MARINE MAMMAL COMMISSION

10 May 2010

Mr. Eric Schwaab
Assistant Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Schwaab:

The Marine Mammal Commission congratulates you on your appointment to the position of Assistant Administrator for Fisheries. In your new position, you will give important direction to the management of marine ecosystems, the resources they contain, and the ecological services they provide. If the Marine Mammal Commission can do anything to assist you as you assume leadership of the National Marine Fisheries Service, please do not hesitate to contact me. The Commission itself is in a transition of leadership, and when our new Commissioners are in place, I will contact you to request a meeting so that we can discuss our many mutual interests.

In the meantime, I am writing to discuss one of the Service's most challenging responsibilities—conservation of the Hawaiian monk seal. This ancient species is thought to have occupied the Hawaiian archipelago for 12 to 15 million years but has been depleted severely on several occasions since its initial discovery by sealers in the early 1800s. Scientists conducted the first range-wide survey of the Hawaiian monk seal in the 1950s and, since then, the population has declined by more than 50 percent. It now numbers fewer than 1,200 seals, is declining at the rate of 4.5 percent per year, and is likely to continue to decline for the next 5 to 10 years because of its distorted age structure (i.e., poor juvenile survival leading to low recruitment of females of reproductive age). Nonetheless, the species has shown remarkable resilience in the past, and there is no reason to believe that it cannot recover from its current precarious state.

Although Hawaiian monk seals occasionally venture into the international waters of the central North Pacific, the United States has sole responsibility for their management and conservation. The National Marine Fisheries Service has lead responsibility for management of Hawaiian monk seals or, more accurately, human activities that affect them. The Service and its agency partners, including the Marine Mammal Commission, must do everything possible to minimize human impact on the species so that it can recover. The Service developed a monk seal recovery program in the late 1970s, but the program has been underfunded since its inception. In 2007 the Service noted that the species' status is critical, adopted a revised Hawaiian Monk Seal Recovery Plan, and projected average annual costs of $7.2 million per year to conduct recovery activities. In fiscal year 2008, however, program funding declined to less than $2 million, its lowest point in nearly a decade. In fiscal years 2009 and 2010 Congress provided the Service $5.7 million and $5.6 million, respectively, to address the funding deficiency, but future funding is all but certain.

RECOMMENDATIONS

In December 2009 the Marine Mammal Commission held its annual meeting in Honolulu and devoted about half the meeting to a review of monk seal research and management activities in

2009 and plans for 2010. Although Service staff did not receive the full $5.7 million until late in fiscal year 2009, it did a commendable job of using those funds to meet critical recovery needs. The Commission expects that the fiscal year 2010 budget will be used equally well. But two years of such funding will not be sufficient to support recovery of a long-lived, slow-growing species like the Hawaiian monk seal. Indeed, recovery will require sustained funding to address the key conservation challenges. With that in mind, the Marine Mammal Commission recommends that, as a matter of highest priority, the National Marine Fisheries Service secure dedicated annual budgets at the $7.2 million level, as set forth in the Hawaiian Monk Seal Recovery Plan, until such time as the priorities and cost estimates in the plan are formally changed.

As explained in detail in this letter, the Marine Mammal Commission recommends that the National Marine Fisheries Service use such funds to—

- maintain deployment levels for Northwestern Hawaiian Islands (NWHI) field camps, including Nihoa Island, at the 2009 level for the foreseeable future;
- provide the Pacific Islands Fisheries Science Center sufficient resources to fill the position vacated by the retired computer technician as well as to redesign and revamp the Hawaiian monk seal database so that it provides essential scientific and management information on a timely basis;
- complete the ongoing worming trials for juvenile monk seals and analyze the results as soon as possible to determine if and how this approach might be applied more broadly;
- consult with the Hawaiian Monk Seal Recovery Team and key recovery program partners to prepare a strategic Hawaiian monk seal translocation plan;
- proceed with the proposed removal of up to 20 Galapagos sharks near monk seal pupping beaches at French Frigate Shoals in 2010;
- work closely with the agencies leading the effort to remove debris from the NWHI and, as appropriate, use a portion of its annual monk seal appropriation to support debris removal near monk seal pupping beaches;
- consult with the Hawaiian Monk Seal Recovery Team as well as its multiple recovery partners to complete a comprehensive, long-term main Hawaiian Islands research plan in the coming year;
- provide the Pacific Islands Fisheries Science Center sufficient resources to dedicate at least one member of its staff to work fulltime to coordinate, oversee ordirect, and help conduct all main Hawaiian Islands Hawaiian monk seal research activities under the plan;
- consult with the Hawaiian Monk Seal Recovery Team as well as its multiple recovery partners to complete a comprehensive, long-term main Hawaiian Islands management plan in the coming year;
- work closely with the Hawaii Department of Land and Natural Resources to ensure development and approval of a section 6 Endangered Species Act grant application that will enable the department staff to maintain a strong Hawaiian monk seal conservation program and continue to complement the Service's monk seal recovery activities;

- provide an additional staff position in the Pacific Islands Regional Office to work fulltime with volunteer networks on different islands and assist them in developing and organizing Hawaiian monk seal conservation activities;
- continue to work with The Marine Mammal Center to develop a long-term health care facility for Hawaiian monk seals and take the lead responsibility for securing funding to cover operating costs;
- contract with a professional public education firm to develop educational materials and work with agency partners to implement a cooperative, coordinated education and outreach program that is focused on key community segments likely to interact with seals and that will deliver a consistent and well-articulated conservation message;
- begin the contracting process to address community outreach needs immediately; and
- review the results of its aversive conditioning workshop and then fund studies to develop and test promising techniques to dissuade seals from becoming acclimated to people or frequenting areas that could place seals or people at risk.

RATIONALE

The Commission offers the following rationale for its recommendations.

Population Monitoring in the NWHI

At present, 80 percent or more of the total Hawaiian monk seal population occurs at six main breeding colonies in the NWHI. Field camps at these sites are essential to collect demographic data (e.g., abundance, trends, health and survival, reproduction, sources of mortality, and diet and foraging patterns) and conduct management and conservation activities (e.g., removing hazardous debris, disentangling seals, and preventing the death of pups by sharks and aggressive adult male seals). Logistics costs and salaries for those camps are the most expensive items in the Hawaiian monk seal budget. In 2008 the Service responded to budget cuts by reducing both the number of people at and the duration of those camps.

In 2009 the Service used its additional funding to (1) restore full seasonal field camps at all major pupping sites, (2) establish a year-round field camp at one atoll to conduct a worming trial and assess winter conservation threats (e.g., starvation, entanglement, adult male aggression, etc.), and (3) increase research at Nihoa Island. At the Commission's annual meeting, Service staff indicated that 2010 field work in the NWHI would be continued at the 2009 level.

Monitoring of the NWHI breeding colonies is essential for the reasons described earlier. Monitoring at Nihoa Island also warrants continuation. In the last two years, 12 young seals have been translocated from French Frigate Shoals to Nihoa to determine whether such translocations can be used to improve juvenile survival. Continued studies at this site are necessary to assess the status of resident and translocated seals and to estimate the island's carrying capacity for seals. With these concerns in mind, the Marine Mammal Commission recommends that the National Marine

Fisheries Service maintain deployment levels for NWHI field camps, including Nihoa Island, at the 2009 level for the foreseeable future.

Most of the existing data on Hawaiian monk seals is stored in an Oracle database that was developed in the 1990s and has been updated on an ongoing basis. As is often the case, the structure of such a database reflects the capabilities and focus of the persons responsible for building and managing it. Because, in an earlier stage of my career, I oversaw the development of the original Oracle database, I can attest to the fact that management of the data is a considerable challenge at the core of the research program. The computer technician who programmed the data-handling and storage procedures recently retired, and the program is considering its options for storing the existing NWHI data as well as accommodating new data from the main Hawaiian Islands. However program leaders decide to store and manage the full set of data, it should be readily accessible to meet ongoing monitoring needs, to guide management efforts, and to facilitate research by the Service and its many research partners. Because this task is so complex, but also so vital to the recovery program, the Marine Mammal Commission recommends that the National Marine Fisheries Service provide the Pacific Islands Fisheries Science Center sufficient resources to fill the position vacated by the retired computer technician as well as to redesign and revamp the Hawaiian monk seal database so that it provides essential scientific and management information on a timely basis. In addition to hiring a replacement technician, this may require either hiring an additional information technology expert or reassigning an expert from another program at the Center.

Improving Juvenile Survival

Most of the decline in monk seal numbers in the NWHI is due to poor juvenile survival. Sharks prey on pups or juvenile animals in particular, and the same size classes are disproportionately entangled in marine debris (described later in this letter). Both of those threats must be addressed. However, the most significant problem appears to be related to insufficient prey, apparently as a result of ecological changes in the NWHI. Those changes may reflect natural phenomena; the influence of climate change; the residual effects of past commercial fishing, pollution, and other human impacts; or, more likely, some combination of those factors. To the extent that past human activities have contributed to this problem, improved protection afforded by the Papahānaumokuākea Marine National Monument should help. Nonetheless, additional action must be taken to address the loss of young animals, particularly females, to starvation. The two measures under consideration at this time are worming trials and translocation of seals.

Worming Trials: The purpose of worming trials is to reduce internal parasite loads in juvenile seals to improve their condition and increase their chance of survival. The trials were initiated with the additional funding provided in 2009. Parasites may not be the primary problem for young seals, but treatment to reduce parasites may help them survive their difficult transition to foraging independence. The Marine Mammal Commission recommends that the National Marine Fisheries Service complete the ongoing worming trials for juvenile monk seals and analyze the results as soon as possible to determine if and how this approach might be applied more broadly.

Translocations: Translocations involve moving newly weaned pups and juveniles born in the NWHI from areas with poor foraging conditions to areas where conditions are better and they have a higher chance of surviving. Their survival rate generally improves as they approach maturity and, at that time, a decision must be made to either leave them at the new site or move them back to their original location. Such translocations can be expensive and logistically difficult, so to be deemed worthwhile they also must provide a considerable improvement in survival. The monk seal program is developing its ability to use translocations and will need continued support to do so. As noted above, six juvenile seals were moved in each of the past two years from French Frigate Shoals to Nihoa to evaluate techniques for moving and releasing animals.

Foraging conditions around Nihoa are not sufficient to support the number of juvenile seals at risk in the French Frigate Shoals population. Currently, the only natural habitat where juvenile survival rates are sufficiently high and foraging areas sufficiently extensive is in the main Hawaiian Islands. Monk seal scientists and managers also have considered maintaining weaned pups in captivity until they reach maturity, but that option—which cannot be ruled out—introduces additional risks that could complicate reintroduction and re-adaption of seals to the wild. It also would involve high costs to build and operate a facility capable of holding the necessary number of seals. The option with the greatest prospect for success appears to be translocating newly weaned and juvenile seals in poor condition to the waters around the main Hawaiian Islands until they reach age four or five and then returning them to the site of their birth.

Considerable preparation would be necessary before attempting such a translocation on any significant scale. Better information is needed on the incremental improvement in survival, the best locations in the main Hawaiian Islands for supporting seals without increasing seal/human interactions, and the survival rate of the seals after they are returned to their birth site. In addition, some residents in Hawaii are strongly opposed to moving seals from the NWHI to the main Hawaiian Islands. Among other things, moving forward would require an effective outreach program to foster acceptance of such measures, as well as a suitably large, well-trained management staff to address issues that might arise. The Pacific Islands Fisheries Science Center and Pacific Islands Regional Office are working with the Service's Office of Protected Resources to explore this management option and develop suitable plans for moving forward. Given the monk seal's declining status, the Commission believes that the Service should initiate a testing and assessment phase as soon as possible to assess whether a large-scale translocation is appropriate. If the results are promising, then a large-scale program should be developed that incorporates adaptive management principles and public review and comment.

To organize such an effort, the Marine Mammal Commission recommends that the National Marine Fisheries Service consult with the Hawaiian Monk Seal Recovery Team and key recovery program partners to prepare a strategic Hawaiian monk seal translocation plan. The plan should include both assessment and implementation phases for moving a large number of juvenile seals from the NWHI to the main Hawaiian Islands. When the seals reach ages four or five, they would be returned to the NWHI. Based on that plan, the Service should then proceed with all due haste to prepare associated permit applications and environmental impact statements to carry out the

program in a manner consistent with provisions of the Marine Mammal Protection Act, the Endangered Species Act, and the National Environmental Policy Act.

To begin evaluating this approach, the Commission suggests a trial that moves an equal number of seals to and from the main Hawaiian Islands. This would avoid any possible concern about increasing the number of seals in the main Hawaiian Islands until a decision is made about the merits of a large-scale translocation. For example 10 newly weaned pups born in the NWHI could be moved to the main Hawaiian Islands while 10 four- or five-year-old seals born and reared in the main Hawaiian Islands are moved to the NWHI. The survival rate of seals moved to the main Hawaiian Islands could be compared to a control sample of seals at the source location to determine if survival rates increase. Similarly, moving seals to the NWHI would provide a basis for assessing survival and reproductive success of newly maturing seals from the main Hawaiian Islands.

Timing is critical for this recovery action. At the rate of decline in the NWHI over the past five years, pup production could fall to about 80 pups a year by 2015. Each year implementation of this translocation is delayed, its potential effectiveness is diminished. The Commission believes that the assessment phase of this work should begin as soon as possible (i.e., 2011 or, at the latest, 2012). A decision to combine assessment and implementation phases into a single permit application and environmental impact statement could result in considerable delay, resulting in lost time and opportunity to develop this approach. As an alternative, the assessment phase could be authorized under the provisions of a research permit, and scientists could start testing or developing the different components of this sort of approach as soon as the permit is approved. Any large-scale translocations could then be conducted under an enhancement permit. However the Service decides to approach this effort, it must be mindful of the fact that the population cannot tolerate a prolonged delay due to bureaucratic inefficiency or indecision.

Shark Predation

In the mid-1990s shark predation on pre-weaned and newly weaned monk seal pups increased sharply at French Frigate Shoals, and sharks are now a major source of pup mortality at that site. Information presented at the Commission's December meeting indicates that a small portion of the atoll's Galapagos shark population is responsible for the predation. To reduce this source of pup mortality, the Service proposes to remove up to 20 Galapagos sharks found within 400 m of atoll pupping beaches by use of drum lines, a rapidly deployed shore line net, a hand line, and other means. Because the Service's assessment of the problem is well supported and proposed action is necessary, the Marine Mammal Commission recommends that the National Marine Fisheries Service proceed with the proposed removal of up to 20 Galapagos sharks near monk seal pupping beaches at French Frigate Shoals in 2010. At the end of the season, results of that work should be assessed promptly, in consultation with the recovery team and partner agencies, to determine what if anything further should be done to reduce shark predation in 2011 and beyond.

Marine Debris

Over the past three decades, biologists have found nearly 300 entangled seals on NWHI beaches and disentangled about 200 of them. Although most of the other entangled seals were able to free themselves, eight have been found dead. An unknown, but potentially significant number of additional monk seals likely have drowned after becoming entangled at sea where their deaths would be neither observed nor recorded. Most affected seals are juveniles, and most entangling debris is from derelict nets and other types of fishing gear. The two main actions to reduce entanglement-related mortality are disentangling seals and removing hazardous debris from beaches (begun in the 1980s) and surrounding coral reefs (begun in the late 1990s). Because such debris kills and injures many other reef species, including seabirds, sea turtles, fishes, and corals, the Coral Reef Ecosystem Division of the Pacific Islands Fisheries Science Center has organized cooperative interagency efforts to remove debris from nearshore waters around the various islands and atolls in the NWHI. In 2005 clean-up efforts were reduced to what were thought to be appropriate maintenance levels, but accumulation rates have proven to be greater than estimated.

Vessel support for debris removal has been provided by the Coast Guard and the National Oceanic and Atmospheric Administration. In 2009 the National Marine Debris Program contributed $100,000 and the Coral Reef Ecosystem Division contributed $225,000. These funding levels are expected to continue until 2012. Because accumulation rates are higher than predicted, the Papahānaumokuākea Marine National Monument provided an additional $225,000 in 2009, allowing an additional 60 days at sea. Although it is difficult to determine how many monk seals have been saved, there is little doubt that the removal of debris has prevented some monk seal deaths and greatly improved that status of the reef ecosystems. The Marine Mammal Commission recommends that the National Marine Fisheries Service work closely with the agencies leading the effort to remove debris from the NWHI and, as appropriate, use a portion of its annual monk seal appropriation to support debris removal near monk seal pupping beaches.

Management of Hawaiian Monk Seals in the Main Hawaiian Islands

Monk seal trends in the NWHI and main Hawaiian Islands indicate that the species' recovery may soon depend heavily on reoccupation of the main Hawaiian Islands. Although present in low numbers before the 1990s, over the past two decades the number of sightings and births of Hawaiian monk seals in the main Hawaiian Islands have increased steadily. Perhaps 150 seals now occur on the beaches and in the waters around the main Hawaiian Islands, but they are difficult to assess because they are widely scattered, often in remote locations. Nonetheless, the best available information suggests that if current trajectories persist, the total number of seals in the main Hawaiian Islands will exceed those in the NWHI in 15 years.

Development of a Main Hawaiian Islands Hawaiian Monk Seal Research Plan: To date, monitoring in the main Hawaiian Islands has relied largely on sighting histories of tagged or scarred individuals. In 2009 the Service used part of its funding increase to evaluate aerial surveys for collecting data on seal abundance and distribution in the main Hawaiian Islands. The Commission

supported that effort but is not convinced that aerial surveys will suffice for monitoring long-term trends. During the Commission's meeting, staff of the Pacific Islands Fisheries Science Center indicated that they are beginning to develop a main Hawaiian Islands Hawaiian monk seal research plan. The Commission concurs with the need for such a plan because the information available on monk seals in the main Hawaiian Islands is not sufficient to guide recovery actions. To address that shortcoming, the Marine Mammal Commission recommends that the National Marine Fisheries Service consult with the Hawaiian Monk Seal Recovery Team as well as its multiple recovery partners to complete a comprehensive, long-term main Hawaiian Islands research plan in the coming year. The plan should include a monitoring strategy describing how the Service will collect data on annual abundance, pup production, age structure, age-specific survival, habitat-use patterns, diet and foraging patterns, success of recovery actions, seal/human interactions, and other information comparable to data now collected at NWHI breeding colonies. It also should investigate and guide the development of aversive conditioning and translocation techniques to discourage monk seals from using areas where they are exposed to risks associated with human interactions. Because of the broad range of research needed in the main Hawaiian Islands, the Marine Mammal Commission also recommends that the National Marine Fisheries Service provide the Pacific Islands Fisheries Science Center sufficient resources to dedicate at least one member of its staff to work fulltime to coordinate, oversee or direct, and help conduct all main Hawaiian Islands Hawaiian monk seal research activities under the plan.

Development of a Main Hawaiian Islands Hawaiian Monk Seal Management Plan: Although reoccupation of the main Hawaiian Islands may be the brightest hope for monk seal recovery, it raises several major management challenges because of the resulting increase in interactions with fishermen, swimmers, and people using the same beaches used by seals to haul out, rest, or give birth to pups. The magnitude and importance of this challenge were underscored in 2009 when three seals were deliberately killed and a tourist was badly bitten when she inadvertently swam too close to a mother and pup.

The Revised Hawaiian Monk Seal Recovery Plan adopted in 2007 called for preparing a main Hawaiian Islands management plan. This plan has yet to be completed because the Service's Pacific Islands Regional Office has not had staff that it could dedicate exclusively to Hawaiian monk seal management issues. This past summer the Office used additional funding provided by Congress to hire a fulltime Hawaiian Monk Seal Recovery Coordinator. At its annual meeting, the Service advised the Commission that the primary tasks of the new coordinator will include the completion of the main Hawaiian Islands management plan. The Marine Mammal Commission commends the National Marine Fisheries Service for filling this much needed position and recommends that the Service consult with the Hawaiian Monk Seal Recovery Team as well as its multiple recovery partners to complete a comprehensive, long-term main Hawaiian Islands management plan in the coming year.

Given the limited available staff, the Service will require the assistance of other concerned federal, state, local, and private parties to address monk seal management needs. For that reason, the main Hawaiian Islands plan must be developed in cooperation with partner agencies and groups.

Based on presentations at the Commission's annual meeting, the Service already has taken significant steps to enlist assistance from partner agencies. To ensure that the plan accurately reflects their envisioned roles and involvement, the Commission suggests that the Service convene a workshop or meeting to discuss and identify future roles and responsibilities in the main Hawaiian Islands monk seal recovery program so that they can be incorporated into the main Hawaiian Islands plan.

With regard to organization of the plan, the Commission suggests that major sections include (1) volunteer monk seal response networks, (2) public education and outreach efforts for each of several specific sectors of the public (e.g., recreational fishermen, commercial fishermen, the Native Hawaiian community, other Hawaiian residents, and tourists), (3) actions to manage seal distribution (e.g., aversive conditioning and relocating seals to minimize the human interactions that place seals at risk), (4) responses to distressed or nuisance seals (e.g., seals that must be captured and handled due to hookings, entanglements, or human safety concerns), (5) monk seal care facilities (e.g., arrangements for holding and treating seals for short-term and long-term care), and (6) enforcement (e.g., responses to reports of harassment). In addition, the plan should identify mechanisms to coordinate interagency activities over time, additional staff requirements, and estimated costs. Finally, the Commission believes this plan should be developed separately from any plans to translocate seals to and from the main Hawaiian Islands. Completion of a main Hawaiian Islands management plan is too important and includes too many independent needs to be merged in any way with what may be a highly controversial translocation planning and approval process.

The Hawaii Department of Land and Natural Resources: Hawaii's Department of Land and Natural Resources is surely an essential partner in monk seal recovery efforts, particularly in the main Hawaiian Islands. The Department has provided vital assistance in responding both to routine seal haul-outs and emergency situations, conducting public outreach and community awareness, and carrying out enforcement actions. Because of the current budget crisis, the Department will have to rely more heavily than in the past on federal partnerships, including those with the National Marine Fisheries Service. Funding assistance through section 6 of the Endangered Species Act will be more important than ever. During its meeting, the Commission was advised that the state has developed a multi-year grant application for funding through this program. The Marine Mammal Commission recommends that the National Marine Fisheries Service work closely with the Department of Land and Natural Resources to ensure development and approval of a section 6 Endangered Species Act grant application that will enable the Department to maintain a strong Hawaiian monk seal conservation program and continue to complement the Service's monk seal recovery activities.

Volunteer Monk Seal Response Networks: Many concerned and committed residents of Hawaii help with routine but important research and management activities. On several islands, volunteers have organized and committed time and money to protect seals that haul out on busy public beaches, collect and report sightings of individual seals, prepare and distribute public outreach materials, and present programs on monk seal conservation for local schools and visitors. To maximize such benefits, the Service needs a dedicated staff member to work with volunteer networks and instruct them on how to collect and report scientific data, behave when near seals on beaches or in the water, and provide various audiences with accurate information. Working with

such networks can be an exceedingly cost-effective way to educate the public and promote monk seal conservation in the main Hawaiian Islands. The Marine Mammal Commission therefore recommends that the National Marine Fisheries Service provide an additional staff position in Pacific Islands Regional Office to work fulltime with volunteer networks on different islands and assist them in developing and organizing Hawaiian monk seal conservation activities. This individual should serve as the principal point of contact between the Service and volunteer networks and should have responsibility for encouraging, coordinating, and providing such assistance as possible to volunteers.

Hawaiian Monk Seal Health Care Facilities: To manage the recovery of the Hawaiian monk seal, the Service must be able to provide health care for seals that have sustained injuries from human interactions (e.g., hooked by fishing gear), pups that have been abandoned by their mothers because of disturbance, juveniles in poor condition and requiring a period of captive care, and seals that may be part of a translocation effort. Currently the Service has no such facility and has had to rely on inadequate facilities at Kewalo Basin, SeaLife Park, the Waikiki Aquarium, and shore pens erected on the Kaneohe Marine Corps Air Base. Although the latter three facilities have been generous in their support, they are not able to provide care at the level needed. With growing numbers of seals in the main Hawaiian Islands, such temporary and limited arrangements are not sufficient and can lead to more problems than they resolve. The recovery effort needs a dedicated monk seal care facility and staff that can provide expert care ranging from long-term rehabilitation to surgical care and ophthalmology.

To meet this need, the Pacific Islands Regional Office has been working with The Marine Mammal Center, a non-profit organization that has offered to raise private funds to build a monk seal health care facility (estimated cost between $1 and $1.5 million). The Center has obtained conceptual approval from the National Energy Laboratory Hawaii Authority to develop a monk seal health care facility on its property in Kona on the island of Hawaii, and the Center's veterinary and husbandry staff is willing to operate the facility. However, the Center may not be able to raise funds to operate the facility, and the Service will need to secure the necessary resources to do so. The Marine Mammal Commission recommends that the National Marine Fisheries Service (through the Pacific Islands Regional Office) continue to work with The Marine Mammal Center to develop a long-term health care facility for Hawaiian monk seals and take the lead responsibility for securing funding to cover operating costs.

Public Education and Outreach: Last year three monk seals were deliberately shot and killed by people opposed to seals reoccupying the main Hawaiian Islands. This situation is unacceptable and underscores the need for vigorous public education and outreach efforts to ensure that people and seals are able to coexist in the main Hawaiian Islands. In addition, because seals routinely haul out on public beaches throughout the main Hawaiian Islands, extensive ongoing efforts are necessary to ensure that visitors and residents are informed regarding proper conduct when seals are encountered. Reaching all sectors of the Hawaiian community will require partnerships with other agencies and groups and a dedicated effort to prepare and update public information on the biology and ecology of monk seals and their status and to promote the public's interest and cooperation in

their protection and conservation. The Pacific Islands Regional Office, by itself and with other agencies, has prepared various brochures, Web sites, newsletters, and public service announcements. However, support has not yet been developed for an ongoing strategic public education campaign targeting key community sectors.

During the Commission's meeting, the Service noted that it used a portion of its increased funding in 2009 to contract with a professional public education firm to conduct a survey of public perceptions and attitudes toward monk seals. The survey results will be used as a basis for developing a targeted outreach program. Federal agencies often lack the kind of expertise needed to run such a program, and the Marine Mammal Commission recommends that, instead of implementing such an outreach program itself, the National Marine Fisheries Service consider contracting with a professional firm to develop education materials and work with agency partners to implement a cooperative, coordinated education and outreach program that is focused on key community segments likely to interact with seals and that will deliver a consistent and well articulated conservation message. The need for such a program is urgent, and the Marine Mammal Commission also recommends that the Service begin the contracting process to address community outreach needs immediately.

Aversive Conditioning of High-risk Seals: In recent years several seals have hauled out on popular public beaches and become conditioned to interacting with people. Some of these seals have adopted behaviors (e.g., begging for food and human attention) that put them and the involved public at a high risk of injury. In a few cases, seals have chased or bitten people. In other cases, the seals have been at risk of contracting diseases carried by dogs or feral animals. Although many seals appear to prefer remote areas away from human activity, others do not. To address such risks, the Service has had to capture and move a number of seals.

The Commission believes steps should be taken to discourage seals from frequenting or hauling out in areas where they are at high risk or where they may put the public at high risk. Two management approaches that may be useful include (1) capture and transport of pups born on popular beaches to remote locations, and (2) development of an aversive conditioning strategy to discourage seals from using public areas such as marinas and popular beaches.

During the Commission's meeting, the Service reported that it recently had convened a workshop to consider its options for addressing seal/human interactions. The Marine Mammal Commission supports these efforts and recommends that the Service review its workshop results and then fund studies to develop and test promising techniques to dissuade seals from becoming acclimated to people or frequenting areas that could place seals or people at risk. The Service should develop clear policies regarding when, where, and what steps can be taken and by whom to discourage seals from interacting with people or using inappropriate habitats. Once the Service has developed these policies, it must explain them to the public as part of the outreach program. The Service also should consider convening a habitat suitability workshop to identify geographic areas in the main Hawaiian Islands where seals can be moved when such measures are necessary.

Please contact me if you have questions about our recommendations and comments or if the Marine Mammal Commission can be of any assistance in furthering your agency's research and recovery efforts for the Hawaiian monk seal.

Sincerely,

Timothy J. Ragen, Ph.D.
Executive Director

Cc: Mr. Sam Pooley
Mr. William Robinson