

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

23 May 2008

Mr. Sam D. Hamilton
Regional Director
U.S. Fish and Wildlife Service
1875 Century Blvd., Suite 400
Atlanta, GA 30345

Dear Mr. Hamilton:

On 19 November 2007 the Fish and Wildlife Service provided to the Army Corps of Engineers an amended biological opinion pursuant to section 7 of the Endangered Species Act on a marina project proposed by Leeward Yacht Club, LLC (Corps of Engineers application number SAJ-2005-1214 [IP-CDC]). The project would occur along the Orange River near the Fort Myers power plant in Lee County, Florida. The 1.5-mile stretch of the Orange River between the power plant and its confluence with the Caloosahatchee River—the area in which the proposed project would be sited—is one of the most heavily used warm-water refuges for manatees in Florida. Such refuges are essential for the species' survival in winter.

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the amended opinion and believes that its analyses are incomplete and therefore inadequate. The opinion does not consider all available information on manatee use of the area that would be affected by this project or the area's importance as winter manatee habitat. Neither does it adequately assess the potential effects of the project on vessel traffic and manatees. Because the analysis is incomplete, we do not believe that the Service's conclusion that the proposed project is unlikely to affect manatees or their critical habitat is justified. Indeed, as discussed below, it appears to us that approval of this project would be inappropriate. To address these concerns, the Marine Mammal Commission recommends that the Fish and Wildlife Service reinitiate section 7 consultations on the proposed project with the Army Corps of Engineers and more thoroughly assess the available information on manatee habitat use, vessel traffic, and the potential impact on manatees and their habitat.

RATIONALE

Inadequate Assessment of Available Information on Manatee Use in the Project Area

The status of manatees in the project area is assessed on pages 25–26 of the opinion. The opinion indicates that telemetry and aerial survey data were reviewed, but it does not provide a thorough analysis of the history or extent of manatee occurrence in the project area based on that available data. The Orange River, including the proposed project site, is used by manatees principally as a warm-water refuge in winter. Warmed by thermal discharges from the Fort Myers power plant, waters in the Orange River downstream of the plant—including those at the proposed project site—constitute one of the few areas in Florida regularly used by 100 to 200 or more manatees during cold winter weather when water temperatures throughout Florida typically fall below 20° C. Aerial surveys funded by the Florida Power & Light Company have been conducted during cold winter periods at the Fort Myers power plant and on Orange River every year since the late 1970s (see, for

example, Rose and McCutcheon 1980, McGehee 1982, and Reynolds 1983–2007). The opinion, however, does not cite any of those surveys or analyze the resulting data from them.

With regard to the winter occurrence of manatees in the project area, the opinion states only that 234 manatees were reported “in the Orange River” in February 2004, that 1,979 manatees were counted between 2001 and 2006 “at the Fort Myers power plant,” and that as many as 490 manatees have been counted “at the power plant discharge area” in a single day. As we understand it, available data from winter surveys indicate that as many as a third of all animals seen using this warm-water refuge during winter surveys since the late 1970s were in the basin where the proposed project would be located or along the narrow access channel that connects the existing marina to the Caloosahatchee River. To describe the likely impact of the proposed project adequately, data from these surveys must be analyzed to assess the occurrence and movement of manatees within waters directly and indirectly affected by the proposed project, the history of manatee occurrence in those waters over time, and the proportion of the southwestern Florida manatee subpopulation using those waters.

Inadequate Assessment of Potential Changes in Vessel Traffic

According to the applicant, the proposed project would combine and reconfigure two existing marinas with a combined total of 194 wet and dry slips (i.e., the Hansen Marine Ways marina with 102 wet slips and 8 dry slips and the Manatee World Inc. marina with 24 wet slips and 60 dry slips) to form a single new marina with 128 wet slips and no dry slips. (The project also involves dredging more than 12,000 cubic yards of sediment to deepen the marina basin to accommodate vessels averaging 45 ft. in length.) A recent Corps of Engineers site visit referenced in the opinion, however, apparently found that only 59 wet slips at the two facilities are “serviceable.” This represents less than half the number of “existing” wet slips reported by the applicant. Given the uncertainty of the applicant’s assertion regarding the number of existing slips, the Service’s opinion instead relied on a dock facility survey (Fanning 2002) that reported a total of 156 slips at the two facilities. Based on that information, the opinion concludes (page 27) that “the baseline contribution of watercraft from these facilities (i.e., 156 existing slips) is greater than the total number of vessels projected to use the proposed project (i.e., 128 slips).” It goes on to suggest that the project would therefore result in a decrease in vessel numbers and vessel traffic.

This opinion is inadequate for several reasons. Most important, it fails to provide a thorough analysis of the extent to which the “existing” slips have actually been used in recent times. Although it is unclear from the biological opinion exactly when the 126 wet slips at the two facilities were built, it is clear from the Corps’ site visit that many of those slips are now in disrepair and unserviceable. We understand that photographs from aerial surveys since the late 1970s show that many of these slips have been unusable for at least 30 years. This information is not considered in the opinion. Moreover, the basis for using the 2002 Fanning survey count of 156 slips as the baseline level of vessels using the Orange River also seems questionable for purposes of this analysis. For example, the opinion fails to indicate whether or how Fanning distinguished between serviceable and unserviceable slips, the number of slips that were actually in use at the time of the

2002 survey, or a breakdown of wet vs. dry slips recorded in the survey. Because the opinion does not appear to have considered all available evidence on the extent to which slips at these facilities have been used over the past 30 years—a period when manatee use of the Fort Myers power plant has increased—and because the Fanning report is of questionable value as an indicator of the number of boats using these facilities, we find the conclusion that the project would result in a decrease in the number of vessels mooring in the lower Orange River to be unjustified.

In addition, the opinion does not provide a thorough assessment of existing and projected vessel traffic in the Orange River, given changes in the types and sizes of vessels or the conversion of dry slips to wet slips. With regard to changes in vessel types, the opinion notes that most vessels using the Hansen facility since the 1980s have been live-aboard vessels, whereas vessels using the proposed project would be large recreational vessels. The opinion provides no analyses of differences in the frequency of vessel excursions away from the dock by the past number of live-aboard vessels vs. that of the projected number of recreational vessels. It also seems to assume that there would be no difference in either vessel types or vessel traffic levels if dry storage slips were replaced by wet slips designed for vessels averaging 45 ft. in length.

With regard to the frequency of vessel traffic, the opinion states (page 33) that the applicant predicts “the typical frequency of vessel usage (of the marina) is likely to be 10–12 vessels leaving the proposed facility to travel down the Caloosahatchee River... at least once a week or once every two weeks, and then returning later in the day.” The Service offers no analysis of its own regarding actual vessel traffic associated with the proposed project; thus, it apparently accepts this assessment. The opinion also provides no information on the level of vessel traffic generated by the existing facilities with which to compare the proposed level of traffic. The applicant’s projection would equal a total of 6 to 12 roundtrips per week along the lower Orange River between the marina and the Caloosahatchee River as a result of the proposed project. In our view, this number of vessel transits to and from a 128-slip marina seems unrealistically low. We also understand that the proposed project would include the addition of a new fueling station and the use of some slips for vessels visiting other marina attractions, possibly including a restaurant. Although both of these could increase vessel traffic, the opinion does not consider their possible effect on boat transit levels.

With no assessment of the current vessel traffic levels associated with the existing facilities, no rigorous attempt to project future vessel traffic levels, and questionable assumptions that the number of boats using the basin and their associated vessel traffic can be based on a simple one-to-one comparison of “existing” slips vs. proposed slips, we find this assessment of traffic levels inadequate. Considering all of these factors, we believe that the proposed project almost certainly would result in an increase in vessel traffic through portions of the Orange River, including those portions of the river now used by large numbers of manatees as a warm-water refuge.

Inadequate Assessment of Potential Impacts of Vessel Traffic on Thermoregulating Manatees

The greatest threats from the proposed project involve displacement of manatees away from essential resting and thermoregulating areas and increased risks of lethal and non-lethal collisions

with boats. The opinion dismisses both of these concerns based largely on (1) the questionable analyses discussed above that suggest the number of boats to be moored in the Orange River and their associated vessel traffic would decrease as a result of the project, and (2) requirements for using idle speed on the Orange River, which the Service apparently believes would virtually eliminate the risk that boats would disturb or collide with manatees.

With regard to risks of displacing manatees due to vessel disturbance, the opinion (pages 32–37) states only that “take in the form of harassment from watercraft could increase in certain areas with the addition of more sub-lethal watercraft-manatee interactions...however, the likelihood of takes is reduced if the adequate and appropriate regulatory measures (i.e., speed zones) are in place.” This conclusion does not squarely address the question as to whether proposed measures for this project are adequate to prevent harassment of manatees. Moreover, there is virtually no analysis of harassment risks in the opinion. We believe the risk of harassment is real, as the available information from the 30 years of winter manatee surveys shows large numbers of manatees resting amid the unusable slips in the Hanson Marine Ways marina directly within the area that would be dredged and replaced with active slips. Those surveys also show that the basin immediately surrounding the project site and the access corridor through which vessels would have to travel are among the most heavily used manatee resting areas along the entire Orange River.

The opinion also fails to assess thoroughly the potential effects of vessel traffic on manatee behavior. Recent studies not cited in the opinion (e.g., Nowacek et. al 2000, Nowacek et. al 2004, Mikis-Olds 2006) clearly show that manatees respond to vessel noise and movements by changing their behavior and moving to other areas. The opinion also does not consider disturbance, displacement, or physiological effects that could be particularly harmful to animals recovering from cold stress after returning to the warm-water refuge from feeding excursions in cold water. Finally, the opinion does not include any analysis of the regulatory measures to determine if, in fact, they are “adequate and appropriate” to avoid watercraft harassment in the heart of a major warm-water refuge.

Analyses of potential lethal and non-lethal boat collisions with manatees also are inadequate. Although the opinion notes that six dead manatee carcasses have been recovered within a mile of the project site since 2003, it fails to identify the cause of those deaths as being watercraft. The opinion also notes that the Orange River has been designated as an idle speed zone since 2001 and that this is the principal means for avoiding vessel-related deaths and injuries. As we understand, however, there have been nine watercraft-related manatee deaths along the Orange River since 2001. The opinion suggests that some of these deaths may have resulted from collisions outside the Orange River; however, boats in waters of the adjacent Caloosahatchee River also are required to travel at idle speed in winter. Although not mentioned in the opinion, we understand that all of the watercraft deaths in the Orange River have occurred between October and March when aggregations of large numbers of animals are most likely to occur. This evidence suggests that idle speed zones have not been fully effective at preventing collisions in this area. Notwithstanding this evidence, the analysis of projected effects (pages 32–37) states only that “...the placement of watercraft access points has the potential to concentrate boating activity... (and that) if manatees

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frequent this area the likelihood of watercraft collisions with manatees is increased proportional to the number of watercraft using the area....” This is not an adequate assessment of either existing risks or the potential for increased risks from this project. In our opinion, the most parsimonious analysis of the available data is that idle speed limits alone have still allowed several watercraft-related deaths of animals in this area when manatees concentrate in large numbers and that any increase in vessel traffic would further reduce their effectiveness.

Considering all of these factors, we believe that authorization of a project that would increase vessel-related disturbance of resting animals is inappropriate. Doing so in the middle of one of the most important warm-water refuges for manatees in Florida—and the only such habitat able to support large numbers of manatees within a hundred miles of this location—seems inconsistent with the protection needs of this species. Accordingly, the Marine Mammal Commission recommends that the Service reinstate consultations on the proposed project with the Army Corps of Engineers pursuant to section 7 of the Endangered Species Act to provide a more thorough assessment of available information on manatees, vessel traffic, and the potential impact on to manatees.

If you have any questions on our comments and recommendation, please let me know.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Cc: Mr. R. Kipp Frohlich, Section Leader, Imperiled Species Management Section, FWCC
Col. Paul L. Grossgruger, District Commander, U.S. Army Corps of Engineers
Mr. David L. Hankla, Field Supervisor, Endangered Species Field Station, FWS
Mr. Paul Souza, Field Supervisor, South Florida Ecological Services Office, FWS

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