



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

AUG 07 2018

Theophilus Brainerd, Ph.D.
NMFS Southeast Fisheries Center
75 Virginia Beach Drive, Room 207
Miami, FL 33149

Dear Dr. Brainerd:

The National Marine Fisheries Service (NMFS) has issued Permit No. 21233 to the NMFS Southeast Fisheries Science Center for research activities on sea turtles.

This permit is effective upon your signature and valid through September 30, 2027. To use your permit:

1. Read the permit, including attachments. If you have questions, call your permit analyst – Amy Hapeman or Erin Markin – at 301-427-8401 before signing the permit.
2. Sign and date both the original and “File Copy” signature pages.
3. Keep the original signature page with your permit.
4. Return the “File Copy” signature page to our office by:
 - a. Email to your permit analyst;
 - b. Fax (301-713-0376); or
 - c. Mail (NMFS Permits and Conservation Division (F/PR1), 1315 East-West Hwy, Silver Spring, MD 20910).

We evaluated your request to use light emitting diodes (LEDs) on pound nets in North Carolina waters to test bycatch reduction devices. Researchers may use these nets with or without LEDs present because LEDs are not expected to result in additional impacts to the target sea turtles. However, this permit does not authorize the requested acoustic research activities in the field and in a facility (acoustic deterrent devices and auditory evoked potential trials). As discussed, we are deferring making a decision on the acoustic aspects pending completion of a Section 7 consultation under the Endangered Species Act.

National Marine Sanctuaries: Federal regulations govern activities within National Marine Sanctuaries (NMS) (15 CFR 922) with prohibitions on the use of low-flying aircraft, discharging any material or matter (e.g., tags), and other activities. For further information on NMS permits for your work, contact Joanne Delaney with the Florida Keys NMS at 305-809-4714 or Joanne.Delaney@noaa.gov.

Unmanned Aircraft Systems (UAS): UAS fall under the jurisdiction of the Federal Aviation Administration (FAA; <http://www.faa.gov/>). You must be compliant with FAA requirements when operating UAS under this permit. The FAA considers scientific research as either public



(governmental) or civil (non-governmental or commercial); it does not fall under the recreational/hobbyist category. You may also be required to obtain additional Federal, State, or local permits to use UAS depending on where you will be working (e.g., National Marine Sanctuaries, National Parks). It is your responsibility to obtain these permits and comply with any other laws or regulations.

Please keep your contact information current in our online database (<https://apps.nmfs.noaa.gov>). You will receive automated email reminders of due dates for reports and a notice prior to expiration of your permit.

Sincerely,



Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources

Enclosure



Permit No. 21233
Expiration Date: September 30, 2027
Reports Due: October 31, annually

PERMIT TO TAKE PROTECTED SPECIES¹ FOR SCIENTIFIC PURPOSES

I. Authorization

This permit is issued to the NMFS Southeast Fisheries Center (SEFSC), 75 Virginia Beach Drive, Miami, FL 33149, (hereinafter "Permit Holder"; Responsible Party: Theophilus Brainerd Ph.D.), pursuant to the provisions of the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR Parts 222-226).

II. Abstract

The objectives of the permitted activity, as described in the application, are to 1) assess sea turtle abundance, population structure, stock identification, life history, genetics, and effects of natural and anthropogenic stressors; 2) examine habitat use and seasonal migratory movements; and 3) characterize sea turtle baseline health status.

III. Terms and Conditions

The activities authorized herein must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the Terms and Conditions specified in this permit, including appendices and attachments. Permit noncompliance constitutes a violation and is grounds for permit modification, suspension, or revocation, and for enforcement action.

A. Duration of Permit

1. Personnel listed in Condition C.1 of this permit (hereinafter "Researchers") may conduct activities authorized by this permit through September 30, 2027. This permit may be extended by the Director, National Marine Fisheries Service (NMFS) Office of Protected Resources or the Chief, Permits and Conservation Division (hereinafter Permits Division), pursuant to applicable regulations and the requirements of the ESA.
2. Researchers must immediately stop permitted activities and the Permit Holder or Principal Investigator must contact the Chief, NMFS Permits and Conservation Division (hereinafter "Permits Division") for written permission to resume:

¹ "Protected species" include species listed as threatened or endangered under the ESA, and marine mammals.



- a. If serious injury or mortality² of protected species reaches that specified in Table 3 of Appendix 1.
 - b. If authorized take³ is exceeded in any of the following ways:
 - i. More animals are taken than allowed in Tables 1-3 of Appendix 1.
 - ii. Animals are taken in a manner not authorized by this permit.
 - iii. Protected species other than those authorized by this permit are taken.
 - c. Following incident reporting requirements at Condition E.2.
3. The Permit Holder may continue to possess biological samples⁴ acquired⁵ under this permit after permit expiration without additional written authorization provided a copy of this permit is kept with the samples and they are maintained as specified in this permit.

B. Number and Kinds of Protected Species, Locations and Manner of Taking

1. The tables in Appendix 1 outline the authorized species and distinct population segment (DPS) authorized; number of animals to be taken; and the manner of take, locations, and time period.
2. Researchers working under this permit may collect images (e.g., photographs, video) and audio recordings in addition to the photo-documentation authorized in Appendix 1 as needed to document the permitted activities, provided the collection of such images or recordings does not result in takes.
3. The Permit Holder may use images and audio recordings collected under this permit, including those authorized in Tables 1-2 of Appendix 1, in printed materials (including commercial or scientific publications) and presentations provided the images and recordings are accompanied by a statement indicating

² This permit allows for unintentional serious injury and mortality caused by the presence or actions of researchers up to the limit in Table 3 of Appendix 1. This includes, but is not limited to: deaths resulting from infections related to sampling procedures or invasive tagging; and deaths or injuries sustained by animals during capture and handling, or while attempting to avoid researchers or escape capture.

³ By regulation, a take under the Marine Mammal Protection Act (MMPA) means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: The collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild. Under the ESA, a take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to do any of the preceding.

⁴ Biological samples include, but are not limited to: carcasses (whole or parts); and any tissues, fluids, or other specimens from live or dead protected species; except feces, urine, and spew collected from the water or ground.

⁵ Authorized methods of sample acquisition are specified in Appendix 1.

that the activity was conducted pursuant to NMFS ESA Permit No. 21233. This statement must accompany the images and recordings in all subsequent uses or sales.

4. The Chief, Permits Division may grant written approval for personnel performing activities not essential to achieving the research objectives (e.g., a documentary film crew) to be present, provided:
 - a. The Permit Holder submits a request to the Permits Division specifying the purpose and nature of the activity, location, approximate dates, and number and roles of individuals for which permission is sought.
 - b. Non-essential personnel/activities will not influence the conduct of permitted activities or result in takes of protected species.
 - c. Persons authorized to accompany the Researchers for the purpose of such non-essential activities will not be allowed to participate in the permitted activities.
 - d. The Permit Holder and Researchers do not require compensation from the individuals in return for allowing them to accompany Researchers.
5. Researchers must comply with the following conditions related to the manner of taking:
 - a. Aerial Surveys for Following, Hovering or Circling over Turtles
 1. *Manned Aircraft*
 - a. Operate aircraft at an altitude no lower than 500 feet.
 - b. Researchers must end each encounter within 45 min.
 - c. Do not conduct surveys over marine mammal haul out areas.
 - d. Avoid flying over marine mammals at any point.
 2. *Unmanned Aircraft Systems (UAS)*
 - a. Researchers may use a fixed wing or vertical take-off and landing (VTOL) UAS. Researchers may operate only one unit at a time.
 - b. Researchers must end each encounter within 45 min.

- c. Operate UAS at an altitude no lower than 50 feet.
- b. Capture Methods
1. *General Netting Methods*
 - a. Keep in-water chase activities and exertion as brief as possible to minimize the increased stress and associated physiological changes that accompany capture.
 - b. Researchers must remove turtles from the net as quickly and safely as possible. This includes efficient and safe removal of turtles from the net.
 - c. Follow the procedures for handling and monitoring leatherback sea turtles included as Attachment 1 to this permit when intentionally targeting the species for capture using selective capture methods (e.g., hoop net, strike net, encircle net).
 2. *Hand Capture and Dip Netting*
 - a. Limit the number of attempts to capture an individual turtle to three (3) attempts per day.
 3. *Breakaway Hoop Netting*
 - a. Only personnel experienced with the hoop net capture may perform this technique.
 - c. Keep in-water chase activities and exertion as brief as possible to minimize the increased stress and associated physiological changes that accompany capture. This includes efficient and safe removal of turtles from the net.
 - d. Limit the number of attempts to capture a leatherback sea turtle with the hoop net to five (5) per 24-hour period. If Researchers are unsuccessful after the first three (3) attempts, they must wait a minimum of 4 hours before making the final two (2) attempts for the day.
 - e. Researchers must only target leatherback sea turtles behaving normally with no evidence of external trauma.

4. *Pound Netting*

- a. Researchers may set pound nets only in North Carolina waters.
- b. Researchers must maintain, manage and thoroughly check pound nets and leaders every 24 hours or less. Net checking must include a thorough check of the net such that the full depth of the net and leader are visible along the entire length.
- c. Researchers must use a mesh size of 1¾-inch stretched mesh or less in the pound and heart to reduce sea turtle entanglement and mortality.
- d. Researchers cannot participate as part of a fishery or retain any fish catch unless the fishery has an ESA Section 7 Incidental Take Statement or an ESA Section 10(a)(1)(B) incidental take permit.

5. *Entanglement Netting*

- a. Use nets with mesh size designed to minimize bycatch of non-sea turtle species.
- b. Attach highly visible surface buoys to the float line of each net, spaced at intervals of every 10 yards or less.
- c. “Net checking” is defined as a thorough check of the net either by snorkeling the net in clear water (entire net must be visible) or by pulling up on the top line such that the full depth of the net is viewed along the entire length. The following intervals are the maximum time between viewing any single point of the net (i.e., each point of the net must be viewed every 30 or 20 minutes, depending on water temperature).
 - i. Check nets every 30 minutes and more frequently if turtles or other organisms are observed in the net.
 - ii. Check nets every 20 minutes or less if water temperatures are $\leq 10^{\circ}\text{C}$ (50°F) or $\geq 30^{\circ}\text{C}$ (86°F).
- d. Continuously observe the surface float line of all nets for movement indicating an animal has encountered the net.

When this occurs, the net must be immediately and thoroughly checked.

- e. Plan for unexpected circumstances or demands of the research activities and have the ability and resources to meet the net checking requirements at all times. Contingencies for inclement weather must be in place. For example:
 - i. If an animal is highly entangled and requires extra time and effort to remove from the net, Researchers must have sufficient staff and resources to continue checking the rest of the net at the same time.
 - ii. If inclement weather is predicted that would prevent meeting the net checking requirements, Researchers must remove nets in advance of the weather event.
- f. Preventing Transmission of Fibropapilloma (FP) to New Areas:
 - i. When working at sites where FP is known to occur, thoroughly clean and disinfect nets prior to use in areas where FP is either not known to be present, is considered uncommon, or where there is limited or no information on FP prevalence.
 - ii. Prior to use in these other areas, Researchers must disinfect nets using a broadcidal solution and the product-recommended contact time or by thoroughly drying nets in sunlight to inactivate FP-associated herpesvirus.
 - iii. Appropriate disinfectants include 70% isopropyl alcohol, 10% bleach, and other virucidal solutions with proven efficacy against herpesviruses.

6. *Trawling*

- a. Researchers may conduct trawls only in North Carolina waters and the northern Gulf of Mexico over continental shelf and inshore waters of Alabama, Mississippi, and Louisiana east of the Mississippi delta. This excludes areas with known concentrations of sturgeon, such as Duck, North Carolina, and within gulf sturgeon critical habitat from October through March.

- b. Do not tow nets for longer than 30 minutes bottom time or in waters deeper than 20 m.

7. *Seining*

- a. Do not pull seine nets for longer than 30 minutes.

8. *Marine Mammal Mitigation for Trawls, Seines, and Tangle Nets*

- a. Researchers must make every effort to prevent interactions with marine mammals. You must be aware of the presence and location of marine mammals at all times.
- b. Do not deploy nets or initiate trawling when Researchers observe marine mammals, except dolphins or porpoises when trawling, within the vicinity of the study area. Allow marine mammals to leave or pass through the area safely before deploying nets.
- c. For seines and tangle nets, the lead line must be raised and dropped to make marine mammals in the vicinity aware of the net should they enter the research area after nets have been deployed.
- d. Remove tangle or seine nets from the water if marine mammals remain in the vicinity of the study area.
- e. If a marine mammal enters the trawl net, becomes entangled or dies, Researchers must:
 - 1. Stop trawling/netting activities immediately.
 - 2. If the animal is alive, immediately free it from the net in a safe manner (including cutting the net as necessary).
 - 3. If the animal is dead, hold the carcass.
 - 4. Notify the appropriate NMFS Regional Stranding Coordinator within 8 hours (see <https://www.fisheries.noaa.gov/contact-directory/marine-mammal-stranding-network-coordinators>).
 - 5. Report the incident as specified in Condition E.2.

6. Suspend permitted activities until the NMFS Permits Division has granted approval to continue research per Condition E.2.

c. Turtles Captured Under Another Authority Prior to Research Activities

1. The Permit Holder must maintain records demonstrating that sea turtles obtained from other sources were taken legally (e.g., an incidental take statement of an ESA Section 7 biological opinion with a “no jeopardy” conclusion or an ESA Section 10 permit) before research may occur.
2. Researchers must only use turtles if the research activities are reasonably expected not to alter the course of the turtle’s recovery or survival outcome.

d. Handling Compromised Turtles

1. Researchers must have an experienced sea turtle veterinarian on call for emergencies, and a permitted rehabilitation facility(ies) identified for areas outside of Florida, should veterinary care be required on shore to treat a compromised turtle. Compromised turtles include animals that are obviously weak, lethargic, positively buoyant, emaciated, or that have severe injuries or other debilitating abnormalities. Prior to conducting research, notify both the veterinarian, and facility for areas outside of Florida, of the dates and times of the research to ensure their availability. If care at a rehabilitation facility is required in Florida, contact the Florida Fish and Wildlife Conservation Commission (FFWCC) via text/email at seaturtlestranding@myfwc.com or via phone at (888)404-3922 for assistance.
2. Strandings are defined as turtles that wash ashore, dead or alive, or are found floating dead or alive (if alive, generally in a weakened condition). If researchers encounter a stranded sea turtle that they have not captured or handled during permitted research activities (e.g. the researcher encounters a floating dead or injured turtle while en route to their research site), they must immediately report the stranding to the appropriate regional or state stranding hotline number and follow instructions on what to do with the animal. See here for contact information: <https://www.fisheries.noaa.gov/report>. Researchers working in an area where real-time contact is not possible, or is uncertain, must work with the appropriate regional or state stranding coordinating entity to establish a stranded turtle protocol before going into the field. The collection or handling of a stranded sea turtle, outside of

permitted research activities, is not considered a ‘take’ under this permit and should not be included in the permit annual report.

3. The Permit Holder may conduct the authorized activities on compromised or injured sea turtles that have been obtained from other legal sources at the discretion of the onsite veterinarian. Researchers must take care to minimize handling time and reduce further stress to the animal.
4. If an animal exhibits any major abnormality (including weakness, lethargy, or unresponsiveness) or is severely injured during capture or handling, or is found to be severely injured or otherwise compromised upon capture, Researchers must forego or cease activities that will further stress the animal (erring on the side of caution) and contact the on-call veterinarian as soon as possible. In this case, Researchers must count and report the animal as a ‘take’ under this permit.

In such cases, Researchers must implement one of the following options (in order of preference):

- a. For areas outside of Florida: Contact and follow the instructions of the on-call veterinarian, and, if necessary, immediately transfer the animal to the veterinarian or to a permitted rehabilitation facility to receive veterinary care.

When working in Florida: Contact and follow the instructions of the on-call veterinarian. If care at a rehabilitation facility is needed, contact Florida Fish and Wildlife Conservation Commission (FFWCC) via text/email at seaturtlestranding@myfwc.com or via phone at (888)404-3922.

- b. For areas outside of Florida: If the on-call veterinarian and the permitted rehabilitation facility cannot be reached, Researchers should err on the side of caution and bring the animal to shore for medical evaluation and rehabilitation, at a permitted rehabilitation facility, as soon as possible.

When working in Florida: If the on-call veterinarian and the FFWCC cannot be reached, Researchers should err on the side of caution and bring the animal to shore for medical evaluation and rehabilitation, at a permitted rehabilitation facility, as soon as possible. Notify the FFWCC via text/email at seaturtlestranding@myfwc.com or via phone at (888)404-3922, of the incident including the

name of the facility receiving the animal once back on shore.

- c. If the animal cannot be taken to a permitted rehabilitation facility due to logistical or safety constraints, allow it to recuperate as directed by the veterinarian (if successfully contacted), or as conditions dictate, and return the animal to the water. When working in Florida waters, notify the FFWCC via text/email at seaturtlestranding@myfwc.com or via phone at (888)404-3922, of the incident.
 - d. If the animal is taken to rehabilitation, the Permit Holder is responsible for providing all requested information pertaining to the capture, following the status of the sea turtle, and reporting the final disposition (death, permanent injury, recovery and return to wild, etc.) of the animal to the NMFS Permits Division. Upon transfer, the possession and care of the turtle falls under the authority of the permitted rehabilitation facility.
4. Unresponsive animals: Use the following resuscitation techniques on any turtles that are unresponsive or exhibit severe weakness or lethargy following in-water capture. Resuscitation must be attempted unless the turtle is determined to be deceased based on rigor mortis, decomposition, or confirmation of cardiac arrest by Doppler, ECG, or ultrasonography.
- a. Place the turtle on its plastron so that the turtle is right side up, and elevate its hindquarters at least 6 inches. The amount of the elevation depends on the size of the turtle; greater elevations are needed for larger turtles. Contact the on-call veterinarian immediately for additional instructions.
 - b. While it is elevated, periodically rock the turtle gently left to right and right to left by holding the outer edge of the carapace and lifting one side about 3 inches then alternate to the other side.
 - c. Keep sea turtles being resuscitated shaded and damp or moist. A water-soaked towel placed over the head, carapace, and flippers is the most effective method to keep a turtle moist when the temperature is $\geq 75^{\circ}\text{F}$ (23.9°C). DO NOT place a turtle into a container holding water.

- d. Continue resuscitation until recovery or confirmation of death by onset of rigor mortis, decomposition, or cardiac arrest.
 - e. Bring live turtles to shore for medical evaluation at a permitted rehabilitation facility at the direction of FFWCC when in Florida as soon as possible. If the animal cannot be taken to a rehabilitation facility due to logistical or safety constraints, allow it to recuperate as directed by the veterinarian (if successfully contacted), or as conditions dictate, and return the animal to the water. Return all dead turtles to shore for necropsy to be performed by your on-call veterinarian or the permitted rehabilitation facility. When working in Florida waters, notify the FWCC of all events and prior to conducting any necropsy via text/email at seaturtlestranding@myfwc.com or via phone at (888)404-3922.
5. Submit an incident report (see Conditions A.2 and E.2) if an animal becomes compromised or dies during any research activities.
- e. Sea Turtle Mortality
1. In the event an animal dies during research activities, the Permit Holder must submit, within two weeks, an incident report as described in Condition E.2. A necropsy should be performed, except where not feasible such as in remote areas with limited personnel. Gross necropsy findings should be included as part of an incident report. Submit final necropsy findings (e.g., histology and other analyses) when they are complete.
- f. General Handling and Release Requirements
1. Use care when handling live animals to minimize injury.
 2. While holding sea turtles out of water, Researchers must:
 - a. Protect sea turtles from temperature extremes (ideal air temperature range is between 70°F (21.1°C) and 80°F (26.7°C);
 - b. Provide adequate airflow;
 - c. Keep sea turtles moist when the temperature is $\geq 75^{\circ}\text{F}$ (23.9°C);

- d. Prevent sea turtles from sustaining any injuries; and
 - e. Keep the area surrounding the turtle free of materials that could be accidentally ingested or harm the turtle.
3. Exercise extra care when handling, sampling and releasing leatherback sea turtles. Leatherback sea turtles have more friable skin and softer bones and are more susceptible to external trauma. Researchers must:
 - a. Only board leatherbacks if they can be safely brought on board the vessel,
 - b. Handle and support leatherbacks from underneath, and
 - c. Not turn leatherbacks on their backs.
 4. To prevent injury during release, lower sea turtles as close to the water's surface as possible.
 5. Researchers must carefully monitor newly released turtles' abilities to swim and dive in a normal manner. If a turtle is not behaving normally upon release, recapture the turtle, if safely feasible, and contact your on-call veterinarian (see Condition d.1 for compromised animals above).
- g. Handling, Measuring, Weighing, and Marking
1. Refer to Attachment 2 for more information on the requirements for handling and sampling sea turtles.
 2. Clean and disinfect all equipment (tagging equipment, tape measures, etc.) and surfaces that come in contact with sea turtles between the processing of each turtle.
 3. *Turtles with Fibropapillomas (FP)*
 - a. Maintain a designated set of instruments for use on turtles with FP. Items that come into contact with turtles with FP tumors must not be used on turtles without tumors.
 - b. Exercise all measures possible to minimize exposure and cross-contamination between affected turtles and those without apparent disease, including use of disposable

gloves and thorough disinfection of equipment and surfaces.

- c. Appropriate disinfectants include 70% isopropyl alcohol, 10% bleach, and other virucidal solutions with proven efficacy against herpesviruses.

4. *Flipper and Passive Integrated Transponder (PIT) Tagging*

- a. Examine turtles for existing flipper and PIT tags before attaching or inserting new ones. Researchers must check all flippers.
- b. If Researchers find existing tags, record all tag identification numbers and promptly report them to the Cooperative Marine Turtle Tagging Program (CMTTP) at the Archie Carr Center for Sea Turtle Research (ACCSTR): <http://accstr.ufl.edu/resources/report-a-tag/> or by email: accstr@ufl.edu. Researchers must have PIT tag readers capable of reading 125, 128, 134.2, and 400 kHz tags.
- c. Clean and disinfect:
 - i. Flipper tags before use (e.g., to remove oil residue).
 - ii. Flipper and PIT tag applicators, including the tag injector handle, between turtles.
 - iii. The application site before the tag pierces the animal's skin.

5. *Flipper Tagging*

- a. Do not apply more than one tag per flipper for a total of no more than two flipper tags (includes existing flipper tags) per turtle.
- b. Researchers must clean the flipper tag application site and then scrub it with a medical disinfectant solution (e.g., Betadine, Chlorhexidine) followed by 70% percent alcohol before the applicator pierces the animal's skin.
- c. Do not flipper tag animals less than 20 cm straight carapace length (SCL), nuchal notch to pygal tip.

- d. For turtles 20-30 cm SCL, only use 1005 series tags or similar (~ 4.8 x 11.1 mm).
- e. For turtles >30 cm SCL, only use Standard 681 tags.

6. *PIT Tagging*

- a. Use a new, sterile needle for each PIT tag application.
- b. Clean the application site and then scrub it with two replicates of a medical disinfectant solution (e.g., Betadine, Chlorhexidine) followed by 70% alcohol (disinfectant/alcohol/disinfectant/alcohol) before the applicator pierces the animal's skin. Disinfect the injector handle between animals if it has been exposed to fluids from another animal.
- c. Do not apply a PIT tag to turtles <16 cm SCL.
- d. For turtles 16-30 cm SCL:
 - i. Only Researchers with specialized experience may PIT tag turtles of this size.
 - ii. Researchers must use a local anesthetic (e.g., carbocaine, lidocaine) prior to PIT tag injection.
 - iii. Only use 10 mm PIT tags and a 16-gauge injector needle.
 - iv. Researchers must insert the PIT tag into the thickest part of the triceps superficialis muscle. The tag must occupy no more than an estimated 20% of the muscle's total volume and length. To determine eligibility, pinch the muscle forward and assess the tag size relative to the muscle size.
 - v. Researchers may use alternative sites provided the muscle has sufficient mass to accommodate the PIT tag ($\leq 20\%$) and PIT tagging poses minimal risk of injury to vital structures or other anatomical features.

7. *Marking the Carapace*

- a. Use non-toxic paints or markers that do not generate heat or contain xylene or toluene.
- b. Make markings easily legible using the least amount of paint or marker necessary to re-identify the animal.

h. Biological Sampling

1. *Blood Sampling*

- a. Only experienced personnel must directly take or supervise blood samples.
- b. Use new disposable needles on each animal. Change needles immediately if they contact other surfaces or otherwise become contaminated or damaged.
- c. Researchers must thoroughly swab blood collection sites with a medical disinfectant solution (e.g., Betadine, Chlorhexidine) followed by 70% alcohol before sampling. Researchers may use two (2) applications of alcohol if disinfectant solutions may affect intended analyses.
- d. Do not attempt blood sampling if an animal cannot be adequately immobilized or conditions on the boat/holding platform preclude the safety and health of the turtle.
- e. Researchers must limit attempts (needle insertions) to extract blood from the neck to a total of four, two on either side. Use an individual needle for only one or two attempts before replacing it.
- f. You must follow best practices, including retracting the needle to the level of the subcutis prior to redirection to avoid lacerating vessels and causing other unnecessary soft tissue injury and immediately removing the needle if the animal begins to move.
- g. Blood Volume Limits:
 - i. *Sample volume*: Limit the amount of blood withdrawn to the minimal volume necessary to complete permitted activities. Researchers must not

collect more than 5 ml per 1 kg of animal per sample.

- ii. *Sampling period:* Do not exceed the cumulative maximum safe limit described above from a single turtle within a 45-day period. If Researchers take more than 50% of the maximum safe limit in a single event or cumulatively from repeat sampling events from a single turtle within a 45-day period that turtle must not be re-sampled for 3 months from the last blood sampling event.
- iii. *Research coordination:* Researchers must, to the maximum extent practicable, attempt to determine if any of the turtles they blood sample may have been sampled within the past 3 months or will be sampled within the next 3 months by other researchers. The Permit Holder must make efforts to contact other researchers working in the area that could capture the same turtles to ensure that none of the above limits are exceeded.
- iv. *Turtles weighing 1 kg or less:* A single sample must not exceed 6% of total blood volume. Total blood volume is estimated as 7% of total body weight. If Researchers plan to collect additional samples in less than 2 months on the same turtle, samples must not exceed 3 ml/kg of turtle.

2. *Tissue Sampling*

- a. Use a new sterile biopsy punch on each turtle.
- b. Only tissue sample from the limbs, neck or shoulder region as described in the application. Researchers must avoid sensitive areas.
- c. For small skin biopsy samples (6 mm diameter or smaller): Use aseptic techniques at all times. At a minimum, thoroughly swab the tissue surface with a medical disinfectant solution (e.g., Betadine, Chlorhexidine) followed by 70% alcohol before sampling. Researchers may use two applications of alcohol if disinfectants may interfere with analyses. Keep the procedure area and your hands clean.

- d. For muscle sampling in a facility:
 - i. An experienced veterinarian must perform or directly (in-person) oversee this procedure following a veterinary-approved pain management protocol.
 - ii. Researchers must use sterile techniques.
- e. If Researchers can easily determine (through markings, tag number, etc.) that a sea turtle has been recaptured and has been already sampled, Researchers may not sample turtles more than two times during the same permit year.

3. *Gastric Lavage*

- a. Experienced personnel must directly perform or supervise lavage.
- b. Discontinue washing within 3 minutes.
- c. Once the samples have been collected, turn off the water, and allow water and food to drain until all flow has stopped. Slightly elevate the posterior of the turtle to assist in drainage.
- d. Researchers must thoroughly clean and disinfect equipment after each use.
- e. Do not attempt to lavage compromised animals.

4. *Fecal Sampling*: Researchers may only attempt to digitally extract feces on turtles >50 cm SCL.

5. *Laparoscopy and Internal Tissue Sampling*

- a. Do not attempt laparoscopy on compromised turtles.
- b. An experienced veterinarian must perform or directly (in-person) oversee this procedure.
- c. Researchers must follow a veterinary-approved pain management protocol.

- d. Researchers may only use sedation or anesthesia following a veterinary-approved protocol and when directly attended by a veterinarian.

i. Transmitters and Instrument Attachments: Acoustic, Radio, Satellite, and Suction Cup Tags

- 1. Minimum size of animals to receive tags based on specifications described in the application:

Tag Type and Attachment method	Minimum Size (SCL)	
	Leatherbacks	Hardshells
Satellite tag -- resin & tethered to medial ridge	50 cm	Not applicable (N/A)
Towed satellite tag -- eyestraps and tether	30 cm	30 cm
Short-term tag/camera --suction cup on carapace	30 cm	30 cm
Small satellite tag -- neoprene & epoxy	N/A	30 cm
Satellite tag with a frontal area > 35 cm ² -- epoxy	N/A	55 cm for greens, 50 cm other hardshell species
Solar satellite tag (neonates) --neoprene, acrylic and silicone	N/A	20 cm
Radio tag -- epoxy to carapace or tethered to postcentral scutes	N/A	30 cm
Acoustic tag -- epoxy to marginal scutes	N/A	20 cm

- 2. *Tag combinations.* Animals may receive up to 2 tags as follows:

- a. 1 tethered satellite tag + 1 suction cup tag;
- b. 1 epoxied satellite tag + 1 epoxied or tethered radio OR acoustic tag;
- c. 1 epoxied or tethered radio tag + 1 epoxied acoustic tag.

3. For telemetry devices, attachment material selection, and protocols, Researchers should first use best available, currently published methods, especially with regard to risk for thermal injury. Researchers should test (including monitoring temperature) products not previously used for animal attachment by mock application prior to use on sea turtles.
4. Always incorporate the following considerations into external tag selection and application:
 - i. Minimize the frontal area (e.g., the anterior or leading side and edges) of the external tag and ensure it has a low profile.
 - ii. Streamline the external tag attachment while covering as small of an area on the turtle as possible. Minimize the use of adhesives, base plates, and build-up of adhesive material.
 - iii. Use teardrop shaped tags, or fashion square tags into a teardrop shape, to reduce drag when attaching long-term tags to the midline of the carapace.
 - iv. To the degree possible, avoid placing the external tag at the peak height of the carapace. Place tags slightly anterior or posterior to the peak where uplinks will be maintained and the saltwater switch will still be exposed to the air during breathing, but the frontal area is minimized.
 - v. When placing 2 tags on the midline of the carapace, to the extent possible, place tags in series (one behind the other) and close together to minimize drag.
 - vi. Minimize the antenna length and diameter to reduce risk of entanglement and/or drag.
5. Researchers must minimize the risk of entanglement for each external attachment. The transmitter attachment must contain a weak link (where appropriate) or have no gap between the transmitter and the turtle that could result in entanglement.
6. For tethered instruments, the lanyard length must be less than half of the turtle's carapace length. It must include a corrosive, breakaway link that will release the unit after its battery life.

7. Provide adequate ventilation around the head of the turtle if attachment materials produce fumes. To prevent skin or eye contact with harmful chemicals, do not hold turtles in water during tag attachment.
8. For procedures that drill through marginal scutes of hard-shelled turtles, Researchers must follow aseptic techniques with two alternating applications of medical disinfectant (e.g., Betadine, Chlorhexidine) followed by 70% alcohol. Use a separate drill bit for each turtle. Bits may be reused if sterilized by autoclave or cold sterilization (e.g., glutaraldehyde) before reuse. Researchers must use similar aseptic protocols for direct attachment of devices to leatherback turtles, with sterilized drill bits used for each turtle.
9. *Suction cup tags*: Place the attachment so that turtles are able to move freely without impairment.

j. Holding and Sedation/Anesthesia

1. Researchers must not exceed the following holding times for an animal from the time of capture or removal from the pound net to release:
 - a. 1 hour for standard work-up (no transmitter attachments),
 - b. 3 hours if receiving a transmitter attachment, or
 - c. 36 hours for animals temporarily held in a facility.
2. For the transport, maintenance, and care of turtles temporarily held in a facility, follow the “Standard Permit Conditions for Care and Maintenance of Captive Sea Turtles” issued by the U.S. Fish and Wildlife Service (available at: https://www.fws.gov/northflorida/seaturtles/Captive_Forms/20130213_revised%20standard_permit_conditions_for_captive_sea_turtles.pdf) and if in the State of Florida, following Florida Fish and Wildlife Conservation Commission Marine Turtle Conservation Handbook, Section 4, “Holding Turtles in Captivity.”
3. Researchers may only use sedation or anesthesia, such as for imaging, following a veterinary-approved protocol and when directly attended by a veterinarian.

k. Non-Target Species

1. *Bycatch*: Release all incidentally captured species (e.g., fishes and birds) alive as soon as possible.
2. If any listed non-target species are taken (captured, injured, etc.) during research, Researchers must stop activities per Condition A.2 and submit an incident report per Condition E.2. Document adverse interactions in the report, including any pertinent details of the interaction (gear type, what was done to handle and release the animals, location, date, size, water and air temperature, and photos if possible).
3. See Attachment 3 for conditions provided by the U.S. Fish and Wildlife Service for Florida manatees.
4. *Smalltooth Sawfish Requirements*
 - a. This permit does not authorize take of smalltooth sawfish. Researchers must be able to adhere to the following conditions if one is incidentally taken during research.
 - b. Researchers must contact Adam Brame, at (727) 209-5958 or adam.brame@noaa.gov:
 - i. For training requirements on proper handling procedures if Researchers will be operating in areas where sawfish are present.
 - ii. If a sawfish is captured, in addition to following Conditions A.2 and E.2.
 - c. Use extreme caution when attempting to handle and release a captured sawfish, following NMFS Sawfish Handling and Release Guidelines, found at:
http://www.nmfs.noaa.gov/sfa/hms/compliance/workshops/protected_species_workshop/sawfish_sturgeon/sawfish_release_guidelines_placard.pdf
 - d. Researchers must keep the sawfish in the water at all times and cut the net from the rostrum and body of the animal (do NOT disentangle the rostrum from the net).

5. *Submerged Aquatic Vegetation (SAV; e.g., seagrass), Coral Communities, Hard and Live Bottom Habitat*
 - a. Researchers must take all practicable steps including the use of charts, GIS, sonar, fish finders, or other electronic devices to determine characteristics and suitability of bottom habitat prior to using gear to identify SAV, coral communities, and live/hard bottom habitats and avoid setting gear in such areas.
 - b. Do not set, anchor on, or pull gear across SAV, coral or hard/live bottom habitats.
 - c. If research gear is lost, make diligent efforts to recover the lost gear to avoid further damage to benthic habitat and impacts related to “ghost fishing.”
 - d. Johnson’s seagrass and critical habitat: Do not conduct research activities over, on, or immediately adjacent to Johnson’s seagrass or in Johnson’s seagrass critical habitat.
 - e. Other seagrass species: Researchers must avoid setting and deploying gear over, on, or immediately adjacent to any non-listed seagrass species. If Researchers cannot avoid these non-listed species, Researchers must implement the following measures to reduce the potential for seagrass damage:
 - i. Set anchors by hand when water visibility is acceptable, to reduce the potential for seagrass damage. Researchers must place anchors in unvegetated areas within seagrass meadows or areas having relatively sparse vegetation coverage. Remove anchors in a manner that would avoid the dragging of anchors and anchor chains.
 - ii. Avoid damaging any seagrass species, and if the potential for anchor or net drag is evident, suspend research activities immediately.
 - iii. Do not tread or trample on seagrass and coral reef habitat.

6. *North Atlantic Right Whales*

- a. If a right whale is seen, Researchers must maintain a distance of at least 460 meters (500 yards) from the animal.
- b. Report all right whale sightings to the NMFS Sighting Advisory System:
 - i. In any location to the U.S. Coast Guard on channel 16.
 - ii. From VA to ME to (978) 585-8473.
 - iii. From NC to FL to (904) 237-4220.

6. Transfer of Sea Turtle Biological Samples

- a. Samples may be sent to the Authorized Recipients listed in Appendix 2 provided that:
 - i. The analysis or curation is related to the research objectives of this permit.
 - ii. A copy of this permit accompanies the samples during transport and remains on site during analysis or curation.
- b. Samples remain in the legal custody of the Permit Holder while in the possession of Authorized Recipients.
- c. The Permit Holder may grant written approval to additional Authorized Recipients for analysis and curation of samples related to the permit objectives. The Permit Holder must maintain a record of the transfer including the following:
 - i. Name and affiliation of the recipient;
 - ii. Address of the recipient;
 - iii. Types of samples sent (species, tissue type); and
 - iv. Type of analysis or whether samples will be curated.
- d. Samples cannot be bought or sold.

C. Qualifications, Responsibilities, and Designation of Personnel

1. At the discretion of the Permit Holder, the following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein:
 - a. Principal Investigator – Larisa Avens, Ph.D. (See Appendix 2 for authorized activities).
 - b. Co-Investigators – See Appendix 2 for list of names and corresponding activities.
 - c. Research Assistants – personnel identified by the Permit Holder or Principal Investigator and qualified to act pursuant to Conditions C.2, C.3, and C.4 of this permit.
2. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities. The roles and responsibilities of personnel operating under this permit are as follows:
 - a. The Permit Holder is ultimately responsible for activities of individuals operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.
 - b. The Principal Investigator (PI) is the individual primarily responsible for the taking and related activities conducted under the permit. This includes coordination of field activities of all personnel working under the permit. The PI must be on site during activities conducted under this permit unless a Co-Investigator named in Condition C.1 is present to act in place of the PI.
 - c. Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit, for the objectives described in the application, without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.
 - d. Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.
3. Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to:

- a. Individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of vessels or aircraft essential to conducting the activity),
 - b. Individuals included as backup for those personnel essential to the conduct of the permitted activity, and
 - c. Individuals included for training purposes.
4. Persons who require state or Federal licenses or authorizations (e.g., veterinarians, pilots – including UAS operators) to conduct activities under the permit must be duly licensed/authorized and follow all applicable requirements when undertaking such activities.
5. Permitted activities may be conducted aboard vessels or aircraft, or in cooperation with individuals or organizations, engaged in commercial activities, provided the commercial activities are not conducted simultaneously with the permitted activities, except as specifically provided for in an Incidental Take Statement or Incidental Take Permit for the specific commercial activity.
6. The Permit Holder cannot require or receive direct or indirect compensation from a person approved to act as PI, CI, or RA under this permit in return for requesting such approval from the Permits Division.
7. The Permit Holder or PI may designate additional CIs without prior approval from the Chief, Permits Division provided:
 - a. A copy of the letter designating the individual and specifying their duties under the permit is forwarded to the Permits Division by facsimile or email on the day of designation.
 - b. The copy of the letter is accompanied by a summary of the individual's qualifications to conduct and supervise the permitted activities.
 - c. The Permit Holder acknowledges that the designation is subject to review and revocation by the Chief, Permits Division.
8. The Responsible Party may request a change of PI by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit.
9. Submit requests to change the PI or designate CIs by one of the following:
 - a. The online system at <https://apps.nmfs.noaa.gov>;
 - b. An email attachment to the permit analyst for this permit; or

- c. A hard copy mailed or faxed to the Chief, Permits Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301)427-8401; fax (301)713-0376.

D. Possession of Permit

1. This permit cannot be transferred or assigned to any other person.
2. The Permit Holder and persons operating under the authority of this permit must possess a copy of this permit when:
 - a. Engaged in a permitted activity.
 - b. A protected species is in transit incidental to a permitted activity.
 - c. A protected species taken under the permit is in the possession of such persons.
3. A duplicate copy of this permit must accompany or be attached to the container, package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.

E. Reporting

1. The Permit Holder must submit incident and annual reports containing the information and in the format specified by the Permits Division.
 - a. Reports must be submitted to the Permits Division by one of the following:
 - i. The online system at <https://apps.nmfs.noaa.gov>;
 - ii. An email attachment to the permit analyst for this permit; or
 - iii. A hard copy mailed or faxed to the Chief, Permits Division.
 - b. You must contact your permit analyst for a reporting form if you do not submit reports through the online system.
2. Incident Reporting
 - a. If the total number of mortalities for a species is reached, or authorized takes have been exceeded as specified in Condition A.2, the Permit Holder must:

- i. Contact the Permits Division by phone (301-427-8401) as soon as possible, but no later than 2 business days of the incident;
 - ii. Submit a written report within 2 weeks of the incident as specified below; and
 - iii. Receive approval from the Permits Division before resuming work. The Permits Division may grant authorization to resume permitted activities based on review of the incident report and in consideration of the Terms and Conditions of this permit.
 - b. Any time a serious injury or mortality of a protected species occurs, a written report must be submitted within two weeks.
 - c. The incident report must include 1) a complete description of the events, and 2) identification of steps that will be taken to reduce the potential for additional serious injury and research-related mortality or exceeding authorized take.
- 3. Annual reports describing activities conducted during the previous permit year (from October 1 to September 30 of the following year) must:
 - a. Be submitted by October 31st each year for which the permit is valid, and
 - b. Include a tabular accounting of takes and a narrative description of activities and their effects.
 - c. Include data on disturbance rates of sea turtles specific to UAS operations. Details should include, but not be limited to: species, altitude and angle of approach, context of exposure (e.g., behavioral states), and observed behavioral responses to the UAS.
- 4. A joint annual/final report including a discussion of whether the objectives were achieved must be submitted by October 31, 2027, or, if the research concludes prior to permit expiration, within 30 days of completion of the research.
- 5. Research results must be published or otherwise made available to the scientific community in a reasonable period of time. Copies of technical reports, conference abstracts, papers, or publications resulting from permitted research must be submitted the Permits Division upon request.

F. Notification and Coordination

- 1. NMFS Regional Offices are responsible for ensuring coordination of the timing and location of all research activities in their areas to minimize unnecessary duplication, harassment, or other adverse impacts from multiple researchers.

2. The Permit Holder must ensure written notification of planned field work for each project is provided to the NMFS Regional Offices listed below at least two weeks prior to initiation of each field trip/season.
 - a. Notification must include the following:
 - i. Locations of the intended field study and/or survey routes;
 - ii. Estimated dates of activities; and
 - iii. Number and roles of participants (for example: PI, CI, veterinarian, boat driver, animal restrainer, Research Assistant “in training”).
 - b. Notification must be sent to the following Assistant Regional Administrators for Protected Resources as applicable to the location of your activity:

For activities in NC, SC, GA, FL, AL, MS, LA, TX, PR, and USVI:
Southeast Region, NMFS, 263 13th Ave South, St. Petersburg, FL 33701;
phone (727)824-5312; fax (727)824-5309
Email (*preferred*): nmfs.ser.research.notification@noaa.gov; and

For activities in ME, VT, NH, MA, NY, CT, NJ, DE, RI, MD, and VA:
Greater Atlantic Region, NMFS, 55 Great Republic Drive, Gloucester,
MA 01930; phone (978)281-9328; fax (978)281-9394
Email (*preferred*): NMFS.GAR.permit.notification@noaa.gov.
3. Researchers must coordinate their activities with other permitted researchers to avoid unnecessary disturbance of animals or duplication of efforts. Contact the applicable Regional Offices listed above for information about coordinating with other Permit Holders.

G. Observers and Inspections

1. NMFS may review activities conducted under this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by:
 - a. Allowing an employee of NOAA or other person designated by the Director, NMFS Office of Protected Resources to observe and document permitted activities; and
 - b. Providing all documents or other information relating to the permitted activities.

H. Modification, Suspension, and Revocation

1. Permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.
2. The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part:
 - a. In order to make the permit consistent with a change made after the date of permit issuance with respect to applicable regulations prescribed under Section 4 of the ESA;
 - b. In a case in which a violation of the terms and conditions of the permit is found;
 - c. In response to a written request⁶ from the Permit Holder;
 - d. If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to Section E of this permit and information provided to NOAA personnel pursuant to Section G of this permit) includes false information; and
 - e. If NMFS determines that the authorized activities will operate to the disadvantage of threatened or endangered species or are otherwise no longer consistent with the purposes and policy in Section 2 of the ESA.
3. Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or modifications for the same or similar activities requested by the Permit Holder, including those of a continuing nature.

I. Penalties and Permit Sanctions

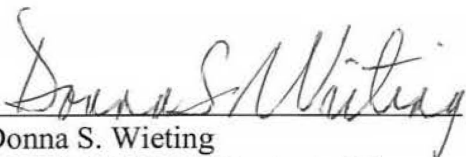
1. A person who violates a provision of this permit, the MMPA, ESA, or the regulations at 50 CFR 222-226 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA, and 15 CFR Part 904.
2. The NMFS Office of Protected Resources shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit.

⁶ The Permit Holder may request changes to the permit related to: the objectives or purposes of the permitted activities; the species or number of animals taken; and the location, time, or manner of taking or importing protected species. Such requests must be submitted in writing to the Permits Division in the format specified in the application instructions.

- a. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit.
- b. Failure to verify, where the NMFS Office of Protected Resources subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, the ESA, and applicable regulations in any enforcement actions.

J. Acceptance of Permit

- 1. In signing this permit, the Permit Holder:
 - a. Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Parts 222-226, and all restrictions and requirements under the ESA;
 - b. Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and
 - c. Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.


 Donna S. Wieting
 Director, Office of Protected Resources
 National Marine Fisheries Service

AUG 07 2018

 Date Issued

BRAINERD.THEOPHIL Digitally signed by
US.R.DR.1365819285 BRAINERD.THEOPHILUS.R.DR.136581
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 Date: 2018.08.08 11:09:55 -04'00'

Theophilus Brainerd, Ph.D.
 Deputy Director, NMFS Southeast Fisheries Science Center
 Responsible Party

 Date Effective

FILE COPY

Appendix 1: Tables Specifying the Kinds of Protected Species, Locations, and Manner of Taking

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
1	Turtle, green sea	North Atlantic Distinct Population Segment (DPS) (Threatened)	50	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
2	Turtle, green sea	North Atlantic DPS (Threatened)	100	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears
3	Turtle, green sea	North Atlantic DPS (Threatened)	25	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
4	Turtle, green sea	North Atlantic DPS (Threatened)	30	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears
5	Turtle, green sea	North Atlantic DPS (Threatened)	25	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
6	Turtle, green sea	North Atlantic DPS (Threatened)	25	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
7	Turtle, green sea	North Atlantic DPS (Threatened)	15	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal; Sample, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
8	Turtle, green sea	North Atlantic DPS (Threatened)	10	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
9	Turtle, green sea	North Atlantic DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking;

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
10	Turtle, green sea	North Atlantic DPS (Threatened)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking;
11	Turtle, green sea	North Atlantic DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
12	Turtle, green sea	North Atlantic DPS (Threatened)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
13	Turtle, green sea	North Atlantic DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; -Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
14	Turtle, green sea	North Atlantic DPS (Threatened)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag;-Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
15	Turtle, green sea	North Atlantic DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
16	Turtle, green sea	North Atlantic DPS (Threatened)	35	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears

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Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
17	Turtle, hawksbill sea	Range-wide (Endangered)	9	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
18	Turtle, hawksbill sea	Range-wide (Endangered)	3	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears
19	Turtle, hawksbill sea	Range-wide (Endangered)	7	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment; Instrument, epoxy attachment (e.g., satellite tag, VHF tag); Instrument, suction cup attachment;</u> Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
20	Turtle, hawksbill sea	Range-wide (Endangered)	2	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
21	Turtle, Kemp's ridley sea	Range-wide (Endangered)	50	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
22	Turtle, Kemp's ridley sea	Range-wide (Endangered)	100	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample, blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
23	Turtle, Kemp's ridley sea	Range-wide (Endangered)	30	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , and scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
24	Turtle, Kemp's ridley sea	Range-wide (Endangered)	20	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears.
25	Turtle, Kemp's ridley sea	Range-wide (Endangered)	30	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
26	Turtle, Kemp's ridley sea	Range-wide (Endangered)	20	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
27	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
28	Turtle, Kemp's ridley sea	Range-wide (Endangered)	20	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
29	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
30	Turtle, Kemp's ridley sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears

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Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
31	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking;
32	Turtle, Kemp's ridley sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample, blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking;
33	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
34	Turtle, Kemp's ridley sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
35	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

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Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
36	Turtle, Kemp's ridley sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample; blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
37	Turtle, leatherback sea	Range-wide (Endangered)	4	Capture/Handle/Release	Net, Hoop	Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, tissue; Transport; Ultrasound; Weigh	Capture by hoop net, dip net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only)
38	Turtle, leatherback sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, tissue; Transport; Ultrasound; Weigh	
39	Turtle, leatherback sea	Range-wide (Endangered)	4	Capture/Handle/Release	Net, Hoop	<u>Instrument, drill carapace attachment</u> ; <u>Instrument, suction cup attachment</u> ; Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hoop net, dip net, cast net, pound net (NC only), tangle net, seine net, or trawl (GoMx and NC only)

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Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
40	Turtle, leatherback sea	Range-wide (Endangered)	5	Harass/Sampling	Capture under other authority	<u>Instrument, drill carapace attachment;</u> <u>Instrument, suction cup attachment;</u> Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, tissue; Tracking; Transport; Ultrasound; Weigh	
41	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	60	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
42	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	200	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears

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Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
43	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	30	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
44	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	25	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears
45	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	30	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
46	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	30	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
47	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	20	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
48	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	10	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
49	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking;
50	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	50	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking;

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
51	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	15	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; -Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (NC only); Other = cloacal temperature, tetracycline marking.
52	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	10	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking
53	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	15	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
54	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	15	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
55	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	10	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only). Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
56	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking. Up to 2 tags per animal at a time.
57	Turtle, olive ridley sea	Range-wide (Threatened)	6	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
58	Turtle, olive ridley sea	Range-wide (Threatened)	5	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
59	Turtle, unidentified sea	NA (Endangered)	3	Capture/Handle/Release	Net, Tangle	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood; Sample, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
60	Turtle, unidentified sea	NA (Endangered)	3	Harass/Sampling	Capture under other authority	Epibiota removal; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
61	Turtle, unidentified sea	NA (Endangered)	2	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears
62	Turtle, unidentified sea	NA (Endangered)	1	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears
63	Turtle, unidentified sea	NA (Endangered)	3	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
64	Turtle, unidentified sea	NA (Endangered)	3	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
65	Turtle, unidentified sea	NA (Endangered)	2	Capture/Handle/Release	Net, Tangle	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, cast net, pound net (NC only), tangle or seine net, trawl (GoMx and NC only); Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.

Table 1. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments. Beaufort Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
66	Turtle, unidentified sea	NA (Endangered)	1	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Imaging (e.g., MRI, CT, CAT, X-Ray)</u> ; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; <u>Laparoscopy</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Other; Photograph/Video; Sample: blood, cloacal swab, <u>fat</u> , fecal, muscle biopsy, nasal swab, <u>organ biopsy</u> , scute scraping, and tissue; Tracking; Transport; Ultrasound; Weigh	Other = cloacal temperature, tetracycline marking; sample, tears. Up to 2 tags per animal at a time.
67	Turtle, green sea	North Atlantic DPS (Threatened)	20	Harass	Survey, vessel/aerial	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture. One UAS during vessel surveys.
68	Turtle, Kemp's ridley sea	Range-wide (Endangered)	20	Harass	Survey, vessel/aerial	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture. One UAS during vessel surveys.
69	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	20	Harass	Survey, vessel/aerial	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture. One UAS during vessel surveys.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
1	Turtle, green sea	North Atlantic DPS (Threatened)	200	Capture/Handle/Release	Hand	Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net
2	Turtle, green sea	North Atlantic DPS (Threatened)	60	Capture/Handle/Release	Hand	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Capture by hand, dip net, hoop net, or cast net. Up to 2 tags per animal at a time.
3	Turtle, green sea	North Atlantic DPS (Threatened)	10	Capture/Handle/Release	Net, trawl	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Only in GoMx and NC waters. Up to 2 tags per animal at a time.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
4	Turtle, green sea	North Atlantic DPS (Threatened)	25	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Up to 2 tags per animal at a time.
5	Turtle, hawksbill sea	Range-wide (Endangered)	60	Capture/Handle/Release	Hand	Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net
6	Turtle, hawksbill sea	Range-wide (Endangered)	22	Capture/Handle/Release	Hand	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Capture by hand, dip net, hoop net, or cast net. Up to 2 tags per animal at a time.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
7	Turtle, hawksbill sea	Range-wide (Endangered)	2	Capture/Handle/Release	Net, trawl	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Only in GoMx and NC waters. Up to 2 tags per animal at a time.
8	Turtle, hawksbill sea	Range-wide (Endangered)	10	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Up to 2 tags per animal at a time.
9	Turtle, Kemp's ridley sea	Range-wide (Endangered)	120	Capture/Handle/Release	Hand	Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
10	Turtle, Kemp's ridley sea	Range-wide (Endangered)	40	Capture/Handle/Release	Hand	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Capture by hand, dip net, hoop net, or cast net. Up to 2 tags per animal at a time.
11	Turtle, Kemp's ridley sea	Range-wide (Endangered)	10	Capture/Handle/Release	Net, trawl	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Only in GoMx and NC waters. Up to 2 tags per animal at a time.
12	Turtle, Kemp's ridley sea	Range-wide (Endangered)	25	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Up to 2 tags per animal at a time.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
13	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	145	Capture/Handle/Release	Hand	Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net
14	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	60	Capture/Handle/Release	Hand	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Capture by hand, dip net, hoop net, or cast net. Up to 2 tags per animal at a time.
15	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	10	Capture/Handle/Release	Net, trawl	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Only in GoMx and NC waters. Up to 2 tags per animal at a time.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
16	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	50	Harass/Sampling	Capture under other authority	Epibiota removal; <u>Instrument, drill carapace attachment</u> ; <u>Instrument, epoxy attachment (e.g., satellite tag, VHF tag)</u> ; <u>Instrument, suction cup attachment</u> ; Lavage, gastric; Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Up to 2 tags per animal at a time.
17	Turtle, leatherback sea	Range-wide (Endangered)	50	Capture/Handle/Release	Net, hoop	Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample, blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net
18	Turtle, leatherback sea	Range-wide (Endangered)	50	Capture/Handle/Release	Net, hoop	<u>Instrument, drill carapace attachment</u> ; <u>Instrument, suction-cup attachment (e.g., camera)</u> ; Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Capture by hand, dip net, hoop net, or cast net. Up to 2 tags per animal at a time.
19	Turtle, leatherback sea	Range-wide (Endangered)	2	Capture/Handle/Release	Net, trawl	<u>Instrument, drill carapace attachment</u> ; <u>Instrument, suction-cup attachment (e.g., camera)</u> ; Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, tissue; Tracking; Transport; Weigh	Only in GoMx and NC waters. Up to 2 tags per animal at a time.

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
20	Turtle, leatherback sea	Range-wide (Endangered)	25	Harass/Sampling	Capture under other authority	<u>Instrument, drill carapace attachment; Instrument, suction-cup attachment (e.g., camera);</u> Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood, cloacal swab, fecal, muscle biopsy, nasal swab, and tissue; Tracking; Transport; Weigh	Up to 2 tags per animal at a time.
21	Turtle, green sea	North Atlantic DPS (Threatened)	100	Harass	Survey, aerial/vessel	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture; one UAS at a time during vessel surveys
22	Turtle, hawksbill sea	Range-wide (Endangered)	5	Harass	Survey, aerial/vessel	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture; one UAS at a time during vessel surveys
23	Turtle, Kemp's ridley sea	Range-wide (Endangered)	20	Harass	Survey, aerial/vessel	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture; one UAS at a time during vessel surveys
24	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	50	Harass	Survey, aerial/vessel	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture; one UAS at a time during vessel surveys

Table 2. Authorized Annual Takes of Post-hatchling, Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea, and their Embayments. Miami Laboratory work. Trawls are authorized only in Gulf of Mexico (GoMx) and North Carolina (NC) waters as indicated at Condition B.5.b.6.a. Pound net captures are authorized only in NC waters. Animals must have been legally captured via an ESA Section 7 ITS or Section 10 permit.

Line	Species	Listing Unit	No. Animals	Take Action	Observe/Collect Method	Procedures	Details
25	Turtle, leatherback sea	Range-wide (Endangered)	100	Harass	Survey, aerial/vessel	Count/survey; Photograph/Video; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Pursue > 5 minutes without capture; manned aircraft survey or use of one UAS during vessel surveys.
26	Turtle, unidentified sea	NA (Endangered)	5	Capture/Handle/Release	Hand	Mark, carapace (temporary); Mark, flipper tag; Mark, PIT tag; Measure; Photograph/Video; Sample: blood and tissue; Transport; Ultrasound; Weigh	Capture by hand, dip net, hoop net, or cast net

Table 3. Authorized Unintentional Mortality of Juvenile, Subadult, and Adult Sea Turtles in U.S. and International Waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their Embayments Associated with Activities Authorized in Tables 1 and 2. Takes are authorized over the life of the permit.

Line	Species	Stock/Listing Unit	No. Animals	Take Action	Procedures	Details
1	Turtle, loggerhead sea	Northwest Atlantic Ocean DPS (Threatened)	2	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.
2	Turtle, green sea	North Atlantic DPS (Threatened)	2	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.
3	Turtle, Kemp's ridley sea	Range-wide (Endangered)	2	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.
4	Turtle, leatherback sea	Range-wide (Endangered)	1	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.
5	Turtle, hawksbill sea	Range-wide (Endangered)	1	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.
6	Turtle, olive ridley sea	Range-wide (Threatened)	1	Unintentional mortality	Salvage (carcass, tissue, parts)	Due to capture (hoop, cast, pound, tangle, seine, or trawl net) or during procedures.

Appendix 2: NMFS-Approved Personnel and Authorized Recipients for Permit No. 21233.

The following individuals are approved to act as personnel as indicated below pursuant to the terms and conditions under Section C (Qualifications, Responsibilities, and Designation of Personnel) of this permit.

Activity	Larisa Avens (PI)	Lisa Belskis	Joanne Braun-McNeill	Lesley Stokes	Ben Higgins	Chris Sasso	Wendy Teas	Paul Richards	Craig Harms, D.V.M.	Matthew Godfrey	Wendy Piniak	Emily Christiansen,	Brian Stacy, D.V.M.
Aerial surveys (manned and UAS)	x	x	x			x	x						
Vessel surveys (no capture)	x		x	x		x							
Hoop net	x					x							
Trawl	x	x	x	x		x	x						
Hand capture, dip net or cast net	x	x	x	x	x	x	x	x					
Seine net	x	x	x	x		x	x						
Gill net	x		x		x	x	x					x	
Pound net	x		x	x		x	x				x		
Tangle net	x	x	x			x	x						
Measure, cloacal/ lesion/nasal swabs, fecal sampling (digital), scute scraping, epibiont removal, weigh, tetracycline injection, skin biopsy, flipper and PIT tag	x	x	x	x	x	x	x	x	x	x	x	x	x
Epoxy based and suction cup tags; blood sampling	x	x	x	x	x	x	x			x	x	x	x
PAT towed (tethered) tagging	x	x	x	x	x	x	x	x					x
Gastric lavage	x		x	x	x				x			x	x
Neonate transmitters	x												
Leatherback medial ridge (direct) transmitters						x							
Imaging, ultrasound, laparoscopy, muscle biopsy, fat sample, and organ biopsy									x				

Biological samples authorized for collection or acquisition in Tables 1-3 of Appendix 1 may be transferred to the following Authorized Recipients for the specified disposition, consistent with Condition B.6 of the permit:

Authorized Recipient	Sample Type	Disposition
Jeff Schwenter College of Charleston, Grice Marine Lab Charleston, SC	Blood	Analysis and curation
Jennifer Keller Lynch and Russell Day National Institute of Standards and Technology Hollings Marine Laboratory Charleston, SC	Blood, skin biopsies, liver biopsies, fat biopsies, and keratin	Analysis and curation
Dr. Craig Harms NCSU, College of Veterinary Medicine Morehead City, NC	Blood, organ biopsies, and cloacal swabs	Analysis and curation
Antech Diagnostic Laboratories Memphis, TN	Blood, cloacal swabs, organ biopsies, and lesion swabs	Analysis and curation
Carteret General Hospital Morehead City, NC	Blood	Analysis and curation
Dr. Joseph Flanagan Houston Zoo Animal Hospital Houston, TX	Blood and skin biopsies	Analysis and curation
Texas Veterinary Medical Diagnostic Laboratory College Station, TX	Blood	Analysis and curation
Bradley University Peoria, IL	Blood	Analysis and curation
National Sea Turtle Genetics and Molecular Ecology Laboratories, NMFS Southwest Fisheries Science Center La Jolla, CA	Blood, stomach contents, and skin biopsies	Analysis and curation
Drs. Ellis Greiner and Brian Stacy Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL	Blood, dead carcasses, tissues and parts, fecal samples	Analysis and curation
University of Miami, School of Medicine, Division of Comparative Pathology, Wildlife and Avian Laboratory Miami, FL	Blood	Analysis and curation
Micrim Labs, INC. Dr. John Pisani Ft Lauderdale, FL	Cloacal swabs, lesion swabs, organ biopsies	Analysis and curation
Armed Forces Institute of Pathology Washington, DC	Cloacal swabs, lesion swabs, organ biopsies	Analysis and curation
Dr. Amanda Southwood, University of North Carolina at Wilmington Wilmington, NC	Muscle biopsies	Analysis and curation
Dr. Roldan Valverde Department of Biological Sciences at Southeastern Louisiana University Hammond, LA	Blood	Analysis and curation

Authorized Recipient	Sample Type	Disposition
Dr. Tom Schultz Marine Conservation Molecular Facility Beaufort, NC	Blood and skin biopsies	Analysis and curation
Dr. Marshall Otter MBL Stable Isotope Laboratory, The Ecosystems Center, Marine Biological Laboratory Woods Hole, MA	Blood, keratin, and skin biopsies	Analysis and curation
Simona Ceriani University of Central Florida Orlando, FL	Skin biopsies	Analysis and curation
IDEXX Laboratories Westbrook, ME	Blood, keratin, and skin biopsies	Analysis and curation
Dr. Rogers Williams The National Marine Life Center, Inc. Buzzards Bay, MA	Blood, keratin, and skin biopsies	Analysis and curation
Annie Page-Karjian Harbor Branch Oceanographic Institute Florida Atlantic University Fort Pierce, FL	Blood	Analysis and curation

Attachment 1: Procedures for handling and monitoring leatherback sea turtles during capture-related work (revised 10/26/2017).

The following provisions are for handling juvenile and adult leatherback turtles. These requirements incorporate recommendations made by a panel of veterinarians and biologists with experience capturing leatherbacks in the Pacific, Atlantic, and Gulf of Mexico.

Personnel requirements

To effectively monitor leatherback turtles during capture and handling, researchers must have a designated medical observer on each capture outing team. Whenever possible, this observer should be an experienced⁷ veterinarian. If a veterinarian is not in attendance, one must be reachable by cellular or satellite phone or radio (as appropriate) in case of emergency. A veterinarian is required to be on board if invasive procedures⁸ are to be performed or if the capture interval will be longer than 1 hour.⁹ For any captures, at least one individual must have the dedicated role of monitoring vital rates, behavior, and ensuring temperature control. This individual should not have any other duties that limit their attentiveness to these responsibilities. Moreover, monitoring and delegation of responsibilities should be coordinated such that the period of restraint is as brief as required to accomplish research objectives.

The chief scientist for each outing must be trained by a veterinarian in the following information and procedures:

- Acceptable parameters for responsiveness, respiration rate, heart rate, and temperature.
- Recognition and appropriate response to situations that suggest cessation of animal handling/procedures, and initiation of release.
- Safe water reintroduction and monitoring of a turtle in possible distress.

Capture, boarding, handling time, monitoring, emergency intervention

The number of attempts to capture an individual leatherback sea turtle is limited to 5 per 24-hour period. If researchers are unsuccessful after the first 3 attempts, they must wait a minimum of 4 hours before making the final 2 attempts to capture that individual on the day. Unless otherwise stipulated in the permit, only turtles observed to be normal (e.g., normal swimming and diving behavior) and with no evidence of external traumatic wounds or other abnormalities may be approached. **Any animal deemed to be in distress at any time during the pre-capture period must be avoided.**

Upon capture, and unless otherwise stipulated in the permit, the turtle should be immediately released if it is found to have any previously unapparent traumatic injuries, abnormal behavior, or other abnormalities that are deemed by the chief scientist or medical observer to create an additional risk of complication.

⁷ “Experienced” refers to a documented history of working with sea turtles under conditions requiring proficiency in emergency procedures and resuscitation.

⁸ “Invasive” includes biopsy or other procedures that involve incision into or penetration of tissues deeper than the dermis (e.g., fat biopsy), excluding phlebotomy, PIT tag implantation, and attachment of other tags/devices.

⁹ The 1-hour time duration starts as soon as the leatherback is caught in the net.

A captive duration of one hour or less is preferred. The following parameters are monitored during the capture period. Additional parameters may be added at the discretion of the Principal Investigator (PI), Co-investigator (CI), or attending veterinarian. A “fill-in-the-blank” observation sheet is used and must be retained as part of each animal’s permanent capture record.

Parameter	Frequency
Responsiveness/activity level	Throughout
Respiration rate	Upon capture, every 20 minutes
Heart rate*(by Doppler, ultrasound, or ECG)	Upon capture, every 20 minutes
Body temperature	Upon capture, every 20 minutes
Point-of-care analyzer* (for blood gases, electrolytes, glucose)	Upon capture, every 30 minutes

*Recommended if feasible, especially for capture intervals exceeding 1 hr, with initial blood sample taken as soon as possible after the turtle is boarded to facilitate comparison with later samples.

Below are general guidelines regarding alteration of these parameters that should trigger immediate assessment by the medical observer and PI or CI. Note that blood values are only intended for interpretation by an attending veterinarian:

Parameter	Trigger threshold
Responsiveness	Reduction in response to procedures or noxious stimuli
Respiration rate	Apnea for periods >2 min.
Heart rate	<20 bpm
Blood pH	<7.2 (temperature corrected)
Potassium	>6.8 mmol/l
Glucose	<60 mg/dl
Body temperature	Alteration of initial body temperature by >2°F or 1°C (or if temp exceeds 86°F/30°C)

The attending veterinarian should be prepared to render aid and resuscitation in the event of an emergency. If a veterinarian is not in attendance, members of the capture team must be trained by a veterinarian in basic resuscitation procedures, which may include endotracheal intubation, ventilatory support, and epinephrine administration.¹⁰ The level of training and expected level of intervention is determined by the designated project veterinarian based on the ability/aptitude of the capture team. Such intervention should follow a previously developed response plan that includes remote consultation with a veterinarian by phone and a written contingency protocol if communication is not possible.

¹⁰ Medical intervention must be compliant with pertinent veterinary practice regulations for the state in which captures are being conducted.

An emergency field kit should include:

- Means of ventilatory support (e.g., demand breathing valve, 2 L Ambu bag, oxygen cylinder)
 - Endotracheal tubes (non-cuffed 10, 12, 14, and 16; other sizes as appropriate)
 - Oral speculum and appropriate sized blade
 - Water-based lubricant
 - Disinfectants (e.g., betadine scrub, isopropyl alcohol)
 - Sterile gauze
 - Medical tape
 - Needles and syringes (size appropriate)
 - Epinephrine*
- *Additional medications (e.g., doxapram, lidocaine, sodium bicarbonate, furosemide, dexamethasone sodium phosphate, fluids) and equipment may be included at the discretion of the attending veterinarian.

Attachment 2: Requirements for Handling and Sampling Sea Turtles

Conditions have been included in the permit for research procedures that involve the handling and sampling of sea turtles. These conditions include requirements provided by a suite of expert veterinarians to minimize and mitigate potential impacts to the study animals. This information is being provided to help understand the permit requirements and standard veterinary protocols for sea turtles.

I. Permit requirements for antiseptic practices and research techniques

Measures required to minimize risk of infection and cross-contamination between individuals generally fall under the categories of clean, aseptic, and sterile techniques. Clean technique applies to noninvasive procedures that result in contact with skin or mucous membranes. Aseptic technique is used for brief, invasive procedures that result in any degree of internal contact, e.g. drawing blood. Sterile technique applies to longer invasive procedures, such as laparoscopy or surgery. Reusable instruments for procedures requiring aseptic or sterile technique should be sterilized by standard autoclave or cold sterilization procedures. Instruments that do not have internal contact, e.g. tagging pliers and PIT tag applicators, should be disinfected using a broadcidal solution and the product-recommended contact time between individuals.

Clean technique:

1. Routine hand washing or use of non-sterile disposable gloves.
2. Cleaning and disinfection of equipment between individuals.

Aseptic technique:

1. Disinfection of hands or use of new non-sterile disposable gloves (preferred)
2. Disinfection of the turtle's skin using a surgical scrub (e.g. betadine scrub or chlorhexidine gluconate)† followed by application of 70% alcohol (isopropyl or ethanol) (minimum requirement).*
3. Clean work area.
4. Use of sterile instruments or new disposable items (e.g. needles and punch biopsies) between individuals.

† Alcohol alone may be used in lieu of surgical scrub if necessary to avoid interference with research objectives, e.g. isotopic analysis.

* Multiple applications and scrubbing should be used to achieve thorough cleansing of the procedure site as necessary. A minimum of two alternating applications of surgical scrub and alcohol are to be used for PIT tag application sites and drilling into the carapace, due to potential increased risk of infection.

Sterile technique:

1. To be conducted in accordance with approved veterinary protocol that considers analgesia/anesthesia, use of antimicrobials, anticipated risks and response measures, and exclusionary criteria for animal candidacy.

2. Direct veterinary attendance
3. Disinfection of hands and use of sterile disposable gloves
4. Dedicated site (surgery room) or work area modified to reduce contamination
5. Surgical preparation of skin
6. Sterile instruments

Research Procedure	Required Technique
Handling, gastric lavage, and cloacal lavage	Clean technique
Tissue sampling (biopsy punch or comparable)	Aseptic technique
Blood sampling	Aseptic technique
PIT tagging	Aseptic technique; 2 applications of surgical scrub and alcohol
Flipper tagging	Aseptic technique
Carapace drilling for instrument attachment or bone biopsy	Aseptic technique; 2 applications of surgical scrub and alcohol
Bone biopsy (other than carapace)	Sterile
Laparoscopy (+/- biopsy)	Sterile
Large skin, muscle, fat biopsy, other tissue biopsy	Sterile

II. Minimum requirements for pain management and field techniques

Procedures used for sea turtle research include those anticipated to cause short term pain or distress, such as tagging, as well more invasive procedures where relatively longer periods of pain or discomfort may result. The minimum requirements below consider animal welfare and relative benefits and risks of different modes of pain management under field and laboratory conditions. Additional measures are encouraged whenever possible, including sedation or anesthesia for invasive procedures, e.g. laparoscopy, when release does not immediately follow the procedure and full recovery can be assessed. Any protocols that do not include the minimum requirements below, e.g., omission of a systemic analgesic, must be approved by a consulting veterinarian with due consideration of pain management.

Research Procedure	Minimum Requirement
Tissue sampling (biopsy punch or comparable)	None
Blood sampling	None
PIT tagging	Local anesthetic if <30 cm SCL
Flipper tagging	None
Carapace drilling for instrument attachment	Local ¹ and/or systemic analgesic
Bone biopsy (other than carapace)	Local anesthetic and systemic analgesic
Laparoscopy	Local anesthetic and systemic analgesic

Research Procedure	Minimum Requirement
Laparoscopy biopsy	Local anesthetic, sedation, and systemic analgesic
Large skin, muscle, fat biopsy, other tissue biopsy	Local anesthetic and systemic analgesic

¹Local anesthetic may be administered by immediate application to the wound following drilling (i.e., “splash block”).

Attachment 3: Standard Conditions for Netting in Manatee Habitat

Permittees engaged in netting activities in manatee habitat shall comply with the following conditions to protect manatees during project-related activities:

1. All project personnel shall be informed that manatees may be found in the project area and that there are civil and criminal penalties for harming, harassing, and/or killing manatees which are protected under the Federal Marine Mammal Protection Act, the Endangered Species Act, and other Federal, State, and Commonwealth laws and regulations.
2. Boat operators must avoid collisions with manatees through prudent seamanship and by adhering to Federal, State, and Commonwealth measures to prevent collisions with manatees, including Permit Conditions 3.(c) and 4.(a) below. In Florida, information about Federal and State manatee speed zones can be found at:

<http://myfwc.com/wildlifehabitats/managed/manatee/protection-zones/>

3. Project personnel shall take steps to avoid the accidental capture of manatees in nets and associated gear. These steps shall include:
 - a. Restricting netting activities to between one-half hour after sunrise and one-half hour before sunset.
 - b. Monitoring netting sites for at least 15 minutes before deploying gear to ensure that manatees are not in the action area. Manatees must be allowed to leave or pass through the area safely before setting any nets. Animals must not be herded away or harassed into leaving.
 - c. Having at least one experienced, dedicated observer watching for manatees during project-related activities and ensuring that all personnel are alert to the presence of manatees. Personnel should be encouraged to use sunglasses with polarized lenses to improve the likelihood of seeing manatees on and below the water's surface.
 - d. Monitoring nets and float lines constantly. Stopping all active netting, including vessel movements, when a manatee(s) comes within 100 feet of the action area. Activities may resume when the manatee(s) has moved 100 feet from the area or when it's been 30 minutes since the animal(s) was last seen.
 - e. Maintaining gear to minimize the likelihood of entangling manatees. Gear-related lines and ropes must be kept taut and free of kinks and knots. Stiff line or cable should be strung across the mouths of hoop and funnel nets at a perpendicular angle (to form an "X") to prevent manatees from entering these nets.
4. If a manatee is accidentally captured:
 - a. Immediately discontinue netting operations and turn off or idle boat motors.
 - b. Verify that the animal is entangled in your gear. Manatees occasionally appear in netting operations but are not entangled; they may also test or push against nets without entanglement.

- c. For manatees entangled in gear, these animals are under duress and are known to injure people and damage nets and other gear. Project personnel should exercise extreme caution when in the presence of captured animals.
- d. Monitor the manatee's breathing and behavior to assess its condition. Healthy animals surface to breathe about once every four minutes. Entangling nets, float lines, and other gear should be kept loose enough to allow animals to surface and breathe.
- e. If a manatee's breathing pattern or behavior suggests that the animal is unduly stressed, stop any activities causing or contributing to the animal's distress.
- f. All options for safely and expeditiously removing an animal from entangling gear shall be identified and considered. If it is determined that the animal can be removed without significant risk to human safety, detailed plans, including safety measures, shall be described to project personnel prior to rescuing the animal.
- g. When handling an entangled manatee, the animal's powerful tail should be avoided. Personnel handling entangling gear should avoid getting fingers, arms, legs, etc., caught in gear. Personal belongings that could entangle in gear (loose clothing, wrist watches, jewelry, etc.) should be removed prior to handling entangled animals and gear.
- h. In the case of animals that are not seriously entangled, plans should consider releasing tension on entangling gear to enable an animal to free itself. For more seriously entangled manatees, plans will likely include pulling, unwrapping, cutting, etc., entangling gear from the animal's head, trunk, tail, and/or flippers.
- i. If a manatee is entangled in a seine net, the best course of action is to stop and open the set, creating as large a window as possible for the manatee to swim out of. If the net set has been completed, one end of the net should be released and a window in the net circumference should be opened to allow the manatee to swim out.
- j. If in the opinion of project personnel the manatee cannot be rescued without significant risk to human safety, authorized stranding responders shall be contacted for assistance. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher shall be called for assistance. (See "To Report Accidental Manatee Captures" for contact information).
- k. In the event that stranding responders assist with a rescue, project personnel shall aid and support responders as directed to safely and expeditiously rescue the animal.
- l. All accidental manatee captures shall be reported immediately to State or Commonwealth wildlife officials. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher must be notified. Within 24 hours of an accidental manatee capture, captures must also be reported to manatee staff at the USFWS's North Florida Ecological Services Office, the local USFWS ecological services office (if different), and to the Chief of Permits, NMFS, Permits and Conservation Division. (See "To Report Accidental Manatee Captures" for contact information.)
- m. Within 30-days of an accidental capture, the permittee shall submit a written report to manatee staff at the USFWS's North Florida Ecological Services Office, the local USFWS ecological services office (if different), and to the Chief of Permits, NMFS, Permits and

Conservation Division describing the circumstances and gear that led to the capture of the manatee, the condition of the animal, steps taken to rescue the animal, and any recommendations to prevent and minimize any future entanglements.

5. In the event an accidental capture results in injury to or the death of a manatee:
 - a. Project activities must stop and State or Commonwealth wildlife officials must be contacted immediately. In Florida, the Florida Fish and Wildlife Conservation Commission's Wildlife Alert dispatcher must be notified. (See "To Report Accidental Manatee Captures" for contact information).
 - b. Authorized stranding responders shall be asked to provide aid to injured animals and, in the event of a death, to salvage the carcass.
 - c. Injured animals shall be treated by a licensed and experienced veterinarian or by experienced animal care staff working in consultation with a licensed and experienced veterinarian.
 - d. In the event of a death, a necropsy should be performed by a qualified veterinarian or by persons experienced in marine mammal necropsies to evaluate the cause of death. In Florida, manatee necropsies are conducted by the State's Marine Mammal Pathobiology Laboratory.
 - e. Within 24 hours of a manatee injury or death, the event must be reported to manatee staff at the USFWS's North Florida Ecological Services Office, the local USFWS ecological services office (if different), and to the Chief of Permits, NMFS, Permits and Conservation Division.
 - f. Within 30-days of an injury or death, the permittee shall submit a written report to the USFWS and NMFS describing the circumstances and gear that led to the injury or death of the manatee and the steps taken to rescue the animal. The report shall include information from attending responders, veterinarian(s) and/or staff and shall include descriptions of injuries and trauma, likely causes of injuries, trauma, or death, and any recommendations to minimize future injuries or death.
6. USFWS, in consultation with NMFS and other appropriate authorities (including State or Commonwealth officials) and individuals, will review all event-related information and will recommend to NMFS if, in USFWS' opinion, the project should be authorized to continue as permitted, continue with modifications necessary to prevent additional injuries or deaths from occurring, or if permit revocation procedures should be initiated.

To Report Accidental Manatee Captures, Including Injured and Dead Manatees

NMFS Permitting Office

Chief of Permits
National Marine Fisheries Service (NMFS), Permits and Conservation Division
PHONE: 301 427-8401

Florida Manatees

Florida Fish and Wildlife Conservation Commission, Wildlife Alert

PHONE: 888 404-3922

U.S Fish and Wildlife Service (USFWS), North Florida Ecological Services Office
PHONE: 904 731-3336 and FAX: 904 731-3045

U.S Fish and Wildlife Service (USFWS), Alabama Ecological Services Office
PHONE: 251 441-5181

U.S Fish and Wildlife Service (USFWS), Georgia Ecological Services Office
PHONE: 912 832-8739

U.S Fish and Wildlife Service (USFWS), Louisiana Ecological Services Office
PHONE: 337 291-3100

U.S Fish and Wildlife Service (USFWS), Mississippi Ecological Services Office
PHONE: 601 965-4900

U.S Fish and Wildlife Service (USFWS), North Carolina Ecological Services Office
PHONE: 919 856-4520

U.S Fish and Wildlife Service (USFWS), South Carolina Ecological Services Office
PHONE: 843 727-4707

Florida (Florida Fish and Wildlife Conservation Commission, Wildlife Alert)
PHONE: 888 404-3922

For Florida manatees outside of Florida, contact respective state wildlife officials:

Alabama (Dauphin Island Sea Lab's Manatee Sightings Network)
PHONE: 866 493-5803

Georgia (Georgia Department of Natural Resources)
PHONE: 800 TO SAVE ME (272-8363)

Louisiana (Louisiana Department of Wildlife and Fisheries)
PHONE: 800 256-2749

Mississippi (Mississippi Department of Wildlife, Fisheries, and Parks)
PHONE: 800 BE SMART (237-6278)

North Carolina (North Carolina Wildlife Resources Commission)
PHONE: 800 662-7137

South Carolina (South Carolina Department of Natural Resources)
PHONE: 800 922-5431

Antillean Manatees in Puerto Rico

U.S Fish and Wildlife Service (USFWS), Caribbean Ecological Services Field Office
PHONE: 787 851-7297 and FAX: 787 851-7440

Puerto Rico (Centro de Mando del Cuerpo de Vigilantes)
PHONE: 787 724-5700