

MARINE MAMMAL COMMISSION
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9 August 2004

VADM Conrad C. Lautenbacher, Jr., Ph.D.
Under Secretary for Oceans and Atmosphere
U.S. Department of Commerce
14th and Constitution Avenue N.W., Room 5128
Washington, D.C. 20230

Dear Admiral Lautenbacher:

The National Marine Sanctuaries Program of the National Ocean Service (Service) manages the Northwestern Hawaiian Islands (NWHI) Coral Reef Ecosystem Reserve (Reserve). Executive Orders 13178 and 13196 governing the Reserve direct that managers seek to “ensure the comprehensive, strong, and lasting protection of the reef system and related marine resources and species” using the best available science and a precautionary approach favoring resource protection when information is lacking. The Executive Orders also direct the Secretary of Commerce to initiate the process to designate the Reserve as a national marine sanctuary and state that “[I]n doing so the Secretary shall supplement or complement the existing Reserve.” This direction clearly links the goals and management principles of a prospective sanctuary with those of the existing Reserve. The National Marine Sanctuaries Program is currently developing guidance to the Western Pacific Fishery Management Council on drafting regulations for various types of fishing that might be allowed in a NWHI national marine sanctuary.

Because of our concerns for Hawaiian monk seals and their habitats, the Marine Mammal Commission has reviewed and commented on fishery management efforts in this region since the early 1980s. We have also participated in monk seal recovery efforts through the Hawaiian Monk Seal Recovery Team and several recovery program reviews, and in habitat protection efforts as a non-voting member of the Reserve Advisory Council (RAC). Recognizing the importance of future fishing regulations for managing this area, we write now to comment on the needed guidance for developing those regulations and to request that you ensure that the guidance the Service gives to the Fishery Management Council is in keeping with the long-term management needs for this truly unique and internationally important ecosystem.

The Reserve management and sanctuary designation process included appointing a RAC comprised of concerned citizens, state officials, and representatives of federal agencies. The RAC advises the Service on management of the Reserve and potential sanctuary. Commission representatives participated in several RAC fishing subcommittee meetings that led to the development of recommendations regarding management of fishing in a prospective NWHI sanctuary and also attended the 7–8 July 2004 meeting at which the RAC approved goals and objectives for managing fishing. Our participation in those efforts, and our own detailed reviews of the ecological characteristics of the NWHI as well as the history and impacts of previous fishing that has occurred in the region, provide the basis for recommending conservation measures necessary to protect Hawaiian monk seals and their habitats. This letter provides the Commission's

recommendations on management options for fisheries in the NWHI, and the attachment to this letter provides additional description of the basis for those recommendations.

Major Recommendations

To prevent region-wide impacts as a result of fishing, particularly commercial fishing targeting reef-dependent species, the Commission believes that standards set forth in the Executive Orders for the NWHI Reserve require a more restrictive management approach in a prospective national marine sanctuary than might normally be developed under the Magnuson–Stevens Fishery Conservation and Management Act. As discussed in more detail in the attachment, because of the limited data and understanding for this ecosystem, and the demonstrated impacts that commercial fisheries have already had, the National Ocean Service should require a burden of proof standard whereby commercial fishing is not allowed unless it can be shown that it will not affect the ecological integrity of the sanctuary. The Marine Mammal Commission therefore recommends that the National Ocean Service include the following provisions in the guidance it provides to the Western Pacific Fishery Management Council:

- that the commercial crustacean fishery remain closed throughout the prospective NWHI national marine sanctuary;
- that the commercial bottomfish fishery be closed within one year of sanctuary designation and, in the interim, bottomfish fishing be limited by means of various restrictions including those set forth in the Executive Orders;
- that commercial longline fishing for pelagic species continue to be prohibited in waters within 50 nautical miles of the NWHI;
- that commercial fishing for pelagic species by trolling, pole and line, and handline be allowed to continue in the prospective sanctuary subject to a cap equivalent to the catch levels during the year prior to Reserve designation, and other restrictions (e.g., zoning, sanctuary permit requirements, reporting of catch levels, etc.) needed to ensure that the integrity of the ecosystem is protected;
- that commercial fishing for precious corals be prohibited throughout the prospective sanctuary;
- that recreational fishing by private and charter vessels using pole and line and trolling methods be allowed to continue in the prospective sanctuary subject to a cap set at levels existing during the first year after sanctuary designation, bag and size limits, catch and release requirements, time and area closures, sanctuary permit and reporting requirements, a ban on the sale or barter of caught fish, and other measures as may be appropriate;
- that commercial fishing for the aquaria and live fish trade, and coral, live rock, algae, sponges, and other invertebrates, be prohibited in the prospective sanctuary;
- that noncommercial Native Hawaiian subsistence, cultural, and religious uses be allowed to continue in the prospective sanctuary to the extent consistent with existing law and subject to permitting and catch reporting requirements;
- that fishing for sustenance be allowed in the prospective sanctuary only as incidental to other permitted activities with all catch consumed while in the NWHI and subject to regulations set forth in the sanctuary management plan; and
- that all fishing in the prospective sanctuary that is not specifically allowed by regulations be prohibited.

Although all of these recommendations regarding fisheries are important, two stand out in regard to the need to recover Hawaiian monk seals and restore the NWHI ecosystem. The impacts already inflicted by commercial lobster and bottomfish fishing on target and possibly non-target species in the NWHI have been well documented. Lobster fishing has been prohibited since 2001. Bottomfish fishing is currently ongoing and would be allowed to continue under the Executive Orders but should be phased out and subsequently suspended for an indefinite period. In both cases, closures of an indefinite period are needed to allow recovery of already affected stocks to levels approaching their pre-exploitation condition and to develop better information with which to assess bank-specific fishery management needs.

We note that, although in some cases our recommendations call for a complete and indefinite closure of fisheries, that does not necessarily mean that opportunities for such fishing are precluded forever. We would anticipate that if a sanctuary is created, the Service will revisit management needs as part of their standard five-year management plan reviews. At such times, the Service could modify restriction on fisheries, subject to precautionary and ecosystem-based management principles and appropriately placed burden of proof.

The Commission believes that these recommendations reflect an appropriate approach to fishing in a NWHI coral reef ecosystem national marine sanctuary, if one is to be created. Our advice is based principally on the need to recover the endangered Hawaiian monk seal population and also on the need to protect habitats and ecosystems of importance to monk seals. We note also that our recommendations are consistent with advice provided to the Service by the RAC, which in most cases unanimously agreed with the recommended measures. Given their broad representation reflecting concerned parties, we believe the RAC's recommendations should carry great weight and be adopted as provided. If you or your staff have questions regarding our comments and recommendations, please call.

Sincerely,



David Cottingham
Executive Director

Attachment

cc: Mr. David Allen
Mr. Daniel Basta
Ms. Mamie Parker
Mr. Robert P. Smith
The Honorable Peter T. Young
Members of the Reserve Advisory Council

**MARINE MAMMAL COMMISSION RECOMMENDATIONS FOR
FISHERIES MANAGEMENT IN A PROSPECTIVE
NORTHWESTERN HAWAIIAN ISLANDS NATIONAL MARINE SANCTUARY**

The small, isolated reefs that form the core of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve and prospective sanctuary are exceedingly vulnerable to human impact. They also are critical habitat for almost all the remaining endangered Hawaiian monk seals. Because fishing, particularly commercial fishing, is the human activity with perhaps the greatest potential for causing region-wide ecological effects, it is essential that the guidance that the National Ocean Service gives to the Western Pacific Fishery Management Council for developing fishing regulations be clear and specific.

In the Marine Mammal Commission's view, the fundamental need with respect to developing appropriate management measures for the NWHI coral reef ecosystem and associated species is recognition that, despite stretching over some 1,200 miles, this system is comprised of a series of very small banks separated by large, deep, oceanic regions. The isolated fish and shellfish populations at each bank are exceedingly vulnerable to overfishing that can cause long-term alterations in species abundances and ecosystem interrelationships. For example, overfishing at Hancock Seamount in the western end of the NWHI chain in the 1960s caused a severe depletion of two target species that have shown no signs of recovery over the last 40 years. Although fish populations at banks are separated by intervening stretches of deep water, they also are tenuously linked by poorly understood larval recruitment and ocean current patterns. That is, larvae produced by a population at one bank may be a major source of recruitment for other banks, and this may vary from year to year depending on small interannual differences in regional ocean currents. In this regard, the fish and invertebrate populations in the NWHI are believed to be a major recruitment source for important commercial and recreational species in the main Hawaiian Islands. Therefore, resource conservation in the NWHI can have direct and significant benefits for fishing success in the main Hawaiian Islands.

For many species of fish and crustaceans, a small number of older, larger individuals produce a disproportionately large percentage of eggs and larvae. It is those large individuals that are typically targeted and removed by fishing. Given the small size of NWHI reefs, even moderate levels of fishing can significantly reduce a bank's abundance of large individuals. This will result not only in significantly reducing bank-specific reproductive potentials, but also could affect recruitment at other banks. Because these relationships are poorly known, it is not possible to predict how reef ecosystems will respond to such removals. Therefore, ecosystem protection and precautionary management as mandated by the governing Executive Orders require that the abundance and population structure of key species remain functionally intact at all banks in the NWHI.

While the vulnerable nature of fish and invertebrate populations at individual banks requires a very conservative management approach, we do not believe that all fishing must necessarily be precluded to be consistent with the Reserves's and prospective sanctuary's ecosystem management standards. However, management measures more stringent than those governing past commercial fishing are needed to achieve the Executive Orders' ecosystem protection goals. In some cases where evidence exists that fishing has already reduced populations and altered species interrelationships, fishing needs to be suspended indefinitely to allow the ecosystem to recover. Given the absence of basic information on the status and ecology of commercially harvested species and bycatch, we believe that time and further research are essential for developing appropriate

management measures that could avoid perturbations to fundamental ecosystem processes and species relationships. Some commercial fisheries may be allowed to operate in the future, if and when it can be shown that their activities will not disrupt the ecological integrity of the sanctuary.

A brief discussion of the rationale for the Commission's recommendation on each of the potential fisheries follows.

Commercial Crustacean (Lobster) Fishing

The Executive Orders cap both landings and the number of permits for all commercial fisheries in the NWHI set at the levels in effect during the year prior to the 4 December 2000 Reserve designation. The crustacean fishery was not addressed specifically in the Executive Orders. However, as there were no lobster landings from the NWHI during the year prior to designation, the Executive Orders require that there be no commercial lobster fishing in the Reserve.

The NWHI lobster fishery has exhibited classic signs of overfishing and stock depletion. At Necker Island, Gardner Pinnacles, and Maro Reef, the three most heavily fished banks, catch per trap haul of legal-sized spiny lobster declined by 75 percent between 1984 and 1991 showing a significant depletion in the both the size and number of reproducing spiny lobsters. As other banks have been fished, similar declines have been observed. As spiny lobster catch levels declined, slipper lobsters became an increasingly large part of the catch. Lobster stocks became severely depleted by the early 1990s, and in 1993 an emergency closure was imposed. However, from 1994 through 1999 the fishery was reopened even though there was little evidence of recovery in lobster abundance. Despite new catch limits that were less than 10 percent of landings in the mid-1980s, catch per unit of effort remained a third that of the early 1980s. There is now evidence that slipper lobsters have replaced spiny lobsters in much of the latter's former habitat, probably due to excessive harvesting. Lobsters are a known prey species of Hawaiian monk seals, and depletion of the lobster stock undoubtedly reduced an important food resource for them. Although natural climatic events may have contributed to the decline in lobster stocks, inappropriate and inadequate management clearly has been a major factor. How long it will take to restore depleted lobster stocks to their natural population levels and structure is unknown.

In addition, bycatch in the commercial lobster fishery has removed thousands of octopi, as well as other crustaceans and fishes, from the small bank ecosystems with unknown effects on those populations. Octopi, crabs, and reef fishes also are known to be prey of Hawaiian monk seals. As monk seal abundance, particularly at French Frigate Shoals, has declined over the past decade for reasons that appear to be related to limited prey availability, the precautionary management and ecosystem protection standards of the Executive Orders require that the NWHI lobster fishery remain closed pending a better understanding of monk seal diets and the status of their prey species, and recovery of the lobster stocks to pre-exploitation levels. Therefore, the Marine Mammal Commission recommends that the commercial crustacean fishery remain closed throughout the prospective NWHI national marine sanctuary.

Commercial Bottomfish Fishing

The Executive Orders cap both the catch level and the number of fishing permits for the NWHI commercial bottomfish fishery at levels not to exceed those in effect during the year prior to Reserve designation. Although landings during that year are uncertain, there were 11 permits issued for the 2000 bottomfish fishing season, including six for the Mau Zone at the eastern end of the NWHI and five for the Ho'omalū Zone in the central and western end of the chain. The Executive Orders also established various areas closed to bottomfish fishing.

The bottomfish fishery is currently managed using an approach similar to the one that led to depletion of NWHI lobster stocks. The plan uses a definition of overfishing that is identical to that in the crustacean fishery management plan (i.e., 20 percent of the spawning ratio that would occur in the absence of fishing). Little is known about the reproduction, early life history, or bank-specific population status of individual bottomfish species, and this definition of overfishing relies on the same stock recruitment modeling approach that was demonstrated to be inadequate to protect NWHI lobster populations. As is the case for lobsters, there is evidence that some of the most important bottomfish stocks, particularly those for onaga, have already sustained significant reductions in both overall abundance and size of individuals. Bottomfish catch levels declined significantly soon after intensive commercial fishing began in the late 1970s and have not improved under the existing management program. Also, like the crustacean plan, the bottomfish plan allows the harvest of multiple species but fails to recognize the status of, or effect of fishing on, individual species and includes virtually no measures to protect individual bank-specific fish populations.

Traditional Native Hawaiian knowledge also recognizes a significant decline in the number and size of fish caught in the NWHI. One of their representatives on the RAC, an early participant in the bottomfish fishery, has strongly urged that this fishery be closed to allow recovery of the affected fish stocks.

The many individual species of snappers and groupers that make up the bottomfish species complex represent a major predatory component of the various bank ecosystems. By treating them as one stock for management purposes, there is a high risk of depleting some species components of the "stock," thereby altering the species composition and predator-prey relationships at individual banks. As noted above, this could significantly diminish recruitment at other banks, including overfished areas in the main Hawaiian Islands. The fishery also takes hundreds of sharks and thousands of other top reef predators, further threatening the region's ecological integrity. With almost no knowledge of the status or age structure of bank-specific populations of targeted and non-target species being removed, the current fishery management system is not consistent with the precautionary management mandate of the Executive Orders. Therefore, the Marine Mammal Commission recommends that the commercial bottomfish fishery be closed within one year of sanctuary designation and, in the interim period, bottomfish fishing be limited by means of various restrictions, including those set forth in the Executive Orders.

Commercial Longline Fishing for Pelagic Species

Commercial longline fishing for pelagic species (e.g., tuna and swordfish) has been precluded from waters within 50 nautical miles of the NWHI since 1992 to prevent interactions with Hawaiian

monk seals. As there was no commercial longline fishing for pelagic species undertaken in the Reserve in the year prior to its designation, this fishery also is prohibited within Reserve boundaries by provisions of the Executive Orders. Because the monk seal population remains endangered and subject to taking in any pelagic longline fishery, the Marine Mammal Commission recommends that commercial longline fishing for pelagic species continue to be prohibited throughout the prospective sanctuary.

Commercial Trolling, Pole and Line, and Handline Fishing for Pelagic Species

Commercial fishing for pelagic species by trolling, pole and line, and handline is carried out principally by transiting bottomfish fishing vessels that typically target tunas, mahi mahi, ono, and other pelagic species. The Executive Orders allow this type of fishing to continue subject to a cap equivalent to the catch levels during the year prior to Reserve designation. Based on the information available to the Commission, it appears that there are a limited number of boats engaged in this fishery and that the target species are part of large Pacific stocks that are not directly tied to the coral reef ecosystems that provided the impetus for designating the Reserve and prospective sanctuary. Therefore, the Marine Mammal Commission recommends that commercial fishing for pelagic species by trolling, pole and line, and handline be allowed to continue in the prospective sanctuary subject to a cap equivalent to the catch levels during the year prior to Reserve designation, and other restrictions (e.g., zoning, sanctuary permit requirements, reporting of catch levels, etc.) needed to ensure that the integrity of the ecosystem is protected .

Commercial Precious Coral Fishing

Although there has been some interest in commercial fishing for precious corals in the NWHI, no such fishing occurred prior to Reserve designation, and precious coral harvesting is therefore precluded by the Executive Orders. Growth rates of precious corals in the NWHI are unknown, but for similar species in the main Hawaiian Islands, growth is exceedingly slow. Precious coral beds are therefore very vulnerable to long-term impacts as a result of harvesting. Recent studies have documented that Hawaiian monk seals forage in precious coral beds, and depletion of those beds also could adversely affect habitats important for prey needed by the seals. Therefore, the Marine Mammal Commission recommends that fishing for precious corals be prohibited throughout the prospective sanctuary.

Recreational Fishing

The Executive Orders allow a continuation of recreational fishing in the NWHI subject to a cap at levels prior to the date of Reserve designation. Data to define the species harvested and catch levels existing prior to designation apparently do not exist. Because of the remoteness of the NWHI, the number of recreational fishermen using the area is small, and their capacity to catch fish is limited due to the size of the vessels involved. The Commission believes that it should be possible to regulate recreational fishing such that it will have a negligible impact on coral reef- associated fish populations and the ecological integrity of a sanctuary. The Marine Mammal Commission therefore recommends that recreational fishing by private and charter vessels using pole and line and trolling methods be allowed to continue in the prospective sanctuary subject to a cap set at levels existing during the first year after sanctuary designation, bag and size limits, catch and release requirements,

time and area closures, sanctuary permit and reporting requirements, a ban on the sale or barter of caught fish, and other measures as may be appropriate.

Fishing for Aquaria and Live Fish Trade, and Coral, Live Rock, Algae, Sponges, and Other Invertebrates

The Executive Orders explicitly prohibit the taking of coral and live rock in the NWHI Reserve. Fishing for the aquaria and live fish trade, and for algae, sponges, and other invertebrates, is not specifically addressed. Information on the status of most of these species is either absent or very limited. Where removals of these types of organisms have occurred in other areas, including the main Hawaiian Islands, species abundances have often been greatly reduced. The risks of such depletions are particularly great at reefs in the NWHI because of their small size, and a precautionary management approach would not allow fishing for these species. Therefore, the Marine Mammal Commission recommends that fishing for the aquaria and live fish trade, and for coral, live rock, algae, sponges, and other invertebrates, be prohibited in the prospective sanctuary.

Native Hawaiian Subsistence and Cultural Fishing

The Executive Orders allow noncommercial Native Hawaiian subsistence, cultural, and religious uses to continue to the extent consistent with existing law and direct the Secretary of Commerce to work with Native Hawaiian interests to identify areas where those activities can be conducted without injury to the NWHI coral reef ecosystem. This appears to be a reasonable approach for accommodating such needs, and the Marine Mammal Commission therefore recommends that noncommercial Native Hawaiian subsistence, cultural, and religious uses be allowed to continue in the prospective sanctuary to the extent consistent with existing law and subject to permitting and catch reporting requirements.

Sustenance Fishing

Almost all vessels traveling to the NWHI for research, recreation, commercial fishing, management, or other purposes engage in various types of fishing for the purpose of direct consumption by crew and passengers aboard the vessel during the voyage. This type of fishing was not explicitly addressed in the Executive Orders that created the Reserve. Given the small number of vessels and people likely to engage in this activity, the Commission believes that it should be possible to manage sustenance fishing in such a manner that it is not likely to cause a significant impact on coral reef resources or the integrity of a sanctuary. Therefore, the Marine Mammal Commission recommends that fishing for sustenance be allowed in the prospective sanctuary only as incidental to other permitted activities with all catch to be consumed while in the NWHI and subject to regulations set forth in the sanctuary management plan.

Other Fishing

In the past, fisheries such as a bottom longline fishery for sharks have arisen unexpectedly in the NWHI and caused problems for resource managers. To avoid such problems in the future, the Marine Mammal Commission therefore recommends that all fishing in the prospective sanctuary that is not specifically allowed by regulations be prohibited.