand surface may be retrieved and properly buried on the beach in accordance with the nest relocation protocols in the existing sea turtle permitting guidelines referenced in Section 1 above. The nest should be marked in accordance with the Nest Marking protocols below.

If the nesting female appears to be oiled or in distress, please call FWC's 24-hour Wildlife Alert Number at **1-888-404-FWCC** (**1-888-404-3922**).

3. Protecting Nests

a. Nest Cleaning

During daily surveys, if tarballs or tar mats are evident on the beach, please call FWC's 24-hour Wildlife Alert Number at **1-888-404-FWCC** (**1-888-404-3922**). Please be sure to include your area code when paging. FWC stranding staff will in turn contact the IC to request the tarballs and tar mats be removed. Only trained clean-up crew members can remove tar materials from the beach.

Upon arrival at the scene, the designated clean-up crew will follow the *Sea Turtle Nest Protection Protocols for Clean-up Crews on Florida's Beaches* (below) to minimize the likelihood of effects to incubating nests and turtles on the beach.

b. Nest Relocation

Nest relocation will proceed in accordance with the existing sea turtle permitting guidelines referenced in Section 1 above. The presence of tarballs and tar mats on a beach in and of itself does not justify nest relocation. If a nest meets the standard criteria for relocation, it should be moved to a location free of tarballs and tar mats and away from the path of clean-up activities, in accordance with the sea turtle permitting guidelines referenced above.

c. Nest Marking

Nest marking along the Gulf coast will proceed in accordance with the existing sea turtle permitting guidelines referenced in Section 1 above. Initially no special nest marking activities are needed for oil spill response.

For all other areas, at least one dual back-up marker system (see A-1 and A-2 in Figure 1), or two dual back-up marker systems (see A-1, A-2, B-1, and B-2 in Figure 1) if time and supplies permit, should be placed a measured distance from the clutch location to ensure that a nest can be found at a later date should the nest perimeter stakes be lost. To place back-up nest markers, measure the exact distance from the precise nest location to two separate marking stakes on the dune that are aligned so that a straight line between them orients directly toward the location of the clutch (see A-1 and A-2 in Figure 1). If the sea turtle permit holder is unable to locate the clutch by digging into the disturbed area and the clutch location is approximate, note the distance between the approximate clutch location and the edges of the disturbed area in each of four opposite directions. Both stakes should be labeled with an identifying nest number and the date the eggs were laid. On beaches where removal of marking stakes by the public is a potential problem, an additional stake, driven deeply and hidden from view, should be placed a measured distance landward of the first two. As added insurance, an aluminum marker can be buried hand-deep and 24 inches from the approximate clutch location in a standardized direction. This metal marker can be found later with a metal detector.

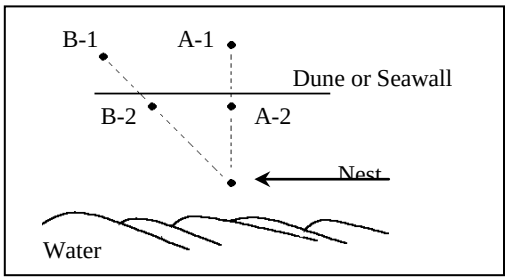

Figure 1. Site A stakes are directly landward of the nest in dune vegetation or at the base of a seawall. Site B stakes are in a similar position as Site A but located at an angle from the nest. Stakes A-1 and B-1 should be sunk deeply so that they are not conspicuous to someone not looking for them. Precisely measure the distance from stakes to the clutch location. Then, sink additional stakes (A-2 and B-2) directly between the clutch and the dune stake(s).

All marked nests should be checked daily to ensure that marking materials remain in place and are intact and to determine whether tar is present. In the event that nest markers are lost due to high tides or storms, the sea turtle permit holder shall coordinate with the sea turtle permitting agency

to re-establish the nest location using the secondary dune or landward markers and existing landmarks, and confirm the location using any existing GPS readings.

Nests that are marked for hatching success evaluations should be marked in accordance with the existing sea turtle permitting guidelines referenced in Section 1 above.

d. Nest Caging

Due to concern that emergent hatchlings may depart from the nesting beach and encounter oil in the water, nests may need to be screened with restraining cages to enable collection of hatchlings at emergence should alternative release sites be necessary, depending on the location and extent of the oil spill. Disposition of caged hatchlings (i.e., allow to enter the ocean at the nest site or collect and release hatchlings elsewhere) will need to be determined by FWC, USFWS, and NMFS sea turtle experts based on each event.

4. Conducting Nest Inventories

Nest inventories should be conducted in accordance with the existing sea turtle permitting guidelines referenced in Section 1 above. Sea turtle experts from FWC and USFWS will determine how best to sample nests for potential impacts related to the oil spill.

SEA TURTLE NEST PROTECTION PROTOCOLS FOR CLEAN-UP CREWS ON FLORIDA'S BEACHES

Most sandy beaches in Florida have active sea turtle nesting survey and nest protection programs in place to detect nesting by loggerhead, green, hawksbill, Kemp's ridley, and leatherback sea turtles. However, some beaches are not surveyed on a daily basis due to logistical difficulties with access (e.g., the Marquesas Islands in Monroe County) or are not currently surveyed at all (e.g., Cape Sable in Monroe County).

Sea Turtle Nest Protection Protocols:

1. Clean-up activities are restricted to full daylight time only.

2. Ensure daily sea turtle nesting surveys by sea turtle permit holders have been completed before work begins each morning. The clean-up crew leader must contact the FWC representative identified below (or her designee) daily to determine if nesting surveys have been completed and clean-up activities can begin.

   Robbin Trindell (Cell: **561-262-1104**; Office: **850-617-6055**)
   Meghan Koperski – back-up (Cell: **561-339-1001**; Office: **561-575-5407** ext. 5964)

3. Sea turtles may still be nesting or hatchlings may be emerging after sunrise, so it is imperative that clean-up crews watch for nesting and hatchling turtles while they are on the beach and immediately cease activities in the immediate area and report the event to the individual identified above (or her designee). Clean-up vehicles (see item 6) should travel slowly (<10mph) to enable a better opportunity to spot and avoid colliding with nesting and hatchling turtles.

4. In areas with active sea turtle nesting survey and nest protection programs in place, nests will be marked; however, some nests may have been missed during daily patrols if turtle crawls were obscured by rainfall, wind, tides, or human activities and, therefore, not be marked. In other areas where access is logistically difficult, no nests or only some nests will be marked. On the Atlantic Coast, in higher density nesting areas, sea turtle nest monitors are unable to mark all nests. Therefore, unmarked nests may be present on some beaches and care must be taken. For those nests that are marked, they will be marked with stakes and flagging around the nest perimeter (see photo below). Do not remove or destroy any stakes or flagging, even if they are up in the dune. These may be back-up stakes that were placed to ensure that a nest can be found at a later date should the nest perimeter stakes be lost. If nest flagging was removed to access a marked nest area, it must be securely replaced after clean-up activities have been completed.

5. No mechanical equipment or heavy vehicles should be used on the beach during clean-up activities. However, a lightweight (ATV type) vehicle, with tire pressures of 10 psi or less may be operated on the beach for the collection of bags filled with tarballs and tar mats. To the extent possible, ATVs should be operated below the most recent high tide line and clean-up work should be concentrated around the time of low tide.

6. Clean-up crews should gently remove tarballs and tar mats either by hand or with hand shovels. If hand shovels are used, they must be either square-point shovels or scoop shovels (see photos below) to reduce the likelihood of shovels penetrating unmarked nests. Clean-up crews should

ensure they do not dig down into the sand, but instead simply scoop the tar material off the surface of the beach.

7. Excavations or temporary alteration of beach topography is not generally allowed. All excavations and temporary alteration of beach topography shall be filled, covered, or leveled to the natural beach profile prior to 8:00 p.m. each day.

Sea Turtles at-Sea Retrieval Protocol

To retrieve live and dead sea turtles sea turtles observed in areas with oil:

1. Observation vessels, or vessels of opportunity, without sea turtle mitigation equipment or trained individuals should only report the location of sea turtles in distress. Vessels deploying boom or using other in-water response equipment should have sea turtle mitigation equipment aboard as described in http://sero.nmfs.noaa.gov/sf/turtle/SF%20Turtle%20Release%20FAQ.pdf

2. A permitted vessel with a freeboard height of four feet or less must have on board a: dipnet, short handled dehooker, long-nose or needle-nose pliers, bolt cutters, monofilament line cutters, at least two types of mouth openers/mouth gags. A permitted vessel with a freeboard height of greater than four feet must have on board a: dipnet, long-handled line clipper, short-handled and a long-handled dehooker, long-nose or needle-nose pliers, bolt cutters, monofilament line cutters, at least two types of mouth openers/mouth gags.

3. All vessels, regardless of freeboard, also need an auto tire or some other cushioned surface to rest a sea turtle on if it is boated. Other cushioned surfaces include life rings, seat cushions, life jackets, or life vests.

4. Utilize a large scoop or cargo net to capture disabled or floating sea turtles observed in the water where sheens, sheets of oil, mouse, or tar are present. Contact Florida's Sea Turtle Stranding and Salvage Network immediately upon observing a sea turtle in distress at **1-888-404-FWCC** (**1-888-404-3922**).

5. Do not attempt to capture turtles that are able to actively swim away and avoid capture, even if some oil is evident on the water's surface or on the turtle. If the turtle is small enough and conditions are such that it can be brought aboard the vessel safely, use a dip net to carefully

bring the turtle aboard. Place the net under the turtle, and safely lift the turtle out of the water and onto the deck. If the vessel is equipped with "cut out doors," use this door to minimize the distance from the water for the turtle to be retrieved.

6. Appropriate care must be utilized when handling live animals to minimize any possible injury or to the handlers (sea turtles can bite). If a turtle appears to be comatose (unresponsive, unconscious), attempt to revive it as follows. Place the turtle on its plastron (lower shell) and elevate the hindquarters approximately 15 - 30° to permit the lungs to drain off water for a period of four to twenty-four hours. A board, tire or boat cushion, etc. can be used. Keep the skin, and especially the eyes, moist while the turtle is on deck by covering the animal's body with a wet towel, periodically spraying it with water. Do not put the turtle in a container of water for resuscitation, as even shallow water may cause it to drown.

   Turtles can withstand lengthy periods without breathing; a comatose sea turtle may not move, breathe voluntarily, or show reflex responses or other signs of life. In other cases, a lightly comatose turtle may show shallow breathing or reflexes such as eyelid or tail movement when touched. Sea turtles may take some time to revive; do not give up too quickly.

7. While onboard, the turtle must be kept moist and in the shade. It must be safely isolated and immobilized on a cushioned surface, such as on a pfd or boat cushion. Turtles are to be protected from temperature extremes of heat and cold and provided adequate air flow. If possible, place the turtle on a pad or cushion to keep turtles off the hot deck. The area surrounding the turtle should be free of any material that could be accidentally ingested by the animal. Keep the sea turtle in the shade and use sea water to keep the turtle wet as needed.

8. Report the sea turtle to the Wildlife Alert Hotline, **1-888-808-3922**. If possible, obtain GPS coordinates for the location where the turtle was retrieved. Record information on the amount and type of oil present as well as any skimming or oil clean-up activities.