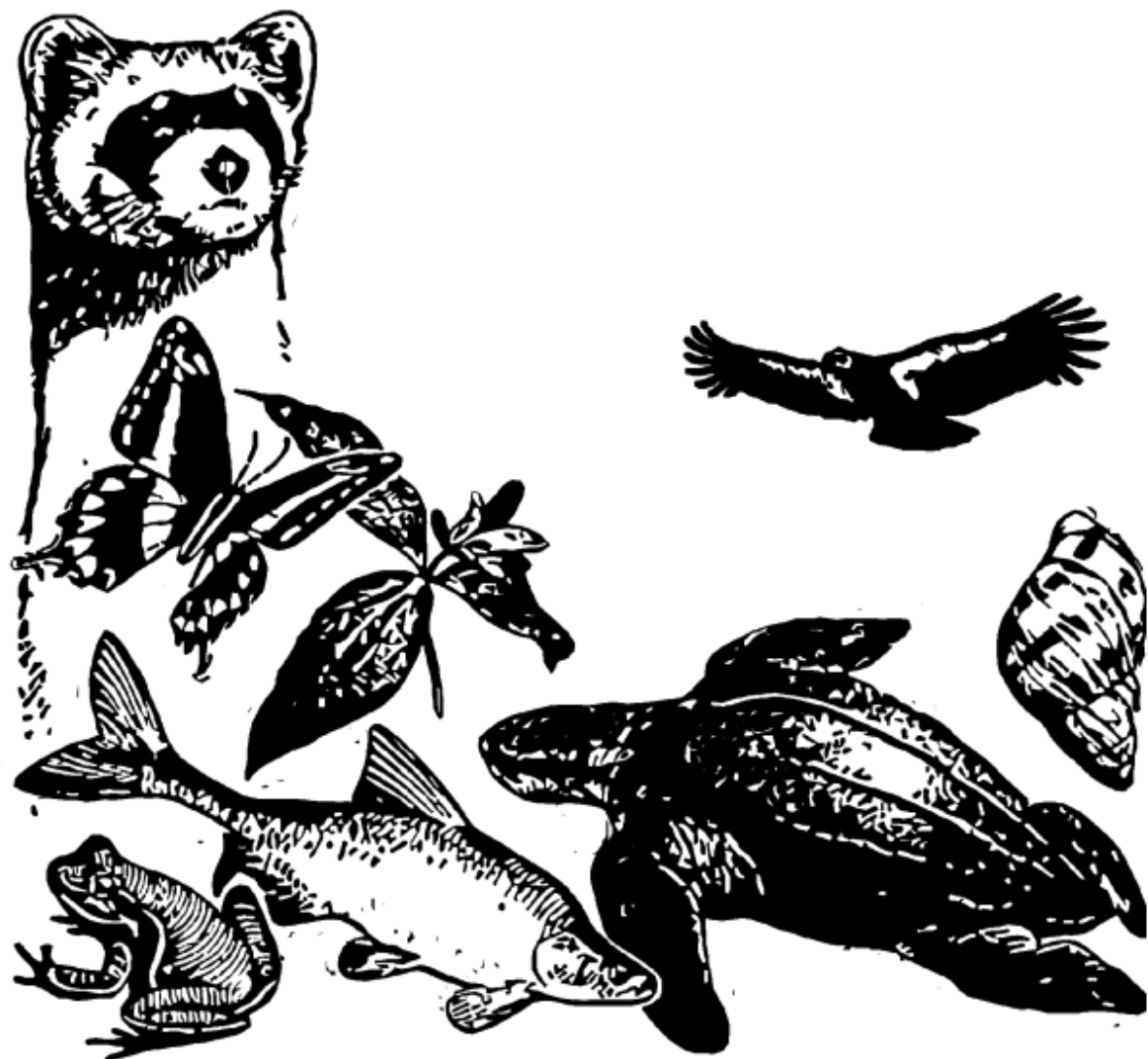


Caribbean Manatee Conservation Measures

West Indian Manatee

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U.S. FISH & WILDLIFE SERVICE
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE
JULY 2023

TECHNICAL ASSISTANCE TO EVALUATE EFFECTS ON ANTILLEAN MANATEES

The Service considers shallow coastal areas, bays, estuaries, river mouths and mangrove lagoon ecosystems as important for the conservation of the Antillean manatee because these areas contain all the natural elements preferred by manatees: abundant sea grass relatively calm waters, sheltered spots, and freshwater sources, as well as a relatively low number of boats within the bay. Actions proposed for these areas should be carefully examined, to ensure that elements required by this species are not compromised.

To evaluate the potential effect of proposed action on manatees, we need the applicants to address the following issues:

1. Type and amount of watercraft associated to the project.
2. Amount of boat facilities (e.g. ramps, piers, dry-stacks, buoys, among others).
3. Amount of habitat to be affected (e.g. acres of sea grasses and/or mangroves) and water depths for the entire footprint.
4. Provisions / restrictions to be taken to prevent collisions with manatees (e.g. delineation of an entrance channel, marking buoys, navigation aids, among others).
5. Outreach efforts to be implemented concerning boat operation. One of the main components of a successful operation of facilities that implement mechanisms to safeguard threatened and endangered species is a comprehensive outreach program that clearly indicates to the public 1) the actions that the facility is undertaking to protect such species (including assurances on the implementation of protection measures), and 2) the activities that the public should take to minimize or prevent impacts to sensitive species and their habitats. Guidelines for safe operation of watercrafts should be included as part of the outreach/education component of the proposed project (example attached below).
6. Any other site-specific conservation measure applicable for the project.

EXAMPLE OF CONSERVATION MEASURES FOR IN-WATER PROJECTS (INCLUDING DREDGING ACTIVITIES)

The following manatee conservation measures are recommended:

1. The contractor instructs all personnel associated with construction of the facility of the presence of manatees and the need to avoid collisions with manatees.
2. All construction personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Endangered Species Act of 1973 and the Marine Mammal Protection Act of 1972. The permit holder and/or contractor will be held responsible for any manatee harmed, harassed, or killed as a result of construction of the project.

3. The project work area shall be surveyed for the presence of manatees at least one hour before any dredging starts and prior to the installation of the silt fence. If manatees are found before any in-water project activity starts, the contractor shall wait for the manatee to leave the area by itself and be at least 100 feet from the project in-water area. Manatees must not be herded or harassed into leaving the area.
4. Siltation barriers will be made of material in which manatee cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project construction will operate at “no-wake/idle” speed at all times while in water within manatee areas and vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards (300 feet) of the in-water work area, all appropriate precautions shall be implemented to ensure protection of the manatees. These precautions shall include operating all equipment in such a manner that moving equipment does not come any closer than 50 to 100 feet of any manatee. If a manatee is within 50 feet of in-water work, all in-water activities must shut down, until manatee moves on its own at least 100 feet away from the in-water work area. Manatees must not be herded or harassed into leaving the area.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Department of Natural and Environmental Resources Law Enforcement (787-724-5700 or 787-771-1124), the USFWS Caribbean Ecological Services Field Office (786-244-0081), or the Caribbean Manatee Conservation Center (787-400-2782 [AQUA]).
8. The contractor shall keep a log detailing sightings, collisions, or injury to manatees, which have occurred during the contract period. Following project completion, a report summarizing the above incidents and sightings will be submitted to the U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office, P.O. Box 491, Boquerón, Puerto Rico 00622.
9. The permit holder and/or contractor shall install and maintain temporary and permanent manatee signs as recommended by the following guidelines:
 - a. Signs must be placed in a prominent location for maximum visibility. Areas that are recommended include: dock walkways, dock master offices, near restrooms or other high patron foot traffic areas.
 - b. Signs must be replaced when faded, damaged or outdated.
 - c. If the facility is large or has multiple docks with separate walkways that are a considerable distance apart, multiple signs should be installed.
 - d. These signs must not face the water, must never be attached to pilings or navigational markers in the water. Some exceptions to signs facing the water exist for temporary signs during in-water work.
 - e. For durability, all signs should be fiberglass, PVC or metal with rounded corners (hand-sanded to remove all sharp edges and burrs), constructed of 0.08 Gauge 5052-H38 Aluminum with an Alodine 1200 conversion coating and Engineer Grade Type I reflective sheeting. Signs constructed to other specifications may not provide durability acceptable to the consumer.
 - f. Signs other than depicted may be considered, but should be approved by USFWS.

PRECAUCIÓN: HÁBITAT DE MANATÍ
CAUTION: MANATEE HABITAT

Toda embarcación
VELOCIDAD MÁXIMA 5MPH
All project vessels IDLE SPEED/NO WAKE

Si observa un manatí a 50 pies o menos del área de trabajo, toda actividad en el agua debe

DETENERSE

When a manatee is within 50 feet of work all in-water activities must **SHUT DOWN**

Informe cualquier accidente con un manatí.
Report any collision with or injury to a manatee.



Vigilantes DRNA
(787) 724-5700

Manatee Conservation Center
(787) 400-AQUA(2782)

This **temporary** bilingual sign is required as part of the standard manatee construction conditions and is intended to be placed near dredge, tugboat and work boat operators. Minimum size should be at least 8½" inches tall by 11" inches wide, and besides the above recommendation, the sign may be in laminated paper. This sign shall be installed or distributed prior to the initiation of construction. Temporary signs will be removed by the permit holder upon completion of construction.

To obtain a ready to print copy of this sign, please contact Jan P. Zegarra from the USFWS Caribbean Ecological Services Field Office at jan_zegarra@fws.gov.

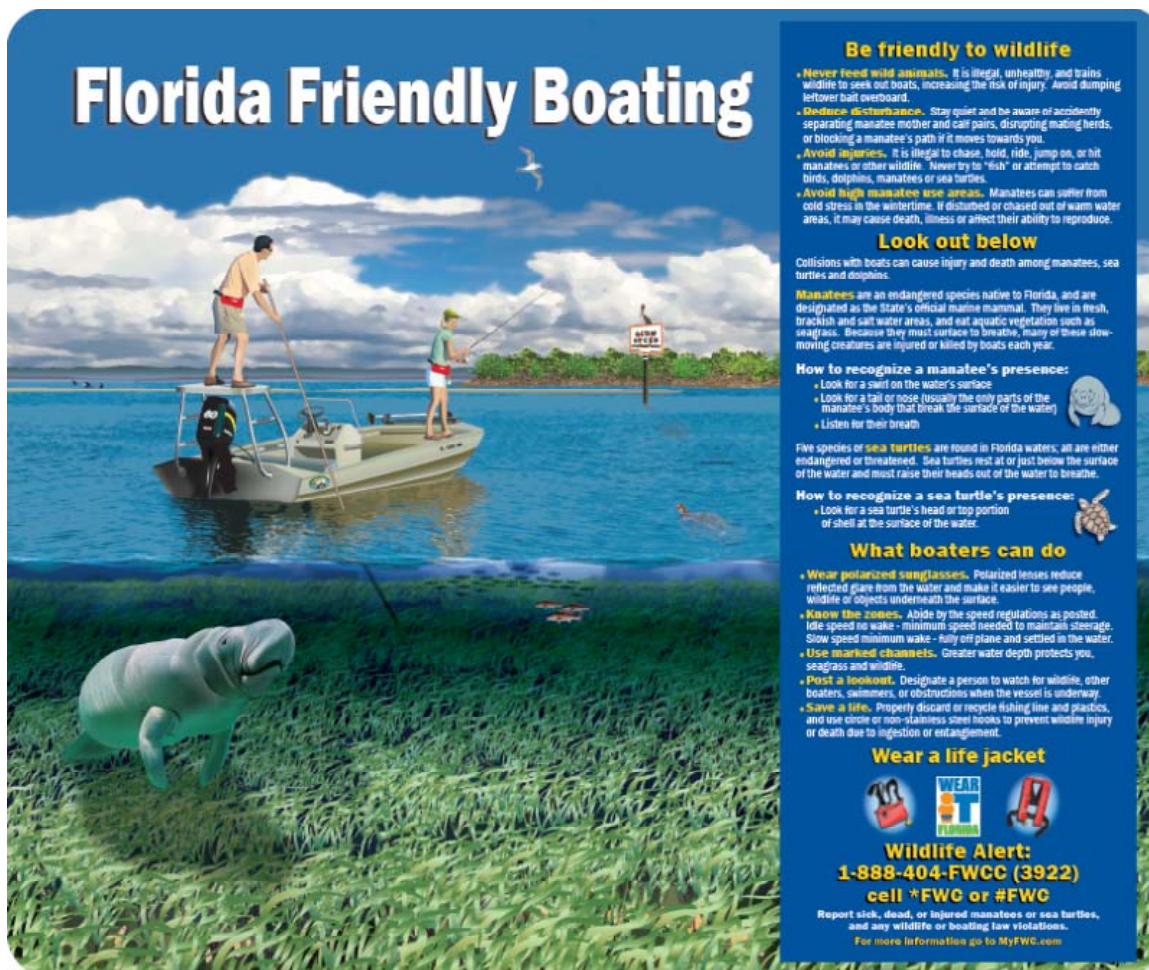


This **permanent** bilingual sign is required as part of the standard manatee construction conditions and is intended to be placed within docking and launching facilities. Minimum size should be at least 30" inches tall by 24" inches wide with rounded corners. This sign shall be installed prior, during or after project construction. This permanent sign may not be required for coastal projects that **do not** have docking and/or launching facilities.

To obtain a ready to print copy of this sign, please contact Jan P. Zegarra from the USFWS Caribbean Ecological Services Field Office at jan_zegarra@fws.gov.

10. A permanent bilingual manatee educational sign should be installed and maintained prior to mooring occupancy at a prominent location to increase the awareness of boaters using the facility of boats to these animals. The numbers of educational signs that may be installed will depend on the docking facility design. One manatee educational sign is recommended at each boat ramp or travel lift (if applicable). Manatee educational signs remain the responsibility of the owner(s) and the Service recommends the signs be maintained for the life of the docking facility in a manner acceptable to the Corps of Engineers.

EXAMPLE MANATEE EDUCATIONAL SIGN



This **permanent** educational sign should have a minimum size of at least 30" inches tall by 36" inches wide with rounded corners.

11. A notarized verification letter stating that permanent signs have been installed at designated locations shall be forwarded to the Corps of Engineers, Antilles Regulatory Section, as soon as they are installed. Signs and pilings remain the responsibility of the owner(s) and are to be maintained for the life of the docking and launching facility in a manner acceptable to the Corps of Engineers.
12. Signs other than depicted above may be considered, but should be approved by USFWS. Signs shall have at least the following minimal recommend information:

- a. Temporary bilingual signs:

PRECAUCIÓN
MANATÍES EN EL ÁREA
Mantenga velocidad de 5 mph dentro del área de construcción
Informe cualquier incidente con un manatí
Vigilantes DRNA 787-724-5700 / 787-771-1124

CAUTION
MANATEES IN THE AREA
Maintain idle speed/no wake (5 mph) within construction site
Report any collisions with or injury to a manatee

- b. Permanent bilingual signs:

PRECAUCIÓN
MANATÍES EN EL ÁREA
Velocidad máxima 5 mph
Informe cualquier incidente con un manatí
Vigilantes DRNA 787-724-5700 / 787-771-1124

CAUTION
MANATEES IN THE AREA
Idle speed/No wake (5 mph) zone
Report collisions, sick, dead or injured manatees

- c. Permanent bilingual educational sign and some of the of the recommended information it should include:

GUÍA PARA LA PROTECCIÓN Y CONSERVACIÓN DEL MANATÍ
(MANATEE PROTECTION AND CONSERVATION GUIDELINES)

1. Utilice gafas polarizadas mientras navega. Éstas ayudan a detectar mejor al manatí, las áreas llanas y cualquier obstáculo en el mar. (*Use polarized sunglasses while navigating. These help to detect any manatee, shallow waters and any other obstacle in the water.*)
2. Si usted ve un manatí en la trayectoria de su embarcación, reduzca la velocidad a 5 mph y conduzca la embarcación fuera del paso del manatí o espere a que el manatí salga del área poniendo su embarcación en neutro. (*If you see a manatee within the*

path of your vessel, reduce the velocity to 5 mph and turn your vessel away from the manatee's path or wait until the manatee has moved from the area by putting your vessel in neutral.)

3. Luego de asegurarse de que el manatí esté fuera de la trayectoria de su embarcación, continúe navegando despacio (no más de 5 mph) hasta que su embarcación se encuentre a no menos de 50 pies (15 metros) del manatí. *(After you are certain that the manatee is well outside of the path of your vessel, resume navigation slowly (not more than 5 mph) until your vessel is not less than 50 feet (15 meters) away from the manatee.)*
4. Obedezca las zonas con límites de velocidad y reduzca la velocidad en aguas llanas menores a 10 pies de profundidad en particular cerca de la costa, en las desembocaduras de ríos, en praderas de hierbas marinas y manglares. *(Obey regulatory speed zones and reduce velocity in shallow waters less than 10 feet, particularly close to the coast, in river mouths, in sea grass beds and mangroves.)*
5. Si observa un manatí mientras usted está en el agua, obsérvelo pasivamente, no lo persiga, acose o lo toque. *(If you observe a manatee while in the water, passively observe it, do not follow it, nor harass or touch.)*
6. No tire basura al agua. El manatí puede ingerirla o enredarse en ella, lo cual podría causarle heridas o la muerte. *(Do not throw trash in the water. Manatees may ingest or entangle on trash, which may injure or kill it.)*
7. Nunca alimente o le ofrezca agua a un manatí. Es ilegal y los malacostumbra a acercarse a lugares donde pueden ser lastimados. *(Never feed or give water to a manatee. It is illegal and will wrongly habituate them to approach areas where they can be injured.)*

Informe accidentes con un manatí inmediatamente. Si encuentra un bebé manatí solo, en peligro, herido o muerto, llame al Cuerpo de Vigilantes del Departamento de Recursos Naturales y Ambientales al 787-724-5700 o 787-771-1124. *(Inform any accident with a manatee immediately. If you find a baby manatee alone, in danger, injured or dead, call the Department of Natural and Environmental Resources Law Enforcement of at 787-724-5700 or 787-771-1124).*

Herir o matar un manatí puede conllevar multas de más de \$50,000 y/o no menos de dos años de cárcel.
(Harming or killing a manatee could carry fines of more than \$50,000 and/or not less than two years in prison.)

GRACIAS POR AYUDAR A SALVAR LOS MANATÍES
THANKS FOR HELPING SAVE THE MANATEES



**U.S. FISH AND WILDLIFE SERVICE
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE**

Conservation Measures for the Antillean manatee (*Trichechus manatus manatus*) for marine events.

Section 7 (a)(1) of the Endangered Species Act (ESA) charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a manatee is subject to penalties under Federal law. If federal funds or permits are needed, the funding or permitting agency shall initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species. Download the [project evaluations fact sheet](#) to learn more about the requirements or visit our [project evaluations webpage](#).

The U.S. Fish and Wildlife Service (USFWS) considers shallow coastal areas, bays, estuaries, river mouths and mangrove lagoon ecosystems as important for the conservation of the Antillean manatee because these areas contain the three key ecological attributes necessary for species' long-term survival: sea grass, freshwater for drinking, calm and shallow waters. Not all of these resources need to be present in order for manatees to use any particular area. The Antillean manatee in U.S. Caribbean, including Vieques, Culebra, and occasionally the U.S. Virgin Islands, are thought to spend the majority of their time in shallow waters less than 20 feet deep and regularly moving into deeper waters when moving between local sites and resources. Actions proposed for these areas should be carefully evaluated to ensure that manatees and their habitat are not affected, especially by the improper use of watercrafts within manatee habitat.

To evaluate the potential effects of any proposed marine event on manatees and its habitat, the Applicant needs to provide the following information:

- Describe the type and amount of watercraft associated to the marine event.
- Provide a map of the entire marine event course with the water depths in that area.
- Describe all types and amount of in-water markers (e.g., buoys) that will be used for the marine event.

For most high speed and high-risk events, we recommend aerial surveys (i.e., helicopter) to spot manatees in the water and track their movements. However, alternatives to aerial surveys may be considered when the Applicant justifies why they are not using aerial surveys and submit an

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alternate dedicated manatee observer plan (watch team) designed specifically for each marine event.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the Antillean manatee and its habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional recommendations can be provided.

1. Marine events must be coordinated with the U.S. Coast Guard (USCG), the National Oceanic and Atmospheric Administration (NOAA), Puerto Rico Department of Natural and Environmental Resources (PRDNER), and the U.S. Virgin Islands Department of Planning and Natural Resources (VIDPNR), if events are conducted in U.S. Virgin Islands
2. Do not plan marine events in areas shallower than 10 feet.
3. For marine events that take place at night, all watercraft should proceed at a safe speed (5 mph), in order to avoid striking any protected species.
4. All marine event personnel and participants should be informed of the possible presence of manatees in the marine event area, and the need to avoid any collision with them. A manatee awareness meeting should be held before the event. All marine event personnel and participants should be advised that there are civil and criminal penalties established by the Federal government for harming, harassing, or killing a manatee. Be aware, that the permit holder and/or contractor for the event may be held responsible for any manatee harmed, harassed, or killed as a result of the marine event if permit conditions are not followed.
5. The event area must be continuously monitored for manatees before (at least 30 to 60 minutes) and during the event to detect manatees that may approach or enter the event area by qualified manatee observers. The qualified manatee observers (watch team) should be provided with proper communication equipment (e.g., two-way radios) to allow them to stay in close communication with each other as well as with the event officials while conducting monitoring. Manatee observers should also employ the use of flags for warning or stopping an event. If communication is interrupted during an event, the race will stop until communication is restored.
 - **Note:** There is no agency observer or training program. Observers may be considered qualified based on their experience. Permit holder and/or contractor are responsible for keeping track of each observer's qualifications and experience.
6. Manatee observers should be designated exclusively for that purpose and no other. An appropriate amount of manatee observers (watch team) should be designated to cover the entire area of the marine event. The position of each observer within the marine event area or on land must also be recorded. A watch team should include a team coordinator, multiple observers at an elevated position on boats and/or land, and/or an observer in a plane or helicopter. All observers should use polarized sunglasses in order to reduce glare and enhance observations.

7. Manatee observers will be in close communication with race officials in order to stop the event if a manatee is observed within the boundaries of the event or upon the request of any observer. If a manatee is sighted within 500 feet of the perimeter of the event boundaries, the observer will immediately notify the event official to alert them that the event may need to be halted. The event official will notify the participants that extreme caution needs to be taken since there is an animal in the vicinity. The event must be stopped immediately upon request of the manatee observer. The event should not resume until the animal has moved away from the area on its own. Manatees must not be herded or harassed to leave the event area. If the observer loses sight of a manatee observed in or near the event area, the event will not resume for at least 30 minutes following the initial sighting, provided that the manatee is not observed again.
8. All participating vessels will travel to and from the event course under the direct supervision of event officials and at idle speed, or the slowest possible navigable speed, until arriving at the course.
9. All participants and official boats should adhere to speed zones adjacent to the event site.
10. A final manatee observer report should be submitted to the USFWS (refer to contact emails below) within 30 days of the event, including a copy of the final USCG permit. Any manatee injury or deaths should be reported immediately:
 - PRDNER: (787) 724-5700, (787) 230-5550, (787) 771-1124
 - USFWS: (786) 244-0081
 - Puerto Rico Manatee Conservation Center: (787) 400-2782, (787) 279-1912 ext. 2070
11. No marine event watercrafts, including spectators, should anchor on or above seagrass and coral reefs.
12. If any of the above recommendation is not met prior to or during the event, the event should be immediately terminated.
13. All marine events should also avoid potential effects on sea turtle nests or sea turtles in the water. Be aware these recommendations are for manatees only, sea turtles in the water or other marine mammals are under the purview of NOAA, thus consultation with them should be initiated as well.

If you have any questions regarding the above conservation measures, please contact the Service:

- José Cruz-Burgos, Endangered Species Coordinator
 - Email: jose_cruz-burgos@fws.gov
 - Office phone (305) 304-1386
- Jan Zegarra, Fish and Wildlife Biologist
 - Email: jan_zegarra@fws.gov
 - Office phone (786) 933-1451