



# MARINE MAMMAL COMMISSION

10 August 2009

Ms. 'Aulani Wilhelm  
Monument Superintendent  
Papahānaumokuākea Marine National Monument  
6600 Kalanianaʻole Highway, Suite 300  
Honolulu, HI 96825

Attention: Science Plan Comments

Dear Ms. Wilhelm:

On 10 July 2009 the National Oceanic and Atmospheric Administration published a *Federal Register* notice (74 Fed. Reg. 33209) requesting comments on the Draft Natural Resources Science Plan for the Papahānaumokuākea Marine National Monument. The purpose of the draft plan is to provide a 15-year research and monitoring framework to improve natural resources management in the Monument over the next five years. Preparing a research plan that identifies appropriate priorities for such a broad array of information needs is a difficult task, and we commend the authors for developing such a comprehensive draft document. The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, offers the following recommendations and comments.

## RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Oceanic and Atmospheric Administration adopt the Draft Natural Resources Science Plan after the Co-Trustees—

- reorganize the identified research topics under headings used in the Monument management plan rather than those used in the Hawaiian Archipelago Marine Ecosystem Research Plan;
- clarify that criteria and procedures used to prioritize research topics listed in the draft Natural Resources Science Plan also should be used to evaluate future research projects that may not be explicitly addressed in the plan;
- simplify the numerical system used to rank research priorities;
- consider additional criteria for setting research priorities, such as whether the research can only be done within Monument boundaries and whether takes of animals for research are kept to the lowest number necessary to accomplish research objectives;
- shorten and modify the list of possible research topics to correspond to the management activities identified in the Monument management plan;
- revise the prioritization scheme to be more discriminating among proposed research topics; and
- clarify that the list of research topics in the plan is not intended to be comprehensive or to preclude possible projects not explicitly listed but rather to illustrate the importance of relating proposed research projects to specific information needs and management activities identified in the Monument management plan.

## **RATIONALE**

The Commission offers the following discussion and rationale for its recommendations.

Pages 5–6, Development of a Research and Monitoring Framework for the Monument: This section notes that the draft plan follows the structural framework of the Hawaiian Archipelago Marine Ecosystem Research Plan. Although the Commission understands the desire for consistency with the archipelago-wide plan, it believes that, first and foremost, the Monument Natural Resources Science Plan should be guided by management issues identified in the Monument management plan. That plan identifies 140 “strategies and activities” arranged under 22 separate “action plans” and six overarching “management needs.” The alternative (i.e., following the archipelago-wide plan) confounds any effort to determine precisely how identified research priorities address the issues highlighted in the management plan. The draft plan attempts to clarify these links by providing a table that lists the broad issues and specific management activity numbers from the management plan after each research topic. However, it is difficult to determine precisely what aspects of the management plan the research topics address without constantly referring back to the management plan. In part, this confusion arises because both the research topics and general management issues are broad and overlapping. In the Commission’s view, the best way to identify links between research topics and management needs would be to organize them under the same headings (i.e., those used in the management plan). This would require a major reorganization of the draft, but the Commission believes such reorganization is needed to ensure that researchers focus their studies on topics that will help resolve identified management issues. Accordingly, the Marine Mammal Commission recommends that the drafters of the plan reorganize the identified research topics under headings used in the Monument management plan rather than those used in the Hawaiian Archipelago Marine Ecosystem Research Plan.

Pages 8–11, Prioritization of Research and Monitoring Activities: This section identifies the criteria and procedures used to prioritize research topics identified in this plan. As currently written, the plan does not indicate whether Monument staff will use these criteria and procedures to evaluate future research proposals. Undoubtedly, researchers and managers will need to evaluate proposals for research not already listed in the plan. To that end, the plan should identify the criteria and provisions that will be used for that purpose.

Although the criteria and evaluation procedures identified in this section (presented principally in Figure 2) include important considerations, they are somewhat confusing. For example, although the procedures call for ranking projects on a scale of 1 to 10, with 10 being a project addressing the highest priorities, a total score of 14 is possible. In addition, although important evaluation factors are identified (e.g., the importance of obtaining identified information, relevance to achieving legal mandates, relevance to more than one management activity in the Monument management plan), other factors also would be appropriate to consider. For example, given the importance of protecting Monument resources, appropriate criteria might include whether the research could be accomplished in an area other than the Monument, thereby avoiding risks to Monument resources, and whether the proposed activity minimizes the number of animals that

might be taken while also recognizing needs for sufficiently robust statistical results. In view of these points, the Marine Mammal Commission recommends that the draft plan be revised to (1) clarify that criteria and procedures used to prioritize research topics listed in the draft Natural Resources Science Plan also should be used to evaluate future research projects that may not be explicitly addressed in the plan, (2) simplify the numerical system used to rank research priorities, and (3) consider additional criteria for setting research priorities, such as whether the research can only be done within Monument boundaries and whether takes of animals for research is kept to the lowest number necessary to accomplish research objectives.

Pages 12–58, Section 3, Research Themes and Focus Areas: This section describes the five research themes under which priority research projects are identified. For each theme, a table or text describes (1) the theme's focus, (2) sample research questions, (3) potentially related management activities listed in the Monument management plan, (4) examples of priority research projects, and (5) related past and ongoing research programs. As discussed in the next paragraph, the following section (section 4) then includes a table listing more than 150 research topics under these five themes. The general outline of information provided for each theme is helpful and appropriate. However, as already discussed, the Commission believes it would be more helpful to provide such information for specific action plans or activities identified in the Monument management plan, rather than the five themes from the archipelago-wide plan.

Pages 61–68, Table 2, Research and Monitoring Activities Organized by Research Theme and Focus Area: This table lists approximately 150 research topics. For each topic, it identifies a priority ranking, estimated time frame to carry out the research, and related “management needs” and management activity numbers from the Monument management plan. The listing appears to address virtually all possible research and monitoring activities important for Monument management purposes. However, the research topic titles are so broad that they offer little indication of the importance of specific studies. For example, although a few research topics identify relatively specific needs (e.g., “evaluate potential impacts of development of additional freshwater sources at potential translocation sites of the Laysan duck, Nihoa finch, Laysan finch and Nihoa millerbird” and “develop tools to increase female monk seal survival to salvage reproductive potential”), the vast majority are so broadly worded that they could include research topics ranging from high to very low value for management purposes (e.g., “conduct terrestrial plant demographic research,” “characterize and map deepwater fish communities/habitat,” and “monitor cetacean distribution”). In addition, all but three of the approximately 150 research topics are ranked as being of either critical or high priority.

The Commission agrees with the need to prioritize research activities and high-priority research could be undertaken under all of the identified topics. However, the Commission also questions whether the draft plan has usefully prioritized research. If all but three of the listed projects are high or critical priority, then little real distinction has been made among these projects—in essence, none of them has been prioritized. For that reason, the Commission believes that this plan would be more useful if it were more discriminating with regard to the most important research.

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To be of maximum use, the plan also should balance the potential benefits of the information that could be obtained against the risk of adversely affecting Monument resources. Some research might be useful to undertake even if it is of relatively low priority if it also poses little risk and does not involve commitment of limited Monument funding. For example, research requiring little or no commitment of Monument funding might usefully be conducted to determine trends in the distribution and abundance of humpback whales in Monument waters even though such research might be accorded a lower priority because humpback whales do not appear to be vulnerable to significant risks within Monument borders. Examples of possible marine mammal-related research topics that might be identified in the Natural Resources Science Plan are attached.

In light of the considerations mentioned here, the Marine Mammal Commission recommends that the drafters (1) revise their prioritization scheme to be more discriminating among proposed research topics and (2) clarify, to the extent possible, that the list of research topics in the plan is not intended to be comprehensive or to preclude possible projects not explicitly listed but rather to illustrate the importance of relating proposed research projects to specific information needs and management activities identified in the Monument management plan.

I hope these comments are helpful. If you or your staff has questions, please call.

Sincerely,



Timothy J. Ragen, Ph.D.  
Executive Director

Enclosure

## ATTACHMENT

### **Examples of Additional Research and Monitoring Studies on Marine Mammals for Inclusion in the Monument Natural Resources Science Plan**

- Develop an acoustic monitoring network to identify and monitor the distribution and seasonality of marine mammals in monument waters; Priority Medium; Duration 5+ years; Activity TES-2.1
- Conduct surveys and photo-identification studies of false killer whales, pilot whales, and other small cetaceans in Monument waters that are also subject to incidental take outside Monument waters to determine relationships between animals within the Monument waters to those elsewhere in the Hawaiian Archipelago; Priority High; Duration 1–3 years; Activity 2.1
- Conduct annual spinner dolphin photo-identification studies to monitor the status and trends of populations at Kure, French Frigate Shoals, and Pearl and Hermes Reef; Priority Medium; Duration 5+ years; Activity TES 2.2
- Conduct tagging studies of spinner dolphins to determine movement and habitat-use patterns in the Northwestern Hawaiian Islands and to detect potential behavioral differences relative to spinner dolphin populations exposed to human disturbance in the main Hawaiian Islands; Priority High; Duration 1–3 years; Activity TES 2.2.
- Translocate juvenile Hawaiian monk seals from areas of low prey availability to areas of high prey availability to increase juvenile survival rates; Priority Critical; Duration 5+ years; Activity TES 1
- Monitor Hawaiian monk seal entanglement rates in marine debris and disentangle seals found entangled; Priority Critical; Duration 5+ years; Activity TES 1.1
- Assess and monitor accumulation rates and impact of net debris in coral reef habitats throughout the Northwestern Hawaiian Islands; Priority High; Duration 5+ years; Activity MD 2
- Monitor changes in the geographic extent and configuration of Hawaiian monk seal pupping beaches and the distribution of monk seal pupping to assess effects of rising sea level on the availability of pupping habitat; Priority High; Duration 5+ years; Activity TES 1.3
- Continue sonic tagging studies of Galapagos sharks, tiger sharks, and other sharks potentially preying on Hawaiian monk seals at French Frigate Shoals to assess means of reducing such predation; Priority High; Duration 1-3 years; Activity TES 1.6
- Assess the effectiveness of shark deterrent and removal methods for reducing shark mortality at French Frigate Shoals; Priority Critical; Duration 1–5 years; Activity TES 1.6

