

Marine Mammal Commission
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

21 April 2008

Ms. Noreen Walsh
Assistant Regional Director
Southeast Regional Office
U.S. Fish and Wildlife Service
1875 Century Building, Suite 400
Atlanta, Georgia 30345

Mr. Kenneth D. Haddad
Executive Director
Florida Fish and Wildlife Conservation Commission
Farris Bryant Building
620 South Meridian Street
Tallahassee, FL 32399-1600

Dear Ms. Walsh and Mr. Haddad:

In the near future, rising fuel and maintenance costs, the availability of new technology for generating electricity, and other factors could cause electric utilities in Florida to retire aging power plants or alter their operating schedules. Permanent or periodic shutdowns of these plants could cause the deaths of large numbers of manatees that depend on warm-water outfalls at power plants to survive the winter. Available information suggests that perhaps half of all manatees now use power-plant outfalls during the coldest winter periods. The Fish and Wildlife Service established a Warm-Water Task Force to address this risk, and the Task Force recommended an assessment of the feasibility of creating temporary refuges to replace outfalls that disappear when power plants are closed.

The Florida Solar Energy Center, Reliant Energy, and the Marine Mammal Commission have developed a conceptual design and cost estimate for a temporary warm-water refuge at the Reliant Energy power plant in Brevard County, Florida. The concept is described in the enclosed report. If successful, such refuges could serve as an interim measure to maintain animals until natural springs, passive thermal basins, or other warm-water habitats can be restored, enhanced, or otherwise made available. Given the absence of other effective measures, the time it will take to build and test the concept, and the possibility that power plants could be closed in the near future with little warning, we believe testing of such a facility is a matter of urgency.

RECOMMENDATIONS

Therefore, the Marine Mammal Commission recommends that the Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission—

- work with the Florida electric utility industry to establish a fund to support research and management actions needed to prevent the deaths of large numbers of manatees from power plant closures or changes in operating schedules; and
- consult with representatives of Reliant Energy to address and resolve issues (e.g., project funding, obtaining permits, hiring a firm to develop final construction plans, facility ownership, and maintenance and operating responsibilities) so that construction and testing of a refuge facility can occur at the earliest possible date.

RATIONALE

Statewide synoptic manatee surveys in the past 10 years indicate that about 50 percent of all Florida manatees and 70 percent of those along the Atlantic Coast rely on power-plant outfalls to survive the coldest winter weather. Counts of at least 50 manatees have been made at 11 outfalls. More than 100 manatees have been counted at eight sites, and more than 500 have been counted at one site. These animals exhibit a high degree of site fidelity to particular warm-water sites. Manatee behavior at one site that was closed in the winter of 1997–1998 suggests that animals will remain at those sites even if doing so leads to their death. Thus, the closure of certain power plants could lead to a large number of manatee deaths.

All plants now being used by Florida manatees are more than 35 years old. Most are also past their planned operating lives. Although two plants have been repowered to use natural gas, thus extending their operating lives, the others are old oil-burning plants that could be closed in the near future due to rising fuel and maintenance costs, concerns about air emissions, the availability of more efficient electricity-generating technology, and the high cost of upgrading equipment. Regulations adopted since older plants were built prohibit comparable thermal discharges from new plants. Thus, existing outfalls used by manatees will not be replaced by outfalls from new plants, and the consequences are likely to be significant. Among other things, the elimination of outfalls now used by large numbers of manatees could—

- (1) significantly reduce the number of Florida manatees and give rise to the need for more stringent restrictions to protect remaining animals from other threats, such as watercraft;
- (2) displace manatees to refuges farther south and concentrate more animals at refuges in major population centers, such as Miami and Fort Lauderdale, where those more onerous restrictions will not be well received by local residents;
- (3) cause depletion of food resources at refuges where large numbers of remaining and displaced manatees overwinter, which in turn could affect manatee health and reproduction; and
- (4) generally undermine past progress toward recovery, making removal from state or federal endangered species lists more difficult.

We believe that steps must be taken now to ensure that plant closures do not result in sudden large-scale declines in manatee numbers.

Possible alternative actions identified by the Task Force include (a) gradually restricting manatee access to plant outfalls in hopes that the animals will move to other sites, and (b) rescuing and translocating distressed animals when a plant closes. Both options carry a sizable risk that large numbers of animals will die, and neither inspires confidence as a long-term solution. Steps should be taken to enhance manatee access to natural springs (e.g., by dredging shallow, silted-in spring runs and by removing dams) and to create new passive thermal basins, but such measures will take years to implement, and an interim solution is essential.

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Preventing this impending crisis will require immediate action that is deliberate and well-considered, but also swift and decisive. To provide the necessary funding for such activities, the Marine Mammal Commission recommends that the Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission work with the Florida electric utility industry to develop a fund to support the research and management needed to prevent the deaths of large numbers of manatees due to power plant closures and ensure that adequate alternative habitat is available. One option for creating and sustaining such a fund is to work with Florida's electric utility industry to develop a request to the Florida Public Service Commission for adding one to three cents a month to electric utility bills, with the proceeds to be used for developing and implementing both interim and long-term solutions to this dilemma.

Artificial warm-water refuges may be the most effective (and cost-effective) interim solution, but clearly the construction and testing of such refuges will take time. The study described in the enclosed report provides the conceptual framework for moving forward. Based on a detailed engineering assessment of labor and materials needed to construct the enclosure and install the associated pipes, pumps, and boiler, the estimated cost of the test facility is about \$1.5 million. The costs of a geologic survey to analyze sediment conditions for pile driving, preparing final construction plans, construction management, and obtaining necessary permits were not estimated and would be additional. We understand that Reliant Energy is willing to allow use of its property for installing the heating system at no cost. To move ahead with a prototype refuge, the Marine Mammal Commission recommends that the Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission consult with representatives of Reliant Energy to address and resolve such issues as project funding, obtaining permits, hiring a firm to develop final construction plans, facility ownership, and maintenance and operating responsibilities so that construction and testing of a refuge facility can occur at the earliest possible date.

The Commission would be glad to provide any assistance it can with this issue. Please contact me if you or your staff has questions concerning these recommendations or the enclosed report.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Enclosure

Cc: Mr. Bill Baker, Reliant Energy