

MARINE MAMMAL COMMISSION
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

14 August 2008

Craig C. MacDonald, Ph.D.
Sanctuary Superintendent
Stellwagen Bank National Marine Sanctuary
175 Edward Foster Road
Scituate, MA 02066

Dear Dr. MacDonald:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Ocean Service's draft management plan and draft environmental assessment for the Gerry E. Studds Stellwagen Bank National Marine Sanctuary announced in the 6 May 2008 *Federal Register*. We offer the following comments and recommendations.

RECOMMENDATIONS

The Marine Mammal Commission commends the Office of National Marine Sanctuaries for developing a thorough and well-documented assessment of sanctuary resources and threats and for identifying constructive actions to protect marine mammals and other resources in the Stellwagen Bank sanctuary. As discussed here, however, we do not believe that the proposed measures in the draft management plan adequately address the identified threats. Accordingly, the Marine Mammal Commission recommends that the Office of National Marine Sanctuaries—

- either (a) amend the current designation document to add commercial fishing and whale watching to the list of “Activities Subject to Regulation” (Article IV, Section 1) or (b) clarify in the proposed plan that, if warranted, commercial fishing and whale-watching activities will be subject to sanctuary regulation over the next five years;
- implement all of the research and management activities identified in the action plans for Ecosystem Alteration (Objectives EA 1 and 2), Marine Mammal Behavioral Disturbance, Marine Mammal Entanglement, and Marine Mammal Vessel Strikes that pertain to whale watching, commercial fishing, and vessel traffic;
- expand Objective MMBD.1 of the draft plan to include new regulations, permit requirements, or other measures as may be necessary for managing commercial and recreational whale-watching vessels in the sanctuary, including measures similar to the voluntary whale-watching guidelines adopted by the Service in 1999;
- consult with the National Marine Fisheries Service regarding activity 3.3.1 and implement a ban on all fishing for sand lance within the sanctuary;
- expand the list of activities under section 3.3 of the Ecosystem Alteration Action Plan to include a provision for implementing such regulations, permit requirements, or other measures as may be necessary to manage the impact of commercial fishing on natural and cultural resources within the sanctuary;
- identify and close one or more areas within the sanctuary to all commercial fishing to assess the potential for restoring habitats damaged by prior fishing activity and to provide a

baseline for evaluating fishery impacts and potential fishery management actions in other areas;

- add a new action plan to the draft management plan section on capacity building to include a comprehensive Stellwagen Bank Sanctuary science plan; and
- expand activity 3.3 of the Administrative Capacity and Infrastructure Action Plan to include efforts to share information on management experience and practice and, to the extent possible, to develop consistent management strategies on issues of mutual concern, such as whale-watching, vessel traffic, and entanglement in fishing gear, and assign this activity a high priority.

RATIONALE

The draft management plan describes the natural and cultural resources, and the threats to those resources, in the Stellwagen Bank National Marine Sanctuary. Based on that information, it proposes a set of action plans to update the 1993 sanctuary management plan. The purpose of the plan is to provide a non-regulatory policy framework to guide sanctuary management until at least 2013. We recognize that the plan itself is not the appropriate vehicle for proposing regulatory measures. We assume, however, that it should identify those actions that sanctuary managers may need to take to accomplish the sanctuary's mission. According to the draft plan, that mission is—

to conserve, protect and enhance the biological diversity, ecological integrity, and cultural legacy of the (Stellwagen Bank) sanctuary while facilitating uses that are compatible with the primary goal of resource protection.

The Stellwagen Bank sanctuary covers 2,181 km² (842 mi²) of federal waters and submerged lands between Cape Ann and Cape Cod, Massachusetts, about 25 nmi east of Boston. Its boundaries encompass a diversity of benthic and pelagic habitats that are among the most biologically productive in the Gulf of Maine ecosystem. The draft plan notes that the bank's abundance of small schooling fish, particularly sand lance and herring, attracts seasonal aggregations of large whales and other marine mammals, and this was an important reason for designating the area as a sanctuary. At least 22 marine mammal species have been sighted in the sanctuary, which includes one of the most important feeding grounds for humpback whales and fin whales off the eastern United States. North Atlantic right whales also feed in the sanctuary and travel through it when moving to and from their principal spring feeding grounds immediately south of the sanctuary in Cape Cod Bay and the Great South Channel.

The draft plan provides a thorough review of marine mammals and other natural and cultural resources within the sanctuary, as well as a detailed, well-documented assessment of the threats to those resources. It concludes that 10 of 17 condition indices used to assess the status of sanctuary resources are now rated as only fair-to-poor due to intensive human activity and development, particularly commercial and recreational fishing and vessel traffic, within sanctuary boundaries. Among the 10 categories rated fair-to-poor, only one is thought to be improving, while the condition of three are rated as declining and six are rated as stable. This sobering assessment indicates that human activities within the sanctuary are impeding the recovery of depleted species,

the restoration of degraded marine communities, and the functioning of fundamental ecological processes (e.g., species reproduction and ecosystem energy flow). Despite this compelling conclusion, the draft plan states on page iii that "...at this time, NOAA is not proposing any regulations or changes to the Stellwagen Bank sanctuary designation document." The draft further notes that regulatory initiatives for activities currently unregulated by sanctuary managers, such as commercial fishing and whale watching, "*could be considered* for action prior to the next management plan review nominally scheduled for 2013." (Emphasis ours)

As we understand it, formal steps to adopt sanctuary regulations for activities not listed in the sanctuary designation document could not be initiated until at least 2013 unless another lengthy formal review comparable to the one for this draft management plan has been completed. That is, activities subject to sanctuary management and regulation first must be listed in Article IV, Section 1, of the designation document, a section entitled "Activities Subject to Regulation," and the next scheduled opportunity to revise the list would not occur until this plan is again updated in 2013 or later. Although the designation document currently lists the operation of any vessel and any activity that could take, remove, injure, or cause the loss of marine mammals or any other sanctuary resource as being subject to sanctuary management, it is not clear in the draft plan whether commercial fishing and whale watching are covered under that language. Thus, it is not clear whether sanctuary managers would be able to implement regulations for commercial fishing or whale watching under the existing designation document. Given that the primary goal of sanctuary management is to protect sanctuary resources—rather than merely to consider their protection—the decision not to modify the designation document may unreasonably preclude or delay the implementation of regulations for commercial fishing and whale watching pending their explicit addition to the sanctuary designation document.

As discussed here, information and analyses cited in the draft plan suggest that commercial fishing and whale-watching activities are—or have a high potential for—adversely affecting marine mammals and other resources that the sanctuary was established to protect. The draft management plan identifies useful and appropriate management standards that might be included in regulations, and the Marine Mammal Commission believes that the plan provides ample justification for proceeding with proposals to implement regulations for fishing and whale watching in the sanctuary before the next scheduled plan review. To clarify that sanctuary managers have authority to implement regulatory measures for fishing and whale-watching activities in a timely manner, the Marine Mammal Commission recommends that the draft plan be modified to either (a) amend the current designation document to add commercial fishing and whale watching to the list of "Activities Subject to Regulation" (Article IV, Section 1) or (b) clarify in the proposed plan that, if warranted, commercial fishing and whale-watching activities will be subject to sanctuary regulation over the next five years.

Whale Watching

The draft plan notes that Stellwagen Bank is one of the world's premier destinations for commercial and recreational whale watching. In 2006, 18 to 23 vessels operated by 13 companies typically visited the sanctuary at least once each day during the whale-watching season. Those vessels generated several tens of millions of dollars in direct sales. The draft plan also notes that persistent

unregulated approaches by commercially and privately owned whale-watching boats can alter the resting, feeding, and nursing behaviors of the whales. In addition, it notes that, since 1980, whale-watching vessels have struck at least nine whales in and around the sanctuary. In 1999, following a record high of three strikes in the previous year (one of which resulted in a whale's death), the National Marine Fisheries Service adopted voluntary whale-watching guidelines for waters off the northeastern United States, including the sanctuary. Those guidelines recommend precautionary actions, such as reducing speeds near whales and limiting close approaches.

Compliance with those voluntary guidelines has been poor. The draft plan notes that whales in the sanctuary are sometimes closely surrounded by multiple privately owned whale-watching boats, contrary to advice provided in the guidelines, and at least two whales have been struck since 1999 when the guidelines were adopted. The draft plan also cites a recent study (Wiley et al. 2008), which found that 78 percent of commercial whale-watching vessels using the sanctuary failed to comply with recommended vessel speeds near whales. The draft plan concludes that the existing voluntary guidelines cannot be relied upon to reduce the risks to whales from whale-watching vessels and that regulatory measures appear warranted. This conclusion appears well supported.

The Marine Mammal Behavioral Disturbance Action Plan (Objective MMBD.1, pages 229–231) identifies measures to manage whale-watching vessels (e.g., identifying criteria for restricting vessel speed and approach distances, considering a permit program for commercial whale-watching operators, conducting a risk assessment for vessels operating near whales, and conducting research to improve understanding of whale-vessel interactions). The Marine Mammal Commission recommends that the Office of National Marine Sanctuaries implement all of the research and management activities identified in the Marine Mammal Behavioral Disturbance Action Plan (Objective MMBD.1) that pertain to whale watching. In addition, the Marine Mammal Commission recommends that the Office of National Marine Sanctuaries expand Objective MMBD.1 of the draft plan to include a new activity to implement regulations, permit requirements, or other measures as may be necessary for managing commercial and privately owned whale-watching vessels in the sanctuary, including measures similar to the voluntary whale-watching guidelines adopted by the Service in 1999.

Commercial Fishing

The draft plan notes that the sanctuary was historically an important commercial fishing area and that it is still heavily exploited by fisheries using traps, sink gillnets, bottom trawls, mid-water trawls, and dredges. After centuries of fishing, the habitat and species composition within the sanctuary have been altered in ways that are poorly understood. The draft plan notes that recent landings from the sanctuary for all fisheries combined have averaged about 17–18 million pounds of fish and shellfish annually, with an additional 4 million pounds discarded each year as bycatch. Herring has made up about 40 percent of annual landings by weight (7 million pounds per year) although herring contributed only about 3 percent (about \$500,000) to the annual total ex-vessel landings value of \$15 to \$23 million per year since 2000. The bank also is heavily used for recreational fishing by charter boats, head boats, and private vessels.

The draft plan raises numerous issues regarding the effects of commercial fishing on marine mammals and other sanctuary resources. It notes that virtually the entire sanctuary is disturbed annually to varying degrees by commercial fishing. Much of the sanctuary is subject to fishing using trawl nets and dredges that first damage and then prevent the recovery of benthic habitat and communities. Although about 22 percent of the sanctuary on its eastern flank lies within an area that is closed to groundfish fishing and all fishing with bottom trawls, dredges, and set gillnets, that area is exposed to the effects of other types of fishing gear (e.g., traps and mid-water trawls) and does not include the range of habitat types observed in other areas of the sanctuary. In addition, no areas in the sanctuary have been set aside as controls to assess the recovery of species and marine communities in the absence of fishing.

The draft plan also notes that herring and sand lance are a primary food source for marine mammals, seabirds, and fish and that allowable catch limits on herring and sand lance may not adequately account for their foraging needs. The plan recognizes that the herring fishery is, in effect, a significant competitor for the resource and could reduce local herring densities to a level below that needed to trigger large whale foraging behavior. Although sand lance, a forage fish important to several marine mammal species, is not currently fished, the plan notes that such fishing could begin with no restrictions or management provisions in place and that a ban on development of such a fishery in the sanctuary appears warranted. In addition, the plan notes that whales may become entangled in gillnets or lines from traps and that the number of entangled whales observed in the sanctuary is high compared to other areas.

Proposed activities to address these issues are provided under action plans for Ecosystem Alteration (Objectives EA 2 and 3, pages 215–221) and Marine Mammal Entanglement (pages 240–245). Virtually all of the identified activities addressing fishery issues either involve further studies, public outreach efforts, workshops, working groups, and other methods to evaluate possible mitigation measures or consultation with the National Marine Fisheries Service on management measures that the agency might undertake. These provisions would be relevant and helpful, and the Marine Mammal Commission recommends that the Office of National Marine Sanctuaries implement all the research and management activities in the action plans for Ecosystem Alteration and Marine Mammal Entanglement that pertain to the impact of commercial fishing.

As a general matter, however, the identified measures do not provide assurance that the actions necessary to reduce the impact of fishing on resources in the sanctuary will be taken. For example, activity MA 3.3.1 calls on sanctuary management to “recommend that NOAA Fisheries Service consider implementing a permanent ban on the exploitation of sand eels (i.e., sand lance) within the sanctuary.” Such a ban appears to be well justified. Although we agree that sanctuary managers must consult with the National Marine Fisheries Service on any actions affecting fisheries, we do not believe it is appropriate for sanctuary managers to cede to the Service all final decisions on regulatory actions necessary to protect resources from fishing activities within the sanctuary. Although the Service clearly would have authority to implement such a regulation, it has neither the mandate nor the stated mission that the Sanctuary Program has for protecting the special assemblage of natural and cultural resources that gave rise to the Stellwagen Bank sanctuary designation. As a result, its view of the importance of such a rule may differ from that of sanctuary managers who are in a better position to consider its importance to the sanctuary’s mission.

Therefore, the Marine Mammal Commission recommends that the Office of National Marine Sanctuaries consult with the National Marine Fisheries Service regarding activity 3.3.1 and implement a ban on all fishing for sand lance within the sanctuary. In addition, the Marine Mammal Commission recommends that the Office of National Marine Sanctuaries expand the list of activities under section 3.3 of the Ecosystem Alteration Action Plan to include a provision for implementing such regulations, permit requirements, or other measures as may be necessary to manage the impact of commercial fishing on natural and cultural resources within the sanctuary. In this regard, the Marine Mammal Commission also recommends that sanctuary managers identify and establish areas within the sanctuary that would be closed to all commercial fishing to assess the potential for restoring habitats damaged by prior fishing activity and to provide a baseline for assessing fishery impacts and potential fishery management actions in other areas.

Vessel Traffic

The draft management plan notes that designated shipping lanes in and out of Boston pass through the sanctuary and that large numbers of both commercial and recreational boats travel within or through the sanctuary. It also notes that marine mammals and other wildlife using sanctuary habitat are vulnerable to being struck by transiting vessels and to disturbance by vessel noise. The draft plan provides a thorough review of recent actions to address vessel strikes in and around the sanctuary. Proposed activities to address the vessel strike and noise issues are provided under action plans on Marine Mammal Behavioral Disturbance (MMBD 2 on noise impacts, pages 231–232) and Marine Mammal Vessel Strikes (Objectives MMVS 1–3, pages 235–239). Among other things, the action plans identify activities to develop a marine acoustics research program for assessing baseline noise levels in the sanctuary, review the adequacy of risk reduction measures implemented by the National Marine Fisheries Service, encourage voluntary year-round speed restrictions in the sanctuary, and support research to document ship strikes and develop technologies to prevent them.

The identified activities appear to be useful and appropriate. The Marine Mammal Commission recommends that the Office of National Marine Sanctuaries implement all of the research and management activities identified in the action plans for Marine Mammal Behavioral Disturbance and Marine Mammal Vessel Strikes that pertain to vessel traffic.

Scientific Research and Monitoring

The draft management plan identifies a number of scientific research and monitoring activities under the various action plans to address capacity building, ecosystem protection, marine mammal protection, and maritime heritage. Identifying research needs related to key management issues is appropriate and helpful. From an administrative perspective, however, reconciling the large number of research needs identified in the document with limited staff and budget will be a difficult challenge requiring evaluation, prioritization, facilitation, and tracking of research activities. At present, it is not clear how the many research needs identified in the various action plans will be met. Given its importance to the sanctuary, a separate science plan should be developed to optimize returns on limited sanctuary funding and staff and to marshal cooperative efforts by other agencies and organizations. Therefore, the Marine Mammal Commission recommends that a new action plan

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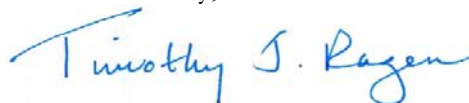
be added to the draft management plan section on capacity building to include a comprehensive Stellwagen Bank Sanctuary science plan.

Cooperative Efforts with the Dominican Republic

Activity 3.3 of the Administrative Capacity and Infrastructure Action Plan identifies—and assigns a low priority to—an activity to develop and support an international exchange of people working on related education and research projects in the Stellwagen Bank Sanctuary and other marine protected areas. As described, this activity would involve the exchange of managers and volunteers working with a “sister sanctuary,” the Silver Bank Humpback Whale Sanctuary, in the Dominican Republic. Because the same humpback whales use habitat in both sanctuaries, the Commission believes that cooperative efforts with the Dominican Republic sanctuary to resolve shared management issues (e.g., the management of whale watching and vessel traffic), as well as shared education and research issues, would be particularly constructive and important. This could lead to a valuable precedent for cooperative and complementary international management of highly migratory marine species, such as humpback whales, that routinely move between protected habitats in different countries. Therefore, the Marine Mammal Commission recommends that the activity 3.3 of the Administrative Capacity and Infrastructure Action Plan be expanded to include efforts to share information on management experience and practice and, to the extent possible, to develop consistent management strategies on issues of mutual concern, such as whale-watching, vessel traffic, and entanglement in fishing gear. The Marine Mammal Commission also recommends that this activity be assigned a high priority.

I hope that our recommendations and comments are helpful. Please contact me if you or your staff has any questions.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Literature Cited

Wiley, D.N., J.C. Moller, R.M. Pace III, and C. Carlson. 2008. Effectiveness of voluntary consent agreements: Case study of endangered whales and commercial whale watching. *Conservation Biology* 22(2):450–457.