

**REGULATORY REQUIREMENTS AND BEST MANAGEMENT PRACTICES (BMPs)
HURRICANE IRMA USCG ESF-10 RESPONSE FLORIDA**

Sensitive Habitats, Wildlife, and Fisheries Resources

- Avoid and minimize disturbance to sensitive shoreline and benthic habitats including: mangroves, salt marshes, beaches, tidal flats, natural rocky shorelines, seagrasses, hard-bottom reefs, coral reefs, and oyster beds.
- Avoid and minimize disturbance to all wildlife and fisheries species and their habitats including: nesting and migratory birds (seabirds, shorebirds, wading birds, etc.), marine mammals, land mammals, marine and coastal reptiles, fish, shellfish, and other marine and coastal invertebrates.

USACE Section 404 Clean Water Act and Section 10 Rivers and Harbors Act Permits

- No significant disturbance of sediment required for the removal of debris or vessels (permit required otherwise, contact the Environmental Unit/EU).

Florida DEP Environmental Resource Permitting

- No filling of wetlands or other surface waters, or dredging that creates or expands surface waters (permit required otherwise, contact EU). All material removed must be deposited on self-contained uplands and managed in accordance with FDEP rules or provisions of the current Emergency Order.

Mangroves:

- Incidental trimming or alteration of mangroves may occur to perform vessel removal and pollution recovery activities associated with ESF-10 FL operations. No separate authorization pursuant to Sections 403.9321-403.9333, Florida Statutes (Mangrove Trimming and Preservation Act) is required.
- All operations shall be conducted in accordance with the *FDEP Emergency Field Authorization #0358553-001-EE* and *Job-Aid for Hurricane Irma ESF-10 Vessel Removal Operations in Mangroves and Adjacent to Sensitive Shallow Habitats*.
- Consult with the EU and/or NRA to assist with vessel removal operations from mangroves as needed.

NOAA Florida Keys National Marine Sanctuary General Permit

- All above and below resource protection requirements and BMPs apply.
- All materials associated with the response must be removed from the seafloor within 15 days of the completion of operations.

Florida SHPO Section 106 National Historic Preservation Act

- Cease all activities involving subsurface disturbance, and immediately contact the EU, if prehistoric/historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time (and leave all artifacts in place). Response activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during response activities, stop all work immediately and report to the Unified Command (UC) and EU through your chain of command.
- Contact the EU prior to conducting any removal or recovery efforts that require substantial ground disturbance beyond the initial disturbance caused by the disaster event (additional SHPO coordination required).

Tribal Coordination

- Seminole Tribe of Florida – the same BMPs above from the Florida SHPO apply for the Seminole Tribe of Florida’s THPO (coordinate with both).
- Seminole Nation of Oklahoma – no recommendations/concerns.
- Miccosukee Tribe of Indians of Florida - additional guidance may be forthcoming.

NOAA NMFS Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), and Essential Fish Habitat (EFH)

- All vessel operators must watch for and avoid collision with species protected under the ESA and MMPA.
- All vessels associated with emergency response activities shall operate at “Idle Speed/No Wake” at all times while operating in water depths where the draft of the vessel provides less than a 4-ft clearance from the bottom, and after a protected species has been observed in and has departed the area.
- All vessels will follow marked channels and/or routes using the maximum water depth whenever possible.
- Stop operating mechanical construction equipment, including vessels, immediately if a protected species is observed within a 50-ft radius of construction equipment and resume after the species has departed the area of its own volition.
- If the detection of species is not possible during certain weather conditions (e.g., fog, rain, wind), then in-water operations will cease until weather conditions improve and detection is again feasible.
- All Vessels:
 - a. Sea turtles: Maintain a minimum distance of 150 ft.
 - b. North Atlantic right whale: Maintain a minimum 1,500-ft distance (500 yards). Right whales are particularly important to consider in the Sector Jacksonville AOR for operations in the Atlantic Ocean.
 - c. Vessels 65 ft in length or longer must comply with the Right Whale Ship Strike Reduction Rule (50 CFR 224.105) which includes reducing speeds to 10 knots or less in Seasonal Management Areas.
 - d. Mariners shall check various communication media for general information regarding avoiding ship strikes and specific information regarding right whale sightings in the area.
 - e. Marine mammals (i.e., dolphins, whales [other than North Atlantic right whales], and porpoises): Maintain a minimum distance of 300 ft.
 - f. When these animals are sighted while the vessel is underway (e.g., bow-riding), attempt to remain parallel to the animal’s course. Avoid excessive speed or abrupt changes in direction until they have left the area.
 - g. Reduce speed to 10 knots or less when mother/calf pairs or groups of marine mammals are observed, when safety permits.
- Anchor/spud in unconsolidated sediment only and avoid all hard-bottom, seagrass beds, corals, and oyster reefs.
- Avoid response vessel grounding, prop scarring, and prop washing in seagrass, hard-bottom, coral, and oyster reef habitats. See the *Guidelines for Irma ESF-10 FL Vessel Removal Operations in Sensitive Shallow Habitats: Seagrasses and Colonized Hard-bottom* for additional details.
- Turbidity must be monitored and controlled; prior to in-water work turbidity curtains should be installed as per below. Turbidity curtains may be waived if minimal turbidity will be generated during marine debris removal or if the current is too strong for curtains to stay in place.
- Turbidity Control Measures:
 - 1. Install floating turbidity barriers with weighted skirts that extend to within 1 ft of the bottom around all work areas that are in, or adjacent to, surface waters.
 - 2. Use these turbidity barriers throughout construction to control erosion and siltation and ensure that turbidity levels within the project area do not exceed background conditions (i.e., the normal water quality levels from natural turbidity).
 - 3. Position turbidity barriers in a way that does not block species entry to or exit from designated critical habitat.
 - 4. Monitor and maintain turbidity barriers in place until the authorized work has been completed and the water quality in the project area has returned to background conditions.

NOAA NMFS ESA, MMPA, EFH – continued

- 5. In the range of ESA-listed corals (St. Lucie Inlet, Martin County south to the Dry Tortugas) and Johnson’s seagrass (Turkey Creek/Palm Bay south to central Biscayne Bay in the lagoon systems on the east coast of Florida): all turbidity controls identified above shall be followed, except turbidity barriers should be secured to the seafloor, but avoid contact with all corals or seagrasses, if feasible.
- Entanglement:
 - 1. All turbidity curtains and other in-water equipment must be properly secured with materials that reduce the risk of entanglement of marine species (described below). Turbidity curtains likewise must be made of materials that reduce the risk of entanglement of marine species.
 - 2. In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water.
 - 3. Turbidity curtains and other in-water equipment must be placed in a manner that does not entrap species within the construction area or block access for them to navigate around the construction area.
- Measures to avoid:
 - 1. Use of in-water explosives.
 - 2. Trawling for debris removal.
 - 3. Deployment of anchored items that do not employ stiff, taut, and non-looping anchor lines.
 - 4. Dragging derelict vessels, debris, or other items across coral, hard-bottom, or seagrass areas - Items should be hoisted or refloated if possible.
- Any collisions with and/or injury or impacts to any protected species (sea turtles, sawfish, whales, dolphins, sturgeon, corals, Johnson’s seagrass, etc.) shall be reported to the SITL and EU as soon as possible. Likewise, report any stranded, injured, trapped, entangled, or dead protected species to the SITL and EU as soon as possible. The EU will make further notifications to the appropriate agency contacts. Contact the SITL and EU through your chain of command or the EU directly at (305) 523-3595.

USFWS Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Fish and Wildlife Coordination Act (FWCA)

- Birds:**
- Avoid known bird nesting and/or aggregation areas, to the extent possible. Do not enter sites with nesting birds without resource agency or conservation area landowners present. If removal/recovery operations are likely to impact nesting birds, contact EU for further guidance.
 - Avoid aircraft disturbance to bird nesting and aggregation areas. If roosting or resting birds, such as egrets, herons, eagles, and frigatebirds, are observed, limit lower or repetitive flight to minimize stress to those birds.
 - If using airboats, maintain a distance of 1000’ from nesting bird sites to limit disturbance.
 - To limit disturbance to birds and other sensitive wetland- and intertidal-associated species, work crews should be limited in size and number to the minimum number of personnel and equipment required to complete removal in an efficient time frame. Equipment and personnel should work as closely together as is feasible during recovery operations to minimize disturbance.
 - On beaches, if it is necessary to excavate the sand to remove targets, return the beach to its original profile at the end of each day.
 - Check under and around vehicles and heavy equipment parked on the beach before they are moved. Shorebirds (piping plover and red knot) are especially vulnerable when they are roosting at night, and extra care should be taken at these times.
 - Avoid deliberately flushing birds.

USFWS ESA, MBTA, FWCA – continued**Manatees:**

- All work must be in accordance with USFWS/FWC Standard Manatee Conditions for In-Water Work (2011).
- All response personnel shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. Advise all response personnel that there are civil and criminal penalties for harming, harassing, or killing manatees.
- All vessels associated with the response shall operate at "Idle Speed/No Wake" at all times while in immediate work areas and while in water where the draft of the vessel provides less than a 4-ft clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- Siltation/turbidity barriers and containment/sorbent boom shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers/booms must not impede manatee movement.
- All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- Any collisions with or injury to a manatee shall be reported to the EU as soon as possible. Likewise, report any stranded, injured, trapped, entangled, or dead manatee to the EU as soon as possible. The EU will make further notifications to the appropriate agency contacts. Contact the EU through your chain of command or directly at (305) 523-3595.
- Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads "Caution: Boaters" must be posted. A second sign measuring at least 8½" by 11" explaining the requirements for "Idle Speed/No Wake" and the "Shut Down" of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed and downloaded at <http://www.myfwc.com/wildlifehabitats/managed/manatee/education-for-marinas/sign-vendors>.

Nesting Sea Turtles:

- Be aware of the potential for sea turtle nesting activity on all Ocean and Gulf-facing sand beaches, including mixed sand and gravel (shell, coral rubble) beaches, throughout Florida.
- Adult sea turtles, crawls, nests, eggs, and hatchlings should be protected during vessel removal activities on sea turtle nesting beaches, including hatchling turtles as they emerge from the nest and crawl to the sea.
- During sea turtle nest laying and hatching season (which can span nearly all year in some locations), no vessel/debris removal activities, including no equipment access, may commence on nesting beaches until a sea turtle nesting survey has been completed each morning by the FWC Marine Turtle Permit Holder (Permittee). Prior to operations on beaches, please contact the EU who will contact FWC (mtp@myfwc.com or 850-922-4330) to identify and obtain contact information for the Permittee for specific beaches to arrange for nesting surveys.
- Entry onto the beach will occur only after the Permittee for that particular beach has completed the morning surveys. Surveys are typically completed by 09:00; all staging on the beach should be conducted after 09:00 and before sunset.
- After the beach has been surveyed, the Permittee will direct the response crew along the established travel corridor.
- If an unmarked sea turtle crawl is encountered during or prior to response activities, the response crew will not disturb the integrity of the crawl or follow the crawl up the beach or into the dune, and will contact the Permittee to inform them of the location of the crawl.

USFWS ESA, MBTA, FWCA – continued**Nesting sea turtles (continued):**

- Any marked nests within the areas where vessel/debris removal will occur (including access areas) shall be left in place. Marked nests shall be delineated by stake and survey tape or string around the nest. A circle with a 10-ft radius centered at the nest is recommended for nest protection. Marked nests and areas with unmarked nests must be avoided during vessel/debris removal.
- It is the responsibility of the Permittee to ensure that all nesting surveys and nest marking are conducted only by persons with prior experience and training in these activities and who is duly authorized to conduct such activities through a valid permit issued by the FWC.
- If activity will occur near a marked nest or in the wrack line, the Permittee or their authorized personnel shall be onsite during all vessel/debris removal.
- Equipment and work crews will only transit the beach seaward of the nesting area on the hard-packed sand.
- Work shall only occur during daylight hours.
- If a sea turtle (either adult or hatchling) is observed maintain at least 200 ft between the turtle and response personnel and contact the Permittee.
- If sea turtle hatchlings are encountered, maintain at least 200 ft between the hatchlings and response personnel, allow the hatchlings to crawl unobstructed to the water. Do not carry the hatchlings to the water. Contact the Permittee to inform them of the hatchlings.
- All response actions, equipment, and personnel shall observe a 10-ft buffer from marked sea turtle nests. Care should be taken to avoid walking or driving equipment over a crawl so that a potential nest is not damaged.
- If altered, beach topography shall be restored in all areas to the natural beach profile by 20:00 each day. Restoring beach topography includes raking of tire ruts, filling pits or holes where debris were removed, etc. Any potential obstructions such as containment or sorbent boom, equipment, etc. should also be removed from the beach by 20:00 each day.
- In the event a sea turtle nest is excavated during vessel/debris removal activities, all work shall cease in that area immediately and the Permittee will be contacted to either rebury the eggs or relocate the clutch to a safe location. Contact the EU for assistance with contacts, (305) 523-3595.
- Upon locating a dead, injured, or sick sea turtle, or if eggs or nests are disturbed during response activity, initial notification must be made to the Permittee and the SITL and EU as soon as possible. The EU will make further notifications to the appropriate agency contacts. Contact the SITL and the EU through your chain of command or the EU directly at (305) 523-3595.

Florida Keys Areas/Species:

- Equipment and material staging areas should be located outside of areas of native vegetation and known endangered species habitats. Contact the EU for assistance, (305) 523-3595.
- All vessel and debris removal should occur within or as close as possible to the footprint of the vessel/debris and the associated disturbance area.
- Minimize the impact footprint of equipment by working from one location to the extent possible by grappling, hoisting, or lifting vessels and marine debris.
- Where possible, equipment should be operated from existing hard top or impacted sites to remove vessels/debris from natural habitats.
- Vessel/debris removal activities should be accomplished with the smallest equipment needed, including hand crews where possible, to minimize disturbance of habitat (especially when working within critical habitats). Remove and transport vessels/debris to storage areas rather than using traditional methods of land clearing and pushing debris into piles.
- Ingress and egress corridors for vehicle and equipment operations and vessel/debris removal should minimize impact to natural habitats.
- Care should be taken to restrict equipment/vehicles to roadways and roadbeds and off of vegetated areas or areas of buried vegetation.

USFWS ESA, MBTA, FWCA – continued**Florida Keys Areas/Species (continued):**

- When vessels/larger debris are collected from debris piles on less developed lands, natural shorelines, or in mangroves and marshes, the debris piles should be lightly disturbed and/or small portions removed first, to allow any protected species (e.g., small mammals) hiding in the debris to escape. Consider having an NRA stationed to alert the equipment operator if protected species are observed, and to avoid collecting protecting species.
- To the degree possible, the removal of forested vegetation should be limited to fallen trees only, and only if required to remove vessels/debris; otherwise, leave fallen trees in place (also applies to mangroves).
- Trimming of standing native trees during vessel/debris removal should be minimized (also applies to mangroves).
- The removal of healthy trees to remove embedded vessels/debris should be avoided or minimized (also applies to mangroves).
- All trash resulting from the response should be removed from the area as appropriate or disposed of properly in covered trash receptacles.
- Key Deer: occur in all habitats, including mangroves and marshes, on Bahia Honda Key, Big Pine Key, No Name Key, Summerland Key, Cudjoe Key, Sugarloaf Key, Saddlebunch Keys, Big Coppit Key, and surrounding keys.
 - o If silt fencing is to be used, it is recommended that wattles are used in place of silt fence. Wattles do not create a barrier to key deer movement.
 - o Obey all roadway speed limits with particular precautions given to the areas of Big Pine Key and No Name Key.
 - o Do not feed key deer, do not leave any food items in areas that are accessible to key deer.
 - o Prior to vessel/debris removal with mechanical equipment, check all vessels/large debris to be removed from less developed lands, natural shorelines, or mangroves to ensure no key deer are using the vessel/large debris as refuge.
 - o If key deer are present in a work area, wait until they leave the area before conducting vessel/debris removal.
- Lower Keys Marsh Rabbit, Silver Rice Rat: occur in mangroves, salt marsh, and beach berm habitats from Big Pine Key and Little Pine Key through Boca Chica Key.
 - o Avoid or minimize disturbance to mangrove, salt marsh, and beach berm habitats.
 - o When vessels/larger debris are collected from debris piles on less developed lands, natural shorelines, or in mangroves and marshes, the debris piles should be lightly disturbed and/or small portions removed first, to allow protected species hiding in the debris to escape. Consider having an NRA stationed to alert the equipment operator if protected species are observed, to avoid collecting protecting species.
- Miami Blue butterfly: occurs in coastal dune and berm habitats in the Snipe Keys, Boca Grande Key, Marquesas Keys, Gull Keys, and Mooney Harbor Key.
 - o Avoid or minimize disturbance to coastal berm and dune habitats and plants.
 - o Leave any clipped or pulled vegetation in place in coastal berm and dune habitats.

USFWS Florida Keys National Wildlife Refuges Complex (Aerial Ops only; all other BMPs apply for water and land operations)

- Aerial operations must be conducted from fixed wing aircraft flying at or above 1000'. Periodic excursions to lower altitudes are permitted but must be minimized.
- Minimize disturbance to nesting/roosting birds during aerial operations, by avoiding repeat passes and excursions to lower altitudes in those areas.

For further guidance and assistance with BMPs, please work with the on-site Natural Resource Advisor (NRA) or contact the Environmental Unit (EU) through your chain of command or directly at (305) 523-3595.

Version Tracking: v4 adds FDEP BMPs for mangrove trimming and BMPs to avoid response vessel grounding, prop scarring, and prop washing in sensitive shallow habitats.