



# MARINE MAMMAL COMMISSION

2 May 2013

Mr. Timothy J. Van Norman  
Chief, Branch of Permits  
Division of Management Authority  
Fish and Wildlife Service  
4401 North Fairfax Drive  
Arlington, VA 22203

Re: Permit Application No. MA-773494  
(Florida Fish and Wildlife  
Conservation Commission)

Dear Mr. Van Norman:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act. The Florida Fish and Wildlife Conservation Commission (FFWCC) is requesting authorization to conduct research on West Indian manatees in the southeastern United States during a five-year period. The proposed activities currently are authorized under the same permit number, which the applicant is seeking to renew.

## **RECOMMENDATION**

The Marine Mammal Commission recommends that the Fish and Wildlife Service issue the permit, as requested.

## **RATIONALE**

FFWCC proposes to conduct research on manatees year-round in the southeastern United States. The proposed research would continue long-term studies of (1) population size and structure, (2) range, movement patterns, and habitat use, (3) life history parameters and reproduction, (4) genetics, (5) foraging ecology, (6) health and disease, and (7) impacts of humans on manatees and their habitat.

FFWCC seeks authorization to harass, capture, handle, restrain, measure, weigh, sample, conduct ultrasound on, mark, and attach instruments to up to 60 wild and 30 rehabilitated manatees per year. Individuals could be from either sex and any age class. Researchers would capture animals in nets and transport them to shore or to a boat. They would hold the manatees for no more than one hour and would collect morphometric data, skin, blood, milk, urine, feces, tissue scrapings, swabs, body temperature, and pulse oximetry readings from each manatee. Each captured manatee would be marked with two passive integrated transponders (PIT tags), and a subset would be freeze-branded with two brands. Individuals could be captured and handled up to 12 times per year, but FFWCC anticipates that the proposed frequency of activities would be needed during monthly health assessment—likely only during assessments conducted in response to unusual mortality

events such as the current UME on the east coast of Florida. They would harass 300 manatees per year incidental to the proposed activities.

Researchers would attach a tag assembly to those same manatees using a peduncle belt with a flexible nylon tether. The positively-buoyant tag assembly could include VHF, UHF, or GPS transmitters, time-depth-temperature recorders, temperature-salinity data loggers, red tide passive sampling devices, bioacoustic probes, digital acoustic recording tags and platform transmitter terminal tags. The tags would comprise less than 2 percent of the manatee's body mass and up to two tags could be attached at any given time. Those assemblies are fabricated with a built-in safety device that allows for detachment if the animal gets entangled in nets, and the assemblies also include a corrodible metal attachment that is designed for release at the end of the pertinent study. Researchers would not tag dependent calves but could tag females with those calves. Special care would be given when handling female-calf pairs. Each individual could be retagged up to 12 times per year. Again, if necessary, that type of repeat activity generally would occur during monthly health assessments. Researchers would swim to within 1.5 m of the animals as quietly as possible to change the tether, remove the tags, and/or attach new tags. If a manatee exhibits a startle response, attempts to remove the belt or tag would be terminated. Currently, manatees are instrumented for approximately six months; however, they have been instrumented for up to two years in previous long-term research studies conducted by FFWCC.

For their mark-recapture study, researchers also would collect skin samples using a needle biopsy attached to an extended pole from up to 1,600 unrestrained, free-ranging manatees per year and could harass up to 3,600 manatees per year incidental to those activities. Individuals of either sex and any age class could be harassed up to 10 times per year to obtain the required sample size for population modeling. Generally, they would not sample calves estimated to be less than one-year of age. They also would mark with a make-up stick up to 100 individuals up to 12 times per year and read PIT tags using a PIT tag reader attached to a pole for up to 100 individuals up to 12 times per year. They would obtain skin samples and read the PIT tags when a manatee approaches to within 3 m of the researchers (on land or in a vessel). If the animals exhibit evasive behavior (e.g., moving away from the researchers, increasing swim speed, or increasing fluke strokes and splashing), researchers would cease activities and attempt sampling on a different day. Researchers would take extra precautions to not separate female-calf pairs and would cease any activities that cause avoidance behavior.

FFWCC also seeks authorization to harass, observe, photograph, and videotape 1,500 manatees per year during vessel-based surveys, tracking activities, hydrographic characterization surveys, and the tag exchange activities previously described. They could harass individuals of either sex or age class up to 30 times per year. Researchers would use a 6.4-m vessel to approach manatees at a distance no less than 3 m to obtain good quality images and assess body condition. They would turn off the engines and drift towards the stationary animals and would troll or paddle towards traveling animals. Up to two snorkelers also would enter the water and approach the animals at a distance no closer than 3 m to obtain underwater images. Boat tracking and snorkeling activities would be kept to a minimum around free-ranging manatees. FFWCC also would avoid easily disturbed individual manatees during underwater photography sessions. These activities could occur for up to one hour.

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Researchers also would conduct up to three statewide aerial surveys per year, multiple county-specific aerial surveys per month, and opportunistic aerial surveys to locate manatees for capture activities. Those activities could harass virtually the entire manatee population up to 10 times per year. They would use either fixed-wing aircraft or helicopters to approach manatees generally at altitudes of 228 m but no less than 152 m to collect the relevant data and obtain good quality images. In addition, FFWCC could use unmanned aerial vehicles flown at altitudes of no less than 48 m for aerial surveys.

To assess manatee feeding ecology, researchers would install seagrass enclosures in a stratified-random manner during winter near warm-water refuges. Numerous seagrass parameters would be measured before and after the winter months and at both control and test sites. Installing and removing the enclosures at the end of the study could result in the harassment of up to 500 manatees during those activities. Film crews also could accompany the researchers during any of the proposed activities.

Finally, FFWCC could import samples collected legally from the Antillean manatee, Amazonian manatee, West African manatee, and dugong worldwide. The samples could include blood, urine, feces, milk, bone, teeth, skin, muscle, blubber, and organs. Any sample also may be exported. FFWCC is requesting up to two unintentional mortalities of manatees during the five-year period. If any animal is unintentionally killed, researchers would conduct a necropsy to determine cause of death and would consult with the Service.

The Marine Mammal Commission believes that this work is necessary to understand various aspects of manatee biology and ecology and therefore recommends that the Fish and Wildlife Service issue the permit, as requested.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act.

Please contact me if you have any questions concerning the Commission's recommendation.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Timothy J. Ragen, Ph.D.  
Executive Director