**Comments to the United States Fish & Wildlife Service**

***Draft Supplemental Environmental Impact Statement***

***for the***

***Translocation of Southern Sea Otters***

Comments Submitted by Defenders of Wildlife, Friends of the Sea Otter, The Humane Society of the United States, The Ocean Conservancy, Sea Otter Defense Initiative, a program of Earth Island Institute's International Marine Mammal Project, and developed with the assistance of the Law Offices of Donald B. Mooney, Ocean Research, Conservation, and Solutions Consulting, and Perkins Coie, LLP.

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## Exhibits

## I. Introduction

In October 2005, the United States Fish and Wildlife Service (Service) published a Draft Supplemental Environmental Impact Statement (DSEIS) for the *Translocation of Southern Sea Otters*. The stated purpose of the supplement is to "evaluate the impacts of the southern sea otter translocation plan as described in [the Service's] 1987 environmental impact statement, using information obtained over the 18 years since the plan's inception, and to evaluate alternatives to the current translocation program, including termination of the program or revisions to it." *See* DSEIS, 2.

The history of the effort to recover the southern sea otter (*Enhydra lutris nereis*) under the Endangered Species Act (ESA) begins with the listing of the subspecies as threatened in 1977. The Service approved the first recovery plan for the southern sea otter in 1982. This plan recognized translocation of sea otters as an "effective and reasonable recovery action." *See* Final Environmental Impact Statement (FEIS), 1. The purpose behind the translocation program was to relocate sea otters in two or more locations within their historic habitat, minimizing the risk and potential impact caused by a single natural or human catastrophe. In 1986, Public Law No. 99-625 was enacted to facilitate the possible translocation of sea otters. In May 1987, the Service published a final environmental impact statement (FEIS-1987 EIS) that analyzed the impacts of a program that proposed to translocate southern sea otters from California's central coast to other areas, including San Nicolas Island (SNI), located off the coast of southern California, and to establish a management zone in accordance with P.L. 99-625. Regulations accompanying the 1987 EIS spelled out the grounds upon which the translocation would be deemed a failure. The Service identified SNI as the preferred translocation site and subsequently issued a decision announcing their intent to begin the plan.

Between August 1987 and March 1990, the Service released 140 otters at SNI. Unfortunately, the program did not work as intended, and by 2004, only 32 independent sea otters remained at the Island. The Service discontinued translocating sea otters to SNI in 1990, but continued to remove sea otters from the designated management zone in order to minimize conflicts between the translocated sea otters and shellfish fisheries. Many factors relating to the status of the southern sea otter population changed over the past decade. By the mid-1990s, it became clear that the translocation program was not meeting the recovery objectives upon which the Service had implemented the program. The Service consulted with the Southern Sea Otter Recovery Team (Recovery Team) and sought public comment and dialogue, including the reinitiation of the ESA section 7 consultation process. The Service ultimately completed a draft evaluation of the translocation program. In July 2000, the Service issued a Biological Opinion (2000 BO) which determined that the

containment of southern sea otters in the designated management zone was not consistent with the requirement of the ESA to avoid jeopardy to the species.

On January 22, 2001, the Service issued a policy statement regarding the treatment of southern sea otters in the designated management zone. The notice advised that the Service would no longer capture and remove sea otters from the management zone pending completion of a reevaluation of the translocation program, which would include the preparation of a supplement to the 1987 EIS and a final evaluation of the translocation program that contains an analysis of failure criteria. A final revised recovery plan for the southern sea otter was issued in 2003 (2003 RP), concluding that maintaining the zonal management program would conflict with ESA recovery goals. The plan confirmed that the ESA's goals and requirements would be best achieved by allowing for natural range expansion, discontinuing the maintenance of the "otter-free zone," and allowing the sea otters currently on SNI to remain.

Friends of the Sea Otter, Defenders of Wildlife, the Sea Otter Defense Initiative, a program of Earth Island Institute's International Marine Mammal Project, the Humane Society of the United States, and The Ocean Conservancy (formerly the Center for Marine Conservation) have been involved in this 30-year-long discussion of southern sea otter protection and recovery efforts. As groups, representing a total membership of over ten million, concerned with the complete recovery of the southern sea otter, we welcome the opportunity to continue our dialogue with the Service through these comments. As required by the 1987 regulations, the 2000 BO and the 2003 RP, these organizations support a determination that the zonal management program has failed and that sea otters must be allowed to expand their range without limitation and be maintained at SNI. As discussed in these comments, these five organizations support Alternative 3C. In addition, Exhibit 1 is a comment letter signed by 77 scientists involved in marine mammal and related disciplines supporting this action.

The comments are organized as follows.

Section II of the joint environmental community comments sets forth the factual background of the sea otter conservation effort, beginning with the pioneering efforts of Margaret Owings and Friends of the Sea Otter in the 1960s. This discussion details the development of the zonal management concept, the enactment of the Public Law No. 99-625, the translocation of sea otters to SNI, and the subsequent events that compel a determination that restrictions on range expansion must be removed.

Section III sets forth general comments on the DSEIS. Section III.A discusses the current status of the southern sea otter. This section analyzes the reasons why zonal management must be terminated, natural range expansion promoted, and the San

Nicolas population retained for biological reasons. Section III.B provides an analysis of the failure criteria from the 1987 regulations, demonstrating that under those standards the Service is *required* to terminate zonal management. Section III.C applies the ESA and Marine Mammal Protection Act (MMPA) to this proposed action, demonstrating why termination of zonal management and retention of the San Nicolas population are required under those laws. This section also discusses how such action is consistent with, and in furtherance of, California law. Section III.D summarizes the ecological and economic benefits of terminating zonal management and allowing for range expansion, while Section III.E discusses the reasons why the adverse effects claimed by some aspects of the fishing community are overstated and why the assumptions used to derive these outcomes are incorrect. In Section III.F, the comments detail how natural range expansion is required to be consistent with public trust principles and the policies reflected in the recent reports of the U.S. Ocean Commission. In Section III.G, the reasons why this action is consistent with the California Coastal Zone Management Plan are discussed. Finally, Section III.H sets forth the proposal of our organizations for moving forward with sea otter conservation and recovery efforts.

Finally, Section IV sets forth responses to testimony and public statements made to date by various interested parties.

Taken together, the comments set forth herein provide a compelling case why, as a matter of law and policy, zonal management must be terminated, natural expansion allowed, and the SNI population retained and supported.

## II. Factual Background

### A. Listing of Southern Sea Otters under the Endangered Species Act in 1977

The southern sea otter, *Enhydra lutris nereis*, once ranged from Baja California to the Pacific Northwest.[1] Estimates of the historical population of southern sea otters in California are 16,000, and range-wide at 150,000 to 300,000 animals.[2]

During the 1700s and 1800s, commercial hunters nearly exterminated the otters, which were captured for their pelts.[3] By 1900, it was widely believed that the population had become extinct. In 1938, however, an estimated 50 survivors were discovered near the Bixby Bridge off of the Big Sur coast.[4]

Southern sea otters currently inhabit the shallow coastal wasters along San Mateo, Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara Counties, and at San Nicolas Island (SNI).[5] Under the protections of the International Fur Seal Treaty of 1911, which banned the hunting of sea otters and fur seals on the high seas, the southern sea otter population began to slowly grow larger. Additionally, in 1913, the California State legislature passed legislation to "ensure continued sea otter existence" as the otter was listed in California Fish and Game Code section 4700, which prohibits the intentional take of these animals except for scientific research.[6]

The 1970s, however, saw a continued lack of species recovery, increased scientific understanding, and the upsurge of human activities that placed the sea otters at risk. In addition, the relatively new MMPA of 1972, 16 U.S.C. § 1361 *et seq*. and ESA of 1973, 16 U.S.C. 1531, provided new tools for species protection and to facilitate species recovery.

On May 22, 1975, the Fund for Animals, Inc., requested that the Service list as endangered 216 taxa of plants and animals under the ESA. Among the species

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[1] Monterey Bay Aquarium Online Field Guide for the Southern Sea Otter: http://www.mbayaq.org/cr/sorac.asp. (All documents cited in these comments are hereby incorporated by reference for purposes of the administrative record.)

[2] M.S. SANCHEZ, Differentiation and Variability of Mitchondrial DNA in Three Sea Otter, *Enhydra lutris*, Populations (1992) (unpublished M.S. thesis, University of California (Santa Cruz)) (on file with the Center for Marine Conservation). MARINE MAMMAL COMMISSION, ANNUAL REPORT 85 (1998). *See also* D.E. Wilson et al., *Geographic Variation in Sea Otters,* Enhydra lutris, 72 J. OF MAMMALOGY 1, 22-36 (1991).

[3] *Id*.

[4] *Id.*, and Friends of the Sea Otter History and Information at: http://www.seaotters.org/About/index.cfm?DocID=2

[5] Service's Biological Opinion (1999) at 18.

[6] *Id.*

requested for listing was the southern sea otter. The majority of the taxa were listed as endangered species by the Service in the Federal Register of June 14, 1976.[7] The southern sea otter, however, was not among the species listed. The Service stated at the time that there was still a substantial amount of data that still had to be analyzed, and that the determination of the species' status under the ESA would have to be delayed.

In connection with the final rulemaking process, the Service opened the subject to public comment. The Service received 291 comments regarding the southern sea otter during this final rulemaking process.[8] Of these, 289 supported listing the southern sea otter as an endangered species.

The largest response in favor of listing came from Friends of the Sea Otter (FSO). FSO collected and mailed to the Dept. of Interior and California Department of Fish and Game (CDFG) petitions registering the names of 60,397 people urging endangered status for California sea otters. FSO's detailed comments recognized that although the sea otter population had increased since earlier in the century, the population was still small and quite vulnerable. Among the threats that FSO identified were: the possible loss of genetic diversity and impacts on the adaptability of the species; chemical, bacteriological, and metal pollution that had increased in the natural habitat range of the sea otter; the possibility of a major oil spill that could decimate a large portion of the population; and direct human kills. Comments from the California Chapter of the Sierra Club also touched on these points, and additionally laid emphasis on the issue of competition for food resources between sea otters and sport and commercial fishing. Rapid population growth, coupled with heavy sport and commercial pressures depleted the shellfish fisheries upon which the sea otters depend, and contributed to ill feelings toward, and direct kills of, sea otters. Additional comments supporting an endangered status for the southern sea otter were letters from professors and researchers in biological science fields, and the Director of the California Academy of Sciences. Their letters expressed concern regarding factors such as potential oil spills, pollution, direct killing by man, and the loss of genetic diversity within the southern sea otter population. In addition, the Service was presented with a petition that had been signed by many hundreds of people advocating an endangered designation.

The Marine Mammal Commission (Commission), in a June 1, 1976 letter, provided recommendations to the Service regarding the southern sea otter.[9] The Commission

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[7] 42 FR 2965 (January 14, 1077).

[8] All discussion of the comments received by the Service is found in 42 FR 2966.

[9] 42 FR 2966.

stated that although the exact population size and rate of growth were uncertain, it was known that the population of southern sea otters was increasing in both range and number, and, if permitted, would continue to do so. Thus, the southern sea otter was not considered to be endangered. The identified threats were problems, however, that could potentially place large numbers of the population in jeopardy. The most serious of the identified problems was the threat posed by a potential oil spill, and the large impact that it would have on the population. Taking this into consideration, the Commission recommended that the Service list the southern sea otter as a threatened species under the ESA.

The southern sea otter was listed as a threatened species under the ESA in a final rule in the Federal Register on January 14, 1977.[10] The Service, in its published final rule, evaluated the five factors found in section 4(a) of the Act. The first factor is the present or threatened destruction, modification, or curtailment of the habitat or range of the southern sea otter. The Service found that there was no question that the sea otter's range in 1977 was much reduced from its historical range. With that in mind, the Service noted that a catastrophic event such as an oil spill in that area could have devastating effects on sea otters. At the same time, the sea otter had made a comeback, seemed relatively dense in its occupied area, and did not seem in any immediate danger. The second factor is the over utilization of sea otters for commercial, sporting, scientific, or educational purpose. The Service noted that the original decline of sea otters was due to over utilization through commercial hunting, but noted that through State, Federal, and International protection, this factor was no longer a problem. The third factor is disease and predation, and the Service found that there was not evidence that supported this as a serious present threat. The fourth factor is the inadequacy of existing regulations. The Service found that while State, Federal and International laws protected sea otters from direct taking, no protection was given to their habitat, and this situation would be improved through an application of section 7 of the ESA. The fifth and final factor are other general natural or manmade factors that affect the continued existence of sea otters. The Service here recognized the potential harms of restricted genetic diversity resulting from low population numbers, as well as the serious potential threat of a major spill from an oil tanker or oil unloading facility in making the decision to list the southern sea otter as a threatened species.

## B. The Translocation Program is Conceived

The need to terminate zonal management and retain the SNI population is demonstrated by the historical record of the sea otter conservation program. Even

[10] 42 FR 2965.

before the enactment of the MMPA in 1972 and the ESA listing of the southern sea otter in 1977, the establishment of a translocated population *and* facilitation of range expansion were recognized as essential conservation measures.[11] When the zonal management concept first emerged in the late 1970's, it was set forth not as a management action that was appropriate as part of the ESA recovery program but instead as a measure that should be considered only when the southern sea otter had attained an optimum sustainable population (OSP) level, which equates with a much higher population size and distribution than that currently present or that would be needed for ESA recovery. As this record demonstrates, maintenance of the translocated San Nicolas population remains a high priority ESA recovery action, whereas zonal management in any form is not appropriate until OSP has been reached, if even at that time.[12]

Soon after the listing of the southern sea otter in 1977, the Commission began to press the Service to make species recovery a priority action. In this correspondence, the Commission clearly emphasized the two-step nature of this task: 1) ESA recovery, with translocation to play a major role; and 2) attaining OSP, at which point zonal management could be considered.

In an August 23, 1979, letter to the Service, the Commission stated that the recovery of the southern sea otter needed to become an "immediate priority task." While acknowledging the importance of the goal of eventually achieving a population within the OSP range along with the implementation of an "ecosystem-oriented management

[11] As early as June 1969, FSO recognized the need for the translocation of southern sea otters and increased range expansion as critical components to recover southern sea otters and protect them from oil spills and fishery conflicts—separate from any recovery efforts under the ESA. In response, the Service translocated 20 otters from the area between Cayucos and Cambria to the region 40 miles north to the center of their range (the Big Creek area).

[12] FSO has long objected to zonal management, dating back to 1970 when it opposed California State Senate Bill SB 442, that would have authorized the transplantation of sea otters found outside of the California Sea Otter refuge in order to protect the interests of the abalone industry. FSO's advocacy resulted in the bill being shelved. In May 1974, Margaret Owings first stated that FSO "favored an unrestricted range for the sea otter along the California coast…and establishing a secondary refuge." SNI was mentioned as a possible site for this refuge. As a follow up, in December 1974, FSO delivered a petition signed by over 12,000 citizens to the Honorable Rodgers Morton, Secretary of the Interior and to the Director of CDFG, opposing range restriction and favoring a limited transplant to a secondary reserve such as an offshore island. In January 1976, FSO opposed CDFG's "The New Research and Management Proposal". This proposal petitioned the federal government for a waiver on the moratorium on sea otters and return of management responsibility to the State. The plan asserted that California sea otters were no longer rare or endangered and that if their current population growth of about 5% per year was not controlled, sea otters would "soon deplete human shellfisheries such as abalones, clams, sea urchins, crabs, lobsters and oysters." It also asked for an experimental containment zone and to remove any sea otters straying out of their "containment zone." In June 1976, in the face of strong opposition mounted by FSO, CDFG withdrew its request for a waiver on the moratorium on taking of sea otters.

strategy," the Commission recognized the still higher priority of simply getting the sea otter population off the threatened list as designated by the ESA.[13]

This priority is further, and explicitly, expressed in the summary minutes of a December 13, 1979, meeting convened in Burlingame, California by representatives of the Commission, CDFG, the Service, and California's Sea Otter Scientific Advisory Committee. All parties agreed that an effective recovery plan "[w]ill consider many of the factors that are relevant to obtaining and maintaining an OSP of sea otters, to the extent that they are relevant to getting sea otters off the "threatened list," but the focus of the plan will be to get them off the threatened list and not to get them to an OSP.[14] Thus, implementation of any sort of OSP strategy was to be dependent upon the sea otter's successful recovery from "threatened" status. Translocation, as it was first conceived, was an emergency precaution taken to address the immediate concern of oil spills and threatened species status, not as part of a long-term OSP or zonal management strategy. This consensus also is spelled out clearly in the summary minutes of the Commission's October 3-4, 1980 meeting, which state: "a transplant of sea otters to an area substantially removed from the present California range seems to offer the only practical means for reducing the threat posed by potential oil spills…a transplant should be undertaken as soon as possible, to eliminate the risks associated with a potential oil spill."[15]

The urgency of translocation for ESA recovery purposes is echoed in a December 2, 1980, letter to the Service from the Commission. As stated in that letter: "[i]t is necessary to establish at least one additional group of sea otters at a site that is secure from the threat of oil spills as soon as possible"[16] The strong link between the translocation proposal and the primary goal of removing the southern sea otter from the threatened species list also is outlined in December 9, 1980, letter from the Service to the CDFG, where it is stated: "[t]he sea otter can be delisted once the population is restored so that an oil spill or other adverse impacts cannot reduce the population to a Threatened or Endangered status. The Service believes that the best method to expedite the restoration of the sea otter population is by translocating California sea otters…."[17] In a July 9, 1980 letter, FSO stated that, "[t]he goal of the

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[13] *See* Letter to Lynn A. Greenwalt, Director, Service, from John R. Twiss, Jr., Executive Director, MMC (August 23, 1979). Exhibit 2.

[14] *See* Summary Minutes of Meeting on California Sea Otters (Dec. 13, 1979). Exhibit 3.

[15] Summary Minutes, Meeting of the Commission (Oct. 3-4, 1980).

[16] *See* Letter to Lynn A. Greenwalt, Service, from John R. Twiss, Jr., Commission (Dec. 2, 1980) ("1980 MMC Letter"). Exhibit 4.

[17] *See* Letter to Mr. E.C. Fullerton, Director, CDFG, from Harold J. O'Connor, Acting Director, Service (December 9, 1980). Exhibit 5. This sentiment is repeated by, among others, FSO.

Recovery Plan is to restore the southern sea otter to non-threatened status. The primary reason for its [the southern sea otter's] threatened status is its extreme vulnerability to a major oil spill."[18] Hence, the motivation for translocation, as it was originally conceived, was the immediate concern for delisting sea otters under the ESA.

The distinction between ESA recovery and the need for translocation, on the one hand, and the attainment of OSP and zonal management, on the other, is clearly spelled out in the 1980 Commission letter and subsequent correspondence. As far back as the August 23, 1979, letter to the Service from Commission, it was understood that zonal management was linked to OSP, not ESA recovery actions such as translocation. As stated in that letter: "[t]he ultimate goal is to restore the population to optimum sustainable levels. The achievement of *that* goal will require resolving fundamental issues concerning sea otter/fishery conflicts" (emphasis added).[19] In other words, resolving sea otter/fishery conflicts, or implementing zones of management, was not connected with the immediate goal of delisting sea otters.[20]

Discussion indicating the connection between the long-term goal of OSP and zonal management, can also be found in the Commission's minutes from the December 13, 1979, meeting which state: "[t]he [recovery] plan will consider many of the factors that are relevant to obtaining and maintaining OSP of sea otters, to the extent that they are relevant to getting sea otters off the 'threatened list,' but the focus of the plan will be to get them off the threatened list and not to get them to OSP"[21] Again, achieving

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[18] *See* Letter from FSO to Service (July 9, 1980). Exhibit 6.

[19] Exhibit 2, Page 2.

[20] From 1979 until the present, FSO and, in subsequent years, Defenders of Wildlife, The Humane Society of the United States, The Ocean Conservancy, and the Sea Otter Defense Initiative, a program of Earth Island Institute's International Marine Mammal Project, took the position on the translocation program, range expansion, and zonal management, best summarized by the following four points:

- We firmly object to management of southern sea otters by range restriction at this point in their recovery from near extinction – at a time when critical information about their biology, population dynamics, and long-term effects on marine ecosystems in California is minimal and just beginning to accumulate.
- We strongly support management plans to establish two or more successful reserve breeding colonies of southern sea otters in sites elsewhere in their range. Such manipulation now appears necessary in order to preserve the unique genotype of the isolated and biologically distinct California sea otter – a population making a slow comeback from near extinction and one becoming increasingly jeopardized by the growing potential for oil spills in its present range.
- We believe that the California sea otter's protection under the ESA should continue until at least two reserve breeding colonies have been successfully established and that its protection under the MMPA should continue until OSP levels have been reached throughout its former range.
- We strongly support continued federal agent and state warden protection of California sea otters against harassment and killing by humans and urge such protection be increased.

[21] Exhibit 3, Page 3.

an OSP is considered second to the urgent goal of simply removing the sea otter from the endangered species list. The outcome of the 1979 meeting was the July 11, 1980, letter from the Commission to the Service, which formally set forth a plan to consider OSP and zonal management. In that letter, the connection between a high-level OSP management plan and zonal management is solidified. As set forth in the letter: "[r]estoring the southern sea otter to its *optimum sustainable level* will require resolving fundamental issues concerning the sea otter/fishery conflicts as well as the potential adverse impacts of human activities on sea otters".[22]

Thus, zonal management is expressed as an idea pertaining to OSP, which is prioritized after the immediate goal of removing sea otters from the threatened species list. In a December 2, 1980, letter from the Commission to the Service, the immediate need to "establish at least one additional group of sea otters at a site that is secure from the threat of oil spills," or translocation, is differentiated from the distant goal to "restore [sea otters] to the optimum sustainable population level".[23] This idea is stated clearly, as well, in the summary minutes from the Commission's meeting on October 3-4, 1980: "[t]he optimum management strategy will be some form of zonal management and that a transplant should be undertaken as soon as possible, to eliminate the risks associated with a potential oil spill".[24]

Thus, "translocation" and "zonal management" are differentiated as concepts—zonal management having to do with the attainment of an OSP level of sea otters, while translocation was an immediate response to the acute danger of a potential oil spill. Zonal management was never considered to have a sensible place in a translocation action as part of the urgent efforts to de-list the southern sea otter.

This distinction is important when considering the proposed action. The southern sea otter remains highly vulnerable to oil spills and other threats, and the need for a translocated population and range expansion has changed little since the 1977 listing decision. Indeed, recent information demonstrates that maintaining a translocated population and promoting range expansion is more important than ever. As discussed later in these comments, these actions remain central components of the recovery strategy for the species under the ESA. In fact, as discussed in the 2003 RP, the target population goal to consider delisting is 3,090. By contrast, OSP is a much larger number, estimated to be in the range of 8,400. As originally articulated by the

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[22] *See* letter to Lynn Greenwalt, Executive Director, Service, from John Twiss, Executive Director, Commission. July 11, 1980. Exhibit 7, Page 2 (emphasis added).

[23] Exhibit 4, Page 1, 2.

[24] Summary Minutes, Meeting of the Commission (Oct. 3-4, 1980), Page 5.

Commission, if zonal management was to be considered at all, it should not be until the population has reached its OSP range. At this time, it appears unlikely that zonal management as originally envisioned by the Commission would be appropriate at any time. For purposes of deciding whether to terminate the management zone now, however, it must be clearly understood that the original rationale for a so-called otter free zone was not to have been considered at all at the ESA recovery stage.

The Service began collecting data relative to preparing a proposed determination of critical habitat for the southern sea otter. It also began preparing a species recovery plan, which was approved in 1982. The recovery plan identified the translocation of southern sea otters as an effective and reasonable recovery action. The purpose of the translocation program was to establish southern sea otters in other portions of their historic habitat. By creating and encouraging the establishment and growth of different sea otter populations within the historic range, the Service hoped to minimize the possibility that a single natural or human-caused catastrophe could decimate the otter population. The development of the translocation program was a direct response to many of the stated concerns about major oil spills and the devastating effects that such a spill could have on a sea otter population that occupied only one small area. This sentiment was echoed in the 1986 Annual Report to Congress of the Commission.[25]

The translocation concept was not, however, without controversy. Commercial and recreational fishermen expressed concern about increased levels of competition in areas where sea otter colonies were established.

It was also hoped that by encouraging sea otter colonies in areas away from commercial fisheries, sea otter fatalities resulting from entanglement and drowning in large-mesh gill and trammel nets set in nearshore waters would decrease.[26] In 1979, the National Marine Fisheries Service and the CDFG began a cooperative program to determine the nature and extent of marine mammal/fishery interactions in California coastal waters.[27] At the 1982 program review, it was noted that sea otters were being killed in gill and trammel nets.[28] Because the nature and extent of the incidental take

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[25] "Because of its small size and limited distribution, the remnant sea otter population along the central coast of California is vulnerable to oil spills and other catastrophic events…The most effective way to reduce the threat from such events is to establish one or more sea otter colonies outside the population's present range." *Annual Report of the Marine Mammal Commission, Calendar Year 1986: A Report to Congress, p 114.*

[26] 52 FR 29754 p23 (final rule for translocation).

[27] Commission Annual Report 1984, page 54.

[28] Set gill nets (both gill and trammel nets) are used to fish for halibut, white sea bass, white croaker, and rockfish. A gill net is a single curtain-like net made of nylon that is suspended in the water without slack. It has mesh openings large enough

was not clear, the Commission provided funds to the State to continue studies and observations. Data from these studies confirmed that "significant numbers of sea otters [and other marine mammals] were being killed. The data also suggested that incidental take could be preventing or impairing recovery of the California sea otter population."[29]

In April 1984, the Service completed its five-year status review of the southern sea otter. The Service had received two petitions with regards to the ESA designation of the sea otter: one, submitted by certain fishing group interests, sought to delist the sea otter entirely, claiming that it was not a separate subspecies distinct from the Alaskan sea otter and that it faced no threats. The other, sponsored by FSO, requested reclassification of the sea otter population from *threatened* to *endangered*. The reasons listed by the second petition included direct malicious kills, incidental drowning in fishing nets, intensive offshore oil exploration and leasing, and possible adverse effects related to pollution from toxic trace metals, synthetic organic compounds, and raw sewage.[30]

The Service denied both petitions, again determining that the southern sea otter population was appropriately classified as *threatened*. This finding was reached despite the facts that: the population had not grown significantly since 1969 and was possibly even declining; the population's occupied habitat range had not expanded since 1977; human-related mortality was still a limiting factor; and the risks posed by a potential oil spill were still present. Recognizing these challenges faced by the sea otter, the Service still declined to change its designation to *endangered* because "the population does not appear to be immediately threatened with extinction and major action [translocation program] is expected in the immediate future."[31]

About this time, the State first became able to reasonably well document the magnitude of the incidental take problem. Commission-funded State studies estimated that between the years of 1973 and 1983, an average of 105 otters were killed annually through entanglement in gill and trammel nets.[32] The Commission

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to permit only the head of the fish to pass through, ensnaring them around the gills when they attempt to escape. A trammel net is a single panel net that is suspended in the water with slack, or is constructed with more than one wall of webbing. This type of net is used to entangle species. Fish are rolled up in the net rather than ensnaring them by the gills. *See* California Department of Fish and Game: http://www.dfg.ca.gov/news/news02/02100.html

[29] Commission Annual Report 1984, p55.

[30] Commission Annual Report 1984, p92.

[31] Commission Annual Report 1984, p92.

[32] Commission Annual Report 1984, p93.

recognized that the incidental take problem posed a "substantial threat to the continued existence and recovery of the California sea otter population."[33] In September 1986, the State enacted permanent closures in certain areas of the shallow water California coast to fishing with gill and trammel nets, including the southern sea otter habitat.[34]

In the June 27, 1984, Federal Register, the Service announced its intention to prepare an EIS.[35] The subject of the EIS was a proposal to translocate a portion of the southern sea otter population to a site within the sea otters' historic range. This action, recommended multiple times by the Commission, was called for in the 1982 Service recovery plan for the southern sea otter. The proposal involved the issuance of experimental population regulations under the ESA, permits under both the ESA and the MMPA, and compliance with other relevant Federal and State laws. The Service identified three phases for determining how to implement the proposed action: first, an evaluation of the existing population and determination of ideal population and translocation site; second, the capture of selected sea otters and transportation to the selected translocation site; and third, monitoring of the translocated sea otters, including regulation of their distribution, enforcement, and public education.

Efforts to carry out translocation were opposed on legal grounds by the oil and gas industry and certain fishery groups. They claimed that, as then drafted, the MMPA prohibited the take of southern sea otters and did not include any exemption that would allow for translocation, which necessarily involved take. While this interpretation was disputed, various stakeholders participated in an effort to achieve consensus on how to proceed.

Based on these efforts, Congress considered the Service's translocation proposal during the 1985 Congressional hearings on the reauthorization of the ESA.[36] The Subcommittee on Fisheries and Wildlife Conservation and the Environment of the House Committee on Merchant Marine and Fisheries, and the Subcommittee on Environmental Pollution of the Senate Committee on Environment and Public Works

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[33] Commission Annual Report 1984, p94.

[34] The State of California enacted permanent 20-fathom closures in two areas, and in the area between the two zones and in Monterey Bay, a 150-fathom closure remains in effect. In order to fish with gill or trammel nets between 15 and 20 fathoms in those areas, however, advance notice must be filed so that monitoring arrangements can be made. In addition, the State Legislature established a $450,000 loan program for impacted fishermen, to be applied to the development and purchase of alternative fishing gear.

[35] Commission Annual Report 1984, p95.

[36] Commission Annual Report 1985 p104.

heard testimony from interested parties on the need for one or more translocations and the resource management conflicts that were expected to arise in association with translocation. The House passed H.R. 1027 on July 27, 1985, section 5[37] of which addresses the translocation of sea otters.

On August 15, 1986, the Service submitted a proposed rule for translocation submitted concurrently with a Draft Environmental Impact Statement on the proposed translocation.[38] As a part of the proposed rule, SNI was selected as the preferred translocation site. Interested parties were invited to comment on the proposal through a 94-day period extending until November 17, 1986. Comments that were received often addressed issues covered in both documents, and thus were analyzed as a collective whole, rather than as two separate sets of responses. The Service received 953 written comments and 54 oral comments during a series of hearings held during the comment period. Of the total 1,007 comments received from individuals and organizations, 821, or 81.5% supported the proposed translocation program. There was widespread support of the translocation program proposal among the environmental community. This support was based on the scientific evidence and understanding of threats as they existed at the time, and also based on the understanding that if the translocation plan should fail, the program would be eliminated or redesigned to best suit the recovery needs of the southern sea otter. Of the remaining comments, 140, or 13.9% opposed the proposal, and 46, or 4.6% remained neutral.

Fifteen Federal and State agencies commented on the proposal. Two expressed support, including the Commission, which strongly supported the proposal and urged its rapid implementation. The remaining 13 neither supported nor opposed the proposal, but offered comments and recommendations for consideration when the final EIS was prepared.

## C. The Translocation Program Becomes Law

In October 1986, the House Committee added the sea otter translocation amendment (H.R. 1027), to H.R. 4531, legislation concerning the extension of the Wetlands Loan Act.[39] The bill passed the Senate and was signed into law on November 7, 1986. The

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[37] "Section 5 is intended to serve as a free-standing provision of the Endangered Species Act. This means that its requirements would continue to apply even if the sea otter were to be delisted under the Act. The purpose of the amendment is to encourage the development and implementation of a plan for the establishment of at least one additional population of sea otters at another location. Within that context, it seeks to resolve resource management conflicts that could arise as a result of a translocation." *See* Commission Annual Report 1985, p104.

[38] 52 FR 29754. All discussion of the comments relating to the proposed rule and DEIS are found in the Final Rule.

[39] Commission Annual Report 1986, p119.

bill was enacted as section 1 of Public Law 99-625. The sea otter translocation amendment serves as a free-standing provision of the ESA. That is, its requirements will continue to apply regardless of the species continued designation under the ESA. The purpose of the amendment was "to encourage the development and implementation of a plan for the establishment of at least one sea otter colony outside the present [circa 1986] range in California. Within that context it resolve[d] resource management conflicts that could arise as a result of a translocation." The amendment also removed constraints under the MMPA that sea otters be taken only for research purposes and allowed actions necessary to relocate and manage the animals.[40] Because of this amendment, the Service revised the EIS to indicate that if the decision was made to translocate sea otters, actions would be taken in accordance with the requirements of P.L. 99-625.

On August 11, 1987, the Service issued the final agency rule under the ESA for the establishment of an experimental population of southern sea otters.[41] The final rule governed the reintroduction of southern sea otters at SNI, where they would be contained in the Island's immediate vicinity. The two purposes cited for the rule were: "(1) [t]o implement a primary recovery action for a federally listed "threatened" species, and (2) to obtain data for action for assessing translocation and containment techniques, population dynamics, the ecological relationships between sea otters and the near shore community, and the effects on the donor population of removal of individual otters for translocation."[42] The Service sought to establish two zones, a "translocation" zone, and an otter-free "management zone". The idea was that sea otters would be contained within the translocation zone, and protected and studied there. Sea otters were to be removed from the management zone if found there, so as to minimize potential conflicts with other uses of the resources, and provide additional levels of protection to sea otters.

The Service believed that the prospects for a successful translocation were excellent and that an experimental sea otter population released at SNI could become established in as few as 5 years. SNI met all of the criteria for the translocation site because it is: 1) within the historic range of the southern sea otter; 2) a source of excellent sea otter habitat and food resources; 3) relatively inaccessible to the general public; 4) a zone where research can be conducted in nearly ideal conditions before and after research design; 5) an isolated offshore island location which increases the likelihood that sea otters would remain there and not disperse in large numbers; and

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[40] The sea otter translocation amendment provides that actions that are necessary to carry out the relocation or management of the southern sea otters under the plan will not be considered violations of either the ESA or the MMPA.

[41] 52 FR 29754. All discussion relating to the final rule is based on the preamble and text of the final rule itself.

[42] 52 FR 29754.

6) a zone where the risk of oil spills affecting the experimental population would be less than half the risk of such spills to the existing population.[43] The boundaries were drawn taking into consideration the availability of food resources, rafting sites and kelp beds as well as wind and wave patterns, offshore currents and other oceanographic variables.[44] The waters surrounding SNI out to at least the 15-fathom contour were considered highly suitable habitat for southern sea otters. Historically, sea otters were present at SNI in considerable numbers. Kelp beds flourished near the island and prey species such as abalone, sea urchins, crabs, clams and mussels were abundant. Finally, the waters around SNI were considered relatively free of toxic pollution and sufficiently distant from the existing range so that a catastrophic oil spill would not likely contact both the existing population and the translocated population at SNI.

Consequently, the EIS for the translocation program anticipated that a maximum of 70 sea otters would be moved to SNI during the first year of the program and 70 animals each year thereafter up to a maximum of 250 animals.[45] The overall goal was to ensure that 70 sea otters would remain on the island and form the core nucleus of breeding sea otters.[46] Growth rate of the new colony was expected to be between 5 and 15 % per year, and the experimental population at SNI would be considered established (probably within 5 to 6 years) when a minimum of 150 sea otters resided within the translocation zone with a minimum annual recruitment of 20 animals.[47] Within the 1997 to 2002 time frame, the Service expected the SNI sea otter population to reach its carrying capacity of about 500 animals. Environmental groups conditioned their support for the translocation program on this assumption. They made it clear, repeatedly, that the zonal management scheme which accompanied the translocation proposal was acceptable based only upon the successful establishment of a viable population that achieved carrying capacity in accordance with that schedule and without adverse effects on the parent population.

## D. The Translocation Program Applied

The Service's southern sea otter translocation program was to be applied in two phases: the pre-translocation phase, and the translocation phase. Each phase emphasized different activities, which are highlighted below.

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[43] 52 FR 29754 at 29788.

[44] *Id.* at 29769.

45 U.S. Fish & Wildlife Service and Institute of Marine Sciences, Translocation of Southern Sea Otters, (May 1987) (Final Environmental Impact Statement, v. I and II).

[46] *Id.*

[47] *Id.*

The pre-translocation phase emphasized four different activities: (1) assessment of the existing population and the acquisition and analysis of behavioral data,[48] (2) development of a plan for capturing and holding sea otters for translocation, including determination of the optimum size, age, and sex composition of the translocated colony,[49] (3) collection of baseline data on the ecosystem at the translocation site,[50] and (4) completing the public notice and review requirements of the National Environmental Policy Act and Administrative Procedure Act.

The translocation phase activities consisted of the capture,[51] transport,[52] and release[53] of sea otters. The Service estimated that these activities could last five years or more, but expected that most of this phase would be completed within the first year.

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[48] Assessment of the Existing Population: to the extent possible, the Service wanted to evaluate the possible impacts of removing animals from the existing population for translocation and to develop a monitoring program to test and evaluate various hypotheses concerning both expected and unforeseen impacts. The principal emphasis of the studies was to obtain better information on population trends, distribution, movement, diet, and activity patterns. 52 FR 29754.

[49] Removal of Animals from the Existing Population: the Service found that there was limited information from which to develop the optimum number, age, and sex composition of the animal group to be translocated. Based on existing studies and the basic principal that the "welfare of the existing population probably would be best served by minimizing the number of animals taken from it while maximizing the likelihood of success," the Service decided to take up to 70 animals from the existing population to the translocation site in the first year. The Service further determine that no more than 250 animals would be moved in total from the existing population for translocation purposes. 52 FR 29754.

[50] Studies at the Translocation Site: Since 1980, the Service had monitored intertidal and shallow subtidal ecosystems at San Nicolas Island. The purposes of the monitoring were (1) to determine the dynamics of near shore communities relatively free of human influence in order to contribute to the eventual determination or refinement of an optimum sustainable population level for southern sea otters pursuant to the MMPA; and (2) to establish baseline ecological information in order to document the range of influences that sea otters, should they be restored there, would have on various components of near shore communities by comparing changes following translocation with the pre-translocation data baseline. 52 FR 29754.

[51] Capture: Capture locations were selected based on the available otter population and accessibility to capture crew and vessels. Animals were captured either by diver held devices, dip nets, or surface entangling nets. The otters, mainly immature, were then placed in holding boxes and transported to San Nicolas Island. The otters were then tagged for identification and given a thorough physical examination to monitor health and also provide information for future identification. Only otters judged to be in good health were translocated. 52 FR 29754.

[52] Transport: Animals were transported in their holding boxes to San Nicolas Island by aircraft, and were accompanied and kept under surveillance during the flight. Upon landing, they were driven immediately to the release site. 52 FR 29754.

[53] Animals were held for two to five days in secured floating pens in groups, where they were monitored continuously and provided with food. This period was to allow the animals to recover from the stress of relocation and become accustomed to the area. The animals were released passively by opening the floating pens and allowing them to leave at will. If dispersal were to result in otters returning to the original population, no further effort was to be made to capture and return them to the translocation site, except as discussed in the "Containment Efforts", below. If the otters were to disperse away from SNI, they would be captured and returned either to the donor population or the translocation site, with preference given to return to the donor population or the translocation site, with preference given to return to the donor population. 52 FR 29754.

Following the capture, transport, and release of the sea otters to SNI, the Service was to follow with containment procedures. In the final rule, the Service did not anticipate that the translocated sea otters would disperse far from SNI. "Because it is an island with abundant prey in surrounding waters and is separated from other shallow waters where food is available by long distances of deep open ocean, dispersal away from SNI is expected to be negligible, at least prior to attainment of carrying capacity."[54] In order to forestall potential problems as the sea otters approached carrying capacity, the Service proposed using either selective removal of animals back to the parent population, or imposing birth control measures on some of the individuals within the translocation zone. Sea otters were to be monitored jointly by the Service and the State, utilizing public participation and reporting through a "hot line".

Efforts to capture and translocate southern sea otters were initiated on August 24, 1987.[55] From August 24 until capture was concluded on October 30, 1987, 108 sea otters (48 male and 60 female) were captured. Of these, 64 were transported to Monterey Bay Aquarium, where they were examined, tagged, and held pending translocation. Three animals died, and one was returned to its capture site before translocation could take place. The Service translocated 31 males and 108 females.[56] In total, between 1987 and 1990, the Service translocated 139 sea otters (63 adults, 76 juveniles) from the mainland parent population to SNI[57]. In July of 1990, the last sea otter (a rehabilitated sea otter pup) was released at SNI, for a total of 140 otters.[58] No sea otters have been translocated to SNI since 1990.

As of 2003, the fate of 70 of those otters is known: three were found dead at SNI within a few days of being translocated. Thirty-six are known to have returned to the parent population range, and 18 were either captured (11 were captured in the management zone and released near the mainland parent population) or found dead (7) in the management zone—including one in a gill net and two in lobster pots[59]--months to years after they were translocated. At least 13 sea otters are thought to have remained at SNI after their release. The fate of the other 70 animals is unknown--most of the missing sea otters emigrated from the island and most probably returned to the parent range.

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[54] 52 FR 29754.

[55] Benz, Carl. *Evaluating Attempts to Reintroduce Sea Otters Along the California Coastline*. Endangered Species Update, University of Michigan. December 1996. Vol. 13 No. 12, p33.

[56] *Id.*

[57] *Id.*

[58] 2003 Recovery Plan, p13.

[59] Commission Annual Report 1987, p47.

Reproduction at SNI was first observed in 1987, the first year of the translocation program. By September 1996, 40 pups were known to have been born, of which 6 died as pups, 11 were weaned.[60] The fate of the remaining pups is unknown. Figures available in 1996 were somewhat surprising, given the initial hope for the success of the translocation program. While pre-weaning mortality within the mainland population was about 40%, the best available data for the translocated population showed a pre-weaning mortality of up to 66%.[61] As of 2003, it was estimated that at least 13 otters had taken up residence at SNI.[62] The lack of growth of the colony was attributed primarily to poor recruitment. Other reasons cited include emigration and adult mortality, lower levels of successful reproduction of viable offspring, and the remaining challenge of incidental take.[63] Incidental take in the lobster or crab fishery also may have contributed to the lack of population growth, but entrapment has not been documented.[64] Nevertheless, a small to medium-sized sea otter could become trapped in one of the hundreds of lobster pots set at the Island each year.[65] Other sources of mortality may include shooting and predation. The discharging of firearms by commercial fishermen has been observed at SNI, and while there have been no confirmed deaths from shooting in recent years, shooting cannot be excluded as a mortality source.[66] Similarly, predation from great white sharks, found in that area, cannot be excluded.[67] With only five to six pups born each year and high pre-weaning mortality, incidental take and natural mortality factors could threaten the long-term survival of the population.[68]

The containment policy, designed to keep sea otters out of the management zone, soon proved to be unviable. Between September 1 and December 18, 1987, there were 16 reports of sea otters within the designated management zone. Half of these were reliable enough that the Service felt certain that sea otters had actually been sighted in areas that they were supposed to specifically have been contained from.

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[60] Supra note 55, at 33.

[61] *Id.*

[62] 2003 Recovery Plan, p13-14. *As of June 2002, the number of otters at San Nicolas Island was about 27 otters, with at least 73 pups having been born into the population.*

[63] Benz, *supra* note 55, at 31-35.

[64] U.S. Fish & Wildlife Service, Evaluation of the Southern Sea Otter Translocation Program (1999) at 17.

[65] Benz, *supra* note 55, at 31-35.

[66] U.S. Fish & Wildlife Service, *supra* note 64, at 17.

[67] *Id.*

[68] Benz, *supra* note 55, at 31-35.

From December 1987 to February 1993, 24 sea otters were captured, removed from the management zone, and returned to the parent range. Eleven of these animals had been translocated to SNI, four were offspring of sea otters translocated to SNI, and at least three swam into the management zone from the parent range. The origins of the remaining six animals were unclear; they had either moved down from the parent range or were offspring of sea otters translocated to SNI. Two of the sea otters removed from the management zone returned to it after traveling hundreds of kilometers, only to be recaptured and moved again.[69] While the sea otters have been continually monitored, in February of 1993, following the death of two sea otters shortly after their release, all sea otter containment activities were halted. No further sea otters were removed from the management zone.[70]

## E. The 2000 Biological Opinion

From the listing of the southern sea otter under the ESA in 1977 as threatened and the beginning of the translocation program development in the early 1980's, the southern sea otter plan was "considered a high priority FWS program based upon the combination of species vulnerability and political controversy associated with recovery needs."[71] By the end of the first year of the translocation phase, problems were evident. The rate of dispersal of sea otters from the Island was higher than expected and appeared to pose problems to the establishment of a colony. By August 1993, the end of the third year of the post-translocation phase, the Service evaluated the status of the translocated colony, containment efforts, and the failure criteria of the translocation program. Surveys confirmed that the sea otter population was continually declining and, therefore, the program as a whole needed evaluation.

The translocation program has not lived up to its expectations in the recovery goals for southern sea otters. In fact, "[f]rom a management perspective, the translocation as implemented failed to achieve the anticipated results for expediting recovery."[72] The original EIS anticipated that a viable colony would become established in about five years, with the Island's carrying capacity reached after about 10 to 15 years. This goal never came even close to being realized. By 1998, "[m]any factors related to the status of the southern sea otter had changed since initiation of the [translocation]

[69] 2003 Recovery Plan, at 14. See also DSEIS at Appendix C 10.

[70] Benz, *supra* note 55, at 33.

[71] Benz, *supra* note 55, at 34.

[72] *Id* at 35.

program, and the program did not appear to be meeting the recovery objectives outlined for it."[73]

Recognizing this, the Service reinitiated section 7 consultation under the ESA and completed a draft evaluation of the translocation program, which was issued in March 1999. The evaluation found that the population, after 10 years of growth, had begun to decline. Annual counts in 1996, 1997, and 1998 found that the population has progressively declined.[74] The Service also evaluated the success of the program based on "failure criteria" included in the translocation amendment, P.L. 99-625, which states that "the Translocation would generally be considered to have failed if one or more of the following conditions exists."[75] There are five criteria, and failure to meet even one of them results in the finding that the translocation program has failed.[76] The Service found that the translocation program had failed under Criteria 2 and 3.

The Service published a revised Biological Opinion in 2000 (2000 BO). In the 2000 BO, it noted that sea otters were moving with greater and greater numbers south of Point Conception and into the management zone. In the spring of 1998, an estimated 100 southern sea otters moved south into the management zone, eliciting numerous requests from the shellfish industry for the sea otters' removal.[77]

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[73] DSEIS p2.

[74] Draft Evaluation of the Southern Sea Otter Translocation Program, March 1999, page 20.

[75] 50 CFR 1(d)(8).

[76] The five criteria are: 1) If, after the first year following initiation of translocation or any subsequent year, no translocated otters remain within the translocation zone, and the reasons for emigration or mortality cannot be identified and/or remedied; 2) If, within three years from the initial transplant, fewer than 25 otters remain, and the reasons for emigration or mortality cannot be identified or remedied; 3) If, after two years following the completion of the translocation phase, the experimental population is declining at a significant rate, and the translocated otters are not showing signs of successful reproduction (i.e., no pupping is observed); however, termination of the project under this and the previous criterion may be delayed, if reproduction is occurring, and the degree of dispersal into the management zone is small enough that no effort to remove otters from the management or no-otter zone would be acceptable to the Service and the affected State; 4) If the Service determines, in consultation with the affected State and the Marine Mammal Commission that sea otters are dispersing from the translocation zone and becoming established within the management zone in sufficient numbers to demonstrate that containment cannot be successfully accomplished. This standard is not intended to apply to situations in which individuals or small numbers of otters are sighted within the management zone or temporarily manage to elude capture. Instead it is meant to be applied when it becomes apparent that, over time (one year or more), otters are relocating from the translocation zone to the management zone in such numbers that: 1. an independent breeding colony is likely to become established within the management zone or 2. they could cause economic damage to fishery resources within the management zone. It is expected that the Service could make this determination within a year, provided that sufficient information is available; and 5) If the health and well-being of the experimental population should become threatened to the point that the colony's continued survival is unlikely, despite the protection given to it by the Service, State and applicable laws and regulations. An example would be if an overriding military action for national security was proposed that would threaten to devastate the colony and the removal of otters was determined to be the only viable way of preventing loss of the colony.

[77] 2000 Biological Opinion, p15-16 (all information relating to expansion of otters into management zone).

Throughout the summer, Service staff met with various interest groups and agencies to describe the status of the southern sea otter and discuss the prospects and probability of success of the containment program. In an unprecedented step of cooperation and public disclosure, the Service sought public comments on a draft Biological Opinion. While most of the sea otters retreated north of the Point Conception border to the management zone, by December 1998, approximately 50 sea otters again inhabited the area, and by January 1999, approximately 152 animals were located along the mainland coast. This pattern of expansion and retreat continued, with 78 sea otters detected in the management zone during aerial surveys in May of 2000. The Service conducted a spring survey in May 2002 and found 8 sea otters in the management zone.[78]

After reviewing the status of the southern sea otter, the environmental baseline for the action area, the effects of the continuation of the containment program, and the cumulative effects, the Service opined that continuing the containment program and restricting the southern sea otter to the area north of the Point Conception management zone boundary would likely jeopardize the species' continued existence.[79] The Service based its conclusions on two reasons: continuation of the containment policy will result in further population decline and negatively affect the species' survival, and the expansion of its territory is essential to the recovery of the southern sea otter.[80] The Service went on to find that, under the regulations implementing section 7(a)(2) of the ESA, "at this time, there are no reasonable and prudent alternatives that would avoid jeopardy to the species while still meeting the intended purpose of the containment program which is to remove southern sea otters from the management zone."[81] 50 C.F.R. § 402.02.

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[78] 2003 Recovery Plan at 14.

[79] 2000 Biological Opinion p 36.

[80] 2000 Biological Opinion p36-37: The Service's conclusion that the continuation of the containment program and restriction of the southern sea otter to the area north of the Point Conception border of the management zone is likely to jeopardize the species' continued existence is based on two reasons: 1) Reversal of the southern sea otter's population decline is essential to its survival and recovery. Continuation of the containment program will result in the capture, transport, and release of large numbers of southern sea otters from the management zone into the parent population. These actions may result in the direct deaths of individuals and disrupt social behavior in the parent population to the degree that those affected individuals will have reduced potential for survival and reproduction. These effects will exacerbate the recent decline of the southern sea otter population; and 2) Expansion of the southern sea otter's distribution is essential to its survival and recovery. Continuation of the containment program will result in the exclusion of southern sea otters from the area south of Point Conception. This effect will perpetuate the species' artificially restricted range and its vulnerability to the adverse effects of oil spills, disease, and stochastic events.

[81] DSEIS at 14.

Based on the 2000 BO, the Service determined that "the containment of southern sea otters was not consistent with the requirements of the Endangered Species Act to avoid jeopardy to the species."[82] On January 22, 2001, the Service issued a policy statement that published this determination and gave notice advising the public that they would no longer capture and remove sea otters from the management zone until a reevaluation of the translocation program had been completed.

## F. The 2003 Revised Recovery Plan

### 1. History of the Southern Sea Otter Recovery Plan

The Service formed the Recovery Team and finalized a Recovery Plan (Plan) for the species in 1982, five years following the listing of the southern sea otter as "threatened" under the ESA in 1977. In 1989, the Service reconvened the Recovery Team for the purpose of reviewing and recommending changes to the then-existing Plan.

A draft revised Plan for the southern sea otter was completed in 1991. The Recovery Team lacked information to quantify particular risks to the sea otter population, such as that of major oil spills, and, therefore, recommended that "the threshold for delisting under the ESA be made equivalent to the lower limit of the optimum sustainable population level under the Marine Mammal Protection Act, which was then believed to be a population size of 5,400 animals with a range extending from Point Conception, California, to the Oregon border." Due to the controversial nature of the Recovery Team's recommendation, the 1991 draft Plan was never finalized.

Based on public comments received on the 1991 draft Plan, the Recovery Team used a population viability analysis to develop delisting criteria for the species as required by the ESA. This approach required additional information on oil spills and how they affect sea otters. Between 1992 and 1995, experts were contracted by the Service to model oil spill scenarios and evaluate risk to sea otters. In 1995, the Service assembled a diverse group of stakeholders as technical consultants to review and comment on the recovery criteria and objectives developed by the Recovery Team.

A second revised draft of the Plan was completed in early 1995. The draft was released for public comment in July 1996. Two significant findings were reported after release of the draft revision: "First, the number of dead sea otters stranded on the beach increased significantly from previous years. This increase in dead strandings coincided with a decline in southern sea otter population counts starting

[82] DSEIS at 14.

about 1995 and continuing through 1999. Second, large numbers of sea otters were reported near Point Conception at the southern end of the range."[83] As of July 1996, the Service and the Recovery Team believed that a major oil spill would be a primary factor in influencing whether sea otters were present in California. Therefore, two approaches were identified that would lead to delisting the southern sea otter under the ESA: "1) increasing the range of sea otters in California to lessen the risk of a single oil spill event reducing the otter population below a viable level, and 2) decreasing the likelihood of a major oil spill event within the sea otter's range."[84] Based on public comments received on the 1996 draft Plan, the Service requested that the Recovery Team review and make recommendations on the Plan a third time.

Another draft was released to the public in January 2000. The Recovery Team reviewed the draft in January 2001, and changes based on these comments were incorporated into the Final Revised Recovery Plan of 2003. As part of the Service's response to these comments, the Recovery Team was asked to "complete a trend analysis to determine the population size that would be robust enough for us to detect a declining trend in abundance reliably prior to the population reaching the threshold for endangered status."[85] In April 2002, the Service solicited comments from peer reviewers on the methodology used in the trend analysis.

On April 3, 2003, the Service issued the *Final Revised Recovery Plan for the Southern Sea Otter (Enhydra lutris nereis)*[86]. The Service listed the main threats to the sea otter population as habitat degradation (including oil spills and other environmental contaminants) and human take (including shooting, entanglement in fishing gear, and harassment).[87] While the reasons for recent declines in the population remain unknown, the Service found that they may be related to one or more of the following: 1) infectious disease resulting from increased immune deficiencies or elevated parasite and pathogen exposure; 2) incidental mortality caused by commercial fishing activities; or 3) food resource limitation.[88] The Service reiterated the recovery objective for southern sea otters.[89] To meet the objective of

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[83] Final Revised Recovery Plan, (RP) 2003, at pp. v.

[84] *Id.* at vi.

[85] *Id.* at vi.

[86] Service, Final Revised Recovery Plan for the Southern Sea Otter (*Enhydra lutris nereis*), 2-23-03; (all discussion of RP).

[87] *Id.* at viii.

[88] *Id.* at viii.

[89] 2003 RP, p ix: to manage human activities that may jeopardize the continued existence of the species or damage or destroy habitat critical to its survival such that the species recovers to the point where it can be removed from the List of Endangered and Threatened Wildlife.… To remove its designation as a depleted population under the Marine Mammal

delisting the sea otter and returning it to a sustainable population level, the Service proposed a series of actions required, including monitoring, protection, research, and criteria evaluation for the southern sea otter.[90] The Service found that four major events occurred since the implementation of the translocation program through P.L. 99-625 that alter the need and rationale for the translocation program.[91] Taking these into account, the Service found that "[c]learly, the intent and purpose of the

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Protection Act, the population would likely have to increase further (after delisting under the Endangered Species Act) to reach its optimal sustainable population level (equivalent to 50 to 80 percent of its current carrying capacity). The lower bound of the optimal sustainable population level is approximately 8,400 animals for the entire California coast, based on estimated historic population levels.

[90] 2003 RP, p ix: Actions Needed: 1) Monitor southern sea otter demographics and life history parameters to determine population size, rate of change, and distribution. Evaluate supporting habitat for changes in types, abundance, distribution, and use (e.g., resting, haul out, feeding, breeding, natal area, peripheral feeding/resting areas) and changes in its estimated carrying capacity by mapping habitat types; 2) Protect the population and reduce or eliminate the identified potential limiting factors related to human activities, including: managing petroleum exploration, extraction, and tinkering to reduce the likelihood of a spill along the California coast to insignificant levels; minimizing contaminant loading and infectious disease; and managing fishery interactions to reduce sea otter mortality incidental to commercial fishing to insignificant levels; 3) Conduct research to understand the factor, or factors, limiting the current growth rate of the California population and refine recovery goals from which management actions can be identified and implemented; and 4) Evaluate failure criteria for the translocation program to determine if the experimental population at San Nicolas Island has met one or more failure criteria and whether continuation of sea otter containment may jeopardize the sea otter population or hinder recovery.

[91] 2003 RP p19-21: Four major events altering the need and rationale for the translocation program: 1) Evidence became available in the early 1980s that entanglement in fishing gear (gill and trammel nets) was having an important limiting influence on the southern sea otter population. Restrictions and closures were imposed, and a subsequent resurgence in population growth was taken as evidence that gear entanglement had indeed caused the population to decline. The establishment of one or more sea otter colonies by translocation was proposed in the original plan because, at that time, the population was not growing, and the reasons for the lack of growth were unknown. Active intervention in the form of a translocation was considered necessary to expedite sea otter range expansion to ensure recovery. With renewed population growth from the late 1980s to the mid-1990s, however, additional translocations were no longer believed to be an efficient means of recovering the southern sea otter population, in large measure because of their high cost and low probability of success. This assessment represents a fundamental change in recovery strategy. The fact that the population is not increasing reinforces the need for this changed recovery strategy. 2) The Exxon Valdez oil spill confirmed many of the worst fears about the consequences of such events….The distance over which the oil rapidly spread during the…disaster indicates that the translocated colony at San Nicolas Island could not provide a reasonable safeguard against an oil spill of this magnitude. 3) The translocation of southern sea otters to San Nicolas Island has been less successful than originally hoped for as a means of establishing a second, self-sustaining population of southern sea otters…even if the population at San Nicolas Island persists, many years will be required before the population is large enough to be considered an effective reserve to buffer against possible local extinction. In addition, our earlier assumption that the mainland population, if decimated by an oil spill or other event, could be restored using small numbers of animals from the San Nicolas Island colony may not be realistic given the tendencies of translocated sea otters to disperse. 4) Maintenance of a management or "no-otter" zone using non-lethal means has proven costly and ineffective. Large numbers of otters…have been observed frequenting the northern end of the management zone…[and the] animals appear to move into and out of the zone seasonally from areas along the mainland to the north… [and] it is clear that it did not occur as a result of the population increasing in size….The rapidity with which southern sea otters can move throughout their range makes maintenance of a management zone difficult if not impossible.

translocation program have not been met."[92] The Service outlined their present strategy for sea otter recovery as 1) determining the cause of increased sea otter mortality; 2) mitigating that cause(s), and 3) allowing the number and range of otters to increase to a size such that enough survivors will exist to recolonize the range without a loss of genetic diversity in the event of a major oil spill, and that the population will be large enough to support the expectation that the Service will be able to detect a declining trend in abundance before the population levels reach the threshold for endangered status.[93] The Service identified their recovery strategy as "creat[ing] the conditions that will enable the southern sea otter population to increase to a size that allows the species to persist following most natural or human-caused perturbations."[94]

### 2. SNI Discussion from Final Recovery Plan of 2003

In eleven out of the last sixteen years, there have been fewer than 25 sea otters at SNI, which, alone, is sufficient to support that the translocation effort was unsuccessful. It was expected that there would be between 150 to 500 sea otters 11 and 30 years from when the last sea otter was translocated in 1990. Although more than 70 births are known to have occurred at SNI from 1987 to 2002, "the population size has remained small and its future prospects are uncertain."[95]

According to figure 8 in the Service's 2003 RP, "the translocation of southern sea otters to SNI has been less successful than originally hoped for as a means of establishing a second, self-sustaining population of southern sea otters.[96] The Service's final rule for the establishment of an experimental population of southern sea otters[97] described three basic stages to expected population growth at SNI: a transplant stage, an initial growth and re-establishment stage, and a post-establishment and growth stage. According to the Service's predictions, the transplant stage would "end when the population was stabilized, with a sufficient mix of healthy males and females totaling 70 animals (or the number of animals translocated, whichever was less)." This stage was expected to require one or more years. The initial growth and re-establishment stage "would end when the experimental population was established,

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[92] 2003 RP p21.

[93] 2003 RP p21.

[94] 2003 RP p29.

[95] 2003 RP, at pp. viii.

[96] 2003 RP, at pp. 20-21.

[97] 52 FR 29754; August 11, 1987.

with at least 150 animals and a minimum annual recruitment of 20 animals for at least 3 of the most recent 5 years." This stage was expected to require at least five to six years after stabilization of the population. The post-establishment and growth stage "would end when the population reached carrying capacity, an estimated minimum of 280 (but as many as 400-500) animals. A minimum of 10 years was expected for the population to reach carrying capacity."[98]

The 2003 RP goes on to conclude that, "even if the population at San Nicolas Island persists, many years will be required before the population is large enough to be considered an effective reserve to buffer against possible local extinction."[99] Earlier assumptions that the mainland population, if decimated by an oil spill or other catastrophic event, could be replenished using small numbers of animals from the SNI colony appear unrealistic given what we now know about the dispersal tendencies of translocated sea otters.

Based on the recommendations of the Recovery Team, the Service concluded that, "additional translocations are not the best way to accomplish the objective of increasing the range and number of sea otters in California. We believe that range expansion of sea otters in California will occur more rapidly if the existing population is allowed to recover passively than it would under a recovery program that includes translocating sea otters."[100] In addition, the Recovery Team believes that, "given changed circumstances such as the recent observed decline in abundance and the shift in the distribution of otters to include the range designated as an otter-free-zone, it is in the best interest of recovery of the southern sea otter population to declare the experimental translocation of sea otters to SNI a failure and to discontinue the maintenance of the otter-free-zone in southern California."[101] If the translocation program is declared a failure, "the Recovery Team believes it would be beneficial to allow the otters currently on SNI to remain there rather than capturing them and returning them to the mainland population."[102] It is strongly believed by sea otter scientists that there are tremendous benefits in continuing to monitor and conduct research on the SNI sea otter population. Initially, the main research-related purposes of this project were to: "i) evaluate and develop techniques for translocating sea otters, ii) evaluate the status of the sea otter population in central California, iii) evaluate the ecological importance of sea otters in nearshore communities, and

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[98] 2003 RP p 20-21.

[99] 2003 RP, at pp. 21.

[100] *Id.*

[101] *Id.*

[102] *Id.*, at pp. 28.

iv) evaluate and develop methods for containment of sea otter populations."[103] Most studies at SNI have been terminated or severely reduced in scope. The colony and the coastal ecosystem are still being monitored.[104]

## G. The Environmental Community Position on Translocation and Zonal Management

Environmental groups have long regarded zonal management and sea otter containment as a *quid pro quo* for a fully successful SNI translocation. This was the premise for environmental group support of P.L. 99-625 and the rules to establish the translocation.

In subsequent years, the environmental community continued to press this point. For example, in comments on the revised draft recovery plan and other documents in the 1990's, the environmental community took the firm stance that zonal management should not be enforced or continued in the absence of full success of the SNI population.

By letter of August 4, 1998, for example, FSO wrote to the Director of the Service expressing strong concern about the then ongoing sea otter decline and the inappropriateness of zonal management and containment. Exhibit 8, Tab 3. As stated in that letter, the SNI translocation had not been successful and new factors like the *Exxon Valdez* demonstrated why the zonal management program should be terminated and range expansion allowed. Counsel for FSO reiterated these concerns and opposition to zonal management in a notice of intent to sue filed with the Secretary of the Interior and Service Director by letter of September 14, 1999. Exhibit 8, Tab 4. On January 21, 2000, counsel for FSO notified the Service that the zonal management program was in violation of NEPA because the 1986 EIS no longer served as the basis for the zonal management program, due to changed circumstances. Exhibit 8, Tab 2.

These concerns were again expressed by letter of March 1, 2000, when FSO commented on the Marine Mammal Commission's draft "Action Plan" for sea otter recovery. In those comments, FSO demonstrated why zonal management was a failure under the regulatory criteria. FSO also recommended that the plan called for termination of zonal management, natural range expansion, and retention of the SNI colony. Exhibit 9.

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[103] *Id.*, at pp. 17.

[104] *Id.*, at pp. 31.

In comments on the draft revised recovery plan filed on April 10, 2000, a coalition of eight environmental groups called for elimination of zonal management and supported that recommendation with expert testimony by Dr. Daniel Goodman, who concluded that zonal management needed to be terminated. Exhibit 10, Tab B.

Six groups followed up on these comments with a November 30, 2000, rulemaking petition and notice of intent to sue under the ESA, specifically asking to amend the translocation regulations in 50 C.F.R. § 17.84 to terminate all containment, allow for natural range expansion, and leave the sea otters at SNI. The groups indicated that they would bring a lawsuit to prevent containment or actions inconsistent with the best interests of the southern sea otter and in violation of the ESA jeopardy prohibition and the Secretary's affirmative duty to conserve the species. Another expert analysis highlighting the problems with sea otter containment was submitted as part of this petition. Exhibit 8, Tab 1.

Also in 2000, FSO submitted comments on the Service's notice of intent (NOI) to prepare a Supplemental Environmental Impact Statement (SEIS) in those comments FSO stated:

> A deal is a deal, and the deal struck in 1986 was that a successful translocation that furthered sea otter recovery would justify a management zone. In addition to the many other compelling reasons to terminate the management zone, the absence of a thriving and successful sea otter population at San Nicolas Island eliminates any grounds upon which capture and removal from the management zone can be called for.

CMC also submitted comments that supported "declaring the translocation a failure, eliminating the management zone, allowing the population at San Nicolas Island to remain, and allowing sea otters to naturally expand their range to allow for the recovery of the species under the ESA and to achieve its Optimum Sustainable Population under the Marine Mammal Protection Act (MMPA)." CMC also urged the Service to use interim final rule or expedited rulemaking to suspend requirements for capture and removal until decision-making is completed.

These views also were expressed to Congress. For example, in testifying before the House Resources Committee in October, 2001, the Ocean Conservancy stated:

> The Ocean Conservancy recognizes that the decision by FWS to declare the translocation a failure will have ecological effects for

> southern sea otters and their habitat, and economic effects on commercial shellfish fisheries and their future management requirements. However, we believe that moving any animals out of the management zone would likely result in mortality that would further impede the recovery of this species, in contravention of the ESA. Moreover, we assert that the sea otter population must be allowed to expand its range, to promote recovery, avoid nonspecific resource competition, and decrease the potential for disease. Therefore, The Ocean Conservancy supports declaring the translocation a failure, eliminating the management zone, allowing the population of San Nicolas Island to remain, and allowing sea otters to naturally expand their range to allow for the recovery of the species under the ESA and to achieve its Optimum Sustainable Population under the MMPA. We urge Congress not to amend the MMPA to address this issue and instead, ask Congress to direct FWS to move forward expeditiously to complete its EIS on the translocation.

Thus, through all of these statements and positions over a period of many years, the environmental community has made it clear that zonal management is not an end unto itself. Instead, it was part of an agreed upon approach designed first and foremost to advance sea otter recovery. It has been clear for well over a decade that sea otters are not achieving the conservation benefits envisioned in P.L. 99-625 and that, due to changed circumstances, a new direction is required.

## H. The Common Ground Discussions

In October 1999, members of the fishing industry and conservation community met to explore areas of common interest and identify actions to recover southern sea otters while at the same time ensuring the sustainability of commercial shellfish fisheries. At their first meeting, the group established the following objective: *Maintain well-managed and abundant fisheries, healthy marine ecosystems, and recover the southern sea otter population.* This effort came to be known as the "Common Ground Coalition" (CGC).

To achieve this objective, the group framed an action plan that included three broad-based goals: 1) pollution prevention; 2) southern sea otter and ecosystem health assessment and maintenance; and 3) habitat enhancement.

In March 2000, the group met again and devised tasks within the action plan to

achieve these goals and objectives. They are: 1) support state funding for ecosystem health monitoring;[105] 2) fishing gear modifications;[106] 3) sea otter health assessment;[107] 4) jump start the sea otter recovery plan;[108] 5) enhance shellfish recruitment and harvest within and beyond the sea otter range;[109] 6) map fisheries and key facilities within current and potential sea otter range;[110] 7) adaptive management strategies to address sea otter range expansion;[111] and 8) identify mitigation measures for fisheries that could be affected by sea otter range expansion.[112]

In April 2000, a segment of the southern California commercial shellfish fishery filed a lawsuit seeking to force the Service to capture and remove sea otters from the management zone. The plaintiffs took this action, even though they were engaged in discussions with the environmental community in an effort to find consensus on issues of concern. This resulted in a suspension of the Common Ground discussions.

In November 2004, the participants to the Common Ground meetings reconvened to

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[105] More than five years of data indicate that nearly 40% of the dead sea otters examined had an infection at the time of death. CGC agreed that scientists must determine sea otter infection rates, how and to what degree infections are communicable, and the incidence of environmental contaminants, toxins and parasites and their impact on sea otters and their habitat. A marine ecosystem health monitoring program should be a jointly funded cooperative research effort to collect and coordinate ecological, biomedical, chemical and physical oceanographic and atmospheric information to identify trends and events affecting otter and shellfish populations.

[106] The commercial fishing industry can play a leadership role in efforts to avoid sea otter entrapment in fishing gear by establishing gear advisory groups. The gear advisory groups could work to mitigate potential entrapment in live fish traps, including crab and lobster traps, which may be used within sea otter habitat.

[107] A multi-agency, public/private effort is needed to assess the health of wild California sea otters.

[108] As the Service nears completion of an updated Southern Sea Otter Recovery Plan, GCC members should work jointly to secure federal, state, and private funding for its implementation.

[109] If adequate research and development funds were available, fishermen could develop and test devices to enhance protected habitat for commercial shellfish harvesting. The CGC should work to engage scientists, engineers, and funders in developing pilot projects for creation of artificial shellfish refugia and cryptic habitat.

[110] Managers may be able to effectively and cooperatively develop adaptive conservation and management strategies allowing for the co-existence of fisheries and sea otters, if information systems exist to easily identify fisheries, activities, and facilities that may affect or be affected by current or future overlap of the sea otter range expansion and fishing grounds.

[111] To improve conservation and management, scientists must better understand and develop predictive models to assess the impact of sea otter movements on fisheries and the ecosystem. This will require additional research into the dynamics of sea otter range expansion and correlations to overall indicators of ecosystem health, pollution or disease conditions and prey availability.

[112] Although no one can predict to what degree sea otters may continue expanding their range, scientists, fishermen, environmentalists, and managers should work toward identifying possible measures to reduce potential adverse impacts on certain fisheries and mariculture projects. The mitigation measures should help reduce fishery impacts due to area or species closures, disease or pollution and should take into consideration the social and economic consequences of changes to the fisheries, marine habitat, and sea otter recovery brought about by the movement of sea otters.

continue their discussions. The CGC members adopted ground rules and established expectations. Unlike the previous meetings, the participants included representatives of the Service and the CDFG. At this meeting, the CGC received an update on the status of southern sea otters and their health. The participants, using the plan developed in their previous meetings, agreed to a nine point action plan that included: 1) support funding for ecosystem health monitoring; 2) continue research into and the development of fishing gear modifications; 3) support efforts to continue sea otter health assessments; 4) support passage of the Southern Sea Otter Recovery and Research Act (SSORRA); 5) enhance shellfish recruitment and harvest within and beyond the sea otter range; 6) map fisheries and key facilities within the current and potential otter range; 7) encourage the development of adaptive management strategies to address sea otter range expansion; 8) identify mitigation measures for fisheries which could be affected by sea otter range expansion; and 9) look for simple actions to improve water quality.

The CGC met in again in June 2005. In the interim between the November and June meeting, the participants submitted a letter requesting increased appropriations for the Service for sea otter recovery efforts. The CGC discussed the circumstances surrounding the development of the SSORRA,[113] the outstanding concerns of the fishing community and further changes/refinements to the Bill. The CGC agreed to advance additional changes to the SSORRA and that Sea Urchins Harvesters Association of California (SUHAC) would draft a letter to Congressman Farr, for endorsement by the CGC, outlining the proposed changes and requesting that Congressman Farr make a commitment to make those changes as a prerequisite for securing the support of the fishing community.

The CGC discussed the Sea Otter Experimental Translocation and Management Plan, a proposal put forth by the fishing community. In this plan, the fishermen highlighted several key issues: 1) the population at SNI provides an important study population; 2) the management zone as currently configured and implemented is ineffective; 3) the management zone should be revised to move the northern boundary south from Pt. Conception to Santa Barbara; 4) that zone should be established for five years and sea otters should be captured and tagged in that area; and 5) recovery enhancement areas should be set aside and a research and management plan for such areas should be developed (enhancement areas could include shellfish refugia).

The CGC discussed the management zone, identifying that the benefit of a management zone is more to reduce competition than to protect the fisheries from the

[113] The Southern Sea Otter Recovery and Research Act requires the Secretary of the Interior, acting through the U.S. Fish and Wildlife Service, to carry out a recovery program for southern sea otter populations along the coast of California.

incidental take restrictions. The CGC also examined briefly the history of removals from the existing management zone and the survival rate of sea otters removed from the management zone. Several other aspects of the Translocation Program and the Management Zone Plan were discussed. In the end, the CGC agreed to continue this discussion at another Common Ground meeting in an effort to determine whether there is an alternative that could be developed that would garner support by both the fishing industry and the conservation community. The CGC agreed that further discussions must consider in greater detail the following issues:

1. Should there be a management zone at all? If there is a management zone, how to revise it, including the area that should be delineated, and the desire to reduce the overall size of the management zone?
2. How to achieve protection of the fisheries in and around San Miguel and Santa Rosa Island?
3. How to make some accommodation for incidental take if it does occur in commercial fisheries?
4. Should animals in a management zone be contained, what is the trigger for containment, where should animals be relocated, how should survivorship be monitored, and what are the triggers and actions if survivorship is poor or relocated animals return?
5. What are the physiological consequences of moving sea otters and what studies are needed to further evaluate the impact of moving sea otters?
6. What is the mechanism and is it possible to secure the necessary funding to implement a research and management strategy for the management zone (it is estimated that 500-700K/yr is need to implement the management zone, but that estimate includes only a minimal monitoring program)?
7. What does a management plan for a Recovery Enhancement Area include?
8. What is the duration of the management zone, if any (e.g., 5 years), and what are the triggers to implement an effective adaptive management program (how emergency situations be handled)?

The CGC agreed that these questions provided at least a basis for further discussion of the possibility of developing an alternative to the existing Translocation Program/Management Zone. However, the conservation organizations participating in the CGC clearly stated that these discussions should not delay the issuance of the pending Translocation Program/Management Zone DSEIS. Unfortunately, due to efforts on the part of the fishing community to delay publication of the DSEIS, discussions were once again suspended. Recently, the groups involved in the CGC have exchanged letters about the possibility of resuming discussions.

Although the CGC discussions have been suspended on several occasions, they illuminated a number of areas of common interest and agreement—most notably, the issue of sea otter health and water quality. The continued work of the CGC to address these issues and make progress on their action plan may ultimately benefit southern sea otter recovery. However, given the sporadic nature of these discussions, the CGC discussions should not be used as a reason to delay a final decision on the translocation program.

## I. The Review of the Translocation Program

These developments clearly pointed in the direction of only one legally sufficient course to promote sea otter recovery and avoid jeopardy to the species: termination of zonal management, along with allowing all sea otters to remain in their current locations. The Service therefore initiated the procedural actions necessary to evaluate whether to pursue this course of action.

### 1. Scoping Process for DSEIS

In order to notify stakeholders of the Service's intended course of action for the review of the southern sea otter translocation program (Program), the Service held two public meetings in August 1998. At these meetings, information was provided on the status of the program, general comments and recommendations were solicited, and the Service announced its intention to reinitiate consultation under section 7 of the ESA for the program and to begin the process of evaluating the failure criteria established for the program.

Upon receipt of substantial new information on the population status, behavior, and ecology of the southern sea otter that revealed adverse effects of containment that were not previously considered, the Service distributed a draft section 7 consultation on the southern sea otter containment program to interested parties for comment on March 19, 1999, and issued a final 2000 BO on July 19, 2000. In the 2000 BO, the Service cited the following information and circumstances as prompting reinitiation: "(1) in 1998 and 1999, southern sea otters moved into the management zone in much greater numbers than in previous years; (2) analysis of carcasses indicated that southern sea otters were being exposed to environmental contaminants and diseases that could be affecting the health of the population throughout California; (3) range-wide counts of southern sea otters indicated that numbers were declining; (4) recent information, in particular the observed effects of the Exxon Valdez oil spill, indicated that southern sea otters at San Nicolas Island would not be isolated from the potential effects of a single large oil spill; and (5) the

capture and release of large groups of southern sea otters could result in substantial adverse effects on the parent population."[114]

The 2000 BO concluded that continuation of the containment program would likely jeopardize the continued existence of the species on the grounds that: "(1) reversal of the southern sea otter's population decline was essential to the survival and recovery of the species, whereas continuation of containment could cause the direct deaths of individuals and disrupt social behavior in the parent range, thereby exacerbating population declines; and (2) expansion of the southern sea otter's distribution was essential to the survival and recovery of the species, whereas continuation of the containment program would artificially restrict the range to the area north of Point Conception, thereby increasing the vulnerability of the species to oil spills, disease, and stochastic events."[115]

On July 27, 2000, the Service published a notice of intent to prepare a supplement to the 1987 EIS on the southern sea otter translocation program.[116] The notice of intent announced that public scoping meetings would be held on August 15, 2000 in Santa Barbara, California, and on August 17, 2000 in Monterey, California. On July 27, 2000, the Service distributed press announcements detailing the scoping meeting dates, times, and locations.

The purpose of the scoping meetings was to solicit information to be used to define the overall scope of the supplement, to identify significant issues to be addressed, and to identify alternatives to be considered. The Service provided a brief presentation on the National Environmental Policy Act process and information related to the southern sea otter translocation program at each session, reserving the remainder of the time for public statements. It also solicited written comments by September 30, 2000. A total of 61 individuals attended scoping sessions held in Santa Barbara, and 43 individuals attended scoping sessions in Monterey. Subsequent to these public scoping sessions, the Service met with the technical consultants to the Recovery Team on September 26, 2000 to discuss scoping of the supplement. The Service reviewed comments received during the scoping meetings and solicited additional information from the group.

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[114] Biological Opinion 2000.

[115] *Id.*

[116] 65 FR 46172.

On January 22, 2001, the Service issued a policy statement regarding the capture and removal of southern sea otters in the designated management zone.[117] Based on the 2000 BO, the Service determined that "the containment of southern sea otters was not consistent with the requirement of the Endangered Species Act to avoid jeopardy to the species."[118] The notice advised the public that the Service would not capture and remove southern sea otters from the management zone pending completion of the reevaluation of the southern sea otter translocation program. This reevaluation would include the preparation of a supplement to the 1987 EIS and release of a final evaluation of the translocation program that contains an analysis of failure criteria. In April 2001, the Service published a scoping report and distributed it to scoping meeting participants and other interested parties.

### 2. Publication of the DSEIS

In October 2005, the Service published a Draft Supplemental Environmental Impact Statement (DSEIS) for the *Translocation of Southern Sea Otters*. The stated purpose of the supplement is to "evaluate the impacts of the southern sea otter translocation plan as described in [the Service's] 1987 environmental impact statement, using information obtained over the 18 years since the plan's inception, and to evaluate alternatives to the current translocation program, including termination of the program or revisions to it."[119] The proposed action in the DSEIS, alternative 3C, is to "[t]erminate the southern sea otter translocation program based on a failure determination…and do not remove sea otters residing within the translocation of management zones at the time the decision to terminate is made."[120] It called for termination of zonal management based on a failure determination and leaving all sea otters in the translocation and management zones. The Service held public hearings on the DSEIS on November 1, 2005 in Santa Barbara and November 3, 2005 in Monterey. In these meetings, the public expressed overwhelming support for Alternative 3C. On December 28, 2005, the Service extended the comment period on the DSEIS to March 6, 2006.

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[117] 66 FR 6649.

[118] *Id.*

[119] *See* DSEIS, p2.

[120] *Id.* at 17.

## III. General Comments

### A. Current Status of the Southern Sea Otter and Biological Justification for Range Expansion and Terminating Zonal Management

#### 1. Current Status of the Southern Sea Otter in Central California

The current status of the southern sea otter confirms the need to adopt alternative 3C. Failure to do so will adversely affect recovery prospects and cause jeopardy to the species.

##### a. Abundance Estimates

Spring counts of southern sea otters are used to determine trends in the distribution and abundance of sea otters in central California. These counts are minimum population counts, with no correction factor to account for either bias or year-to-year variance in viewing conditions. Therefore, the Service plots these data as 3-year running averages, and the trends in these averages provide long-term population trends. These data are available at (http://www.werc.usgs.gov/otters/ca-survey3yr.html).

Historical data indicate a consistent rate of increase at about 4 to -5% per year through the mid-1970s. Then, in about 1975, the population began a period of marked decline, which continued through the early 1980s.[121] In the 1980s, it was discovered that California sea otters were being entangled and killed in a coastal set net fishery.[122] From the mid-1970s to the early 1980s, an average of 105 sea otters/year died from entanglement.[123] The CFGC implemented fishery restrictions to reduce or eliminate these losses. The population then resumed a phase of population growth which continued until about 1995, at which point the numbers again began to decline (See Figure 3).[124] This declining trend is evident in both the yearly counts and in the same data plotted as three-year running averages.[125]

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[121] Riedman, M.L., and J.A. Estes. 1990. The sea otter (*Enhydra lutris*): behavior, ecology, and natural history. Biological Report 90(14), U.S. Fish and Wildlife Service. 126pp.

[122] 2003 RP at 19.

[123] DSEIS at 48.

[124] DSEIS at 49.

[125] DSEIS at 48.

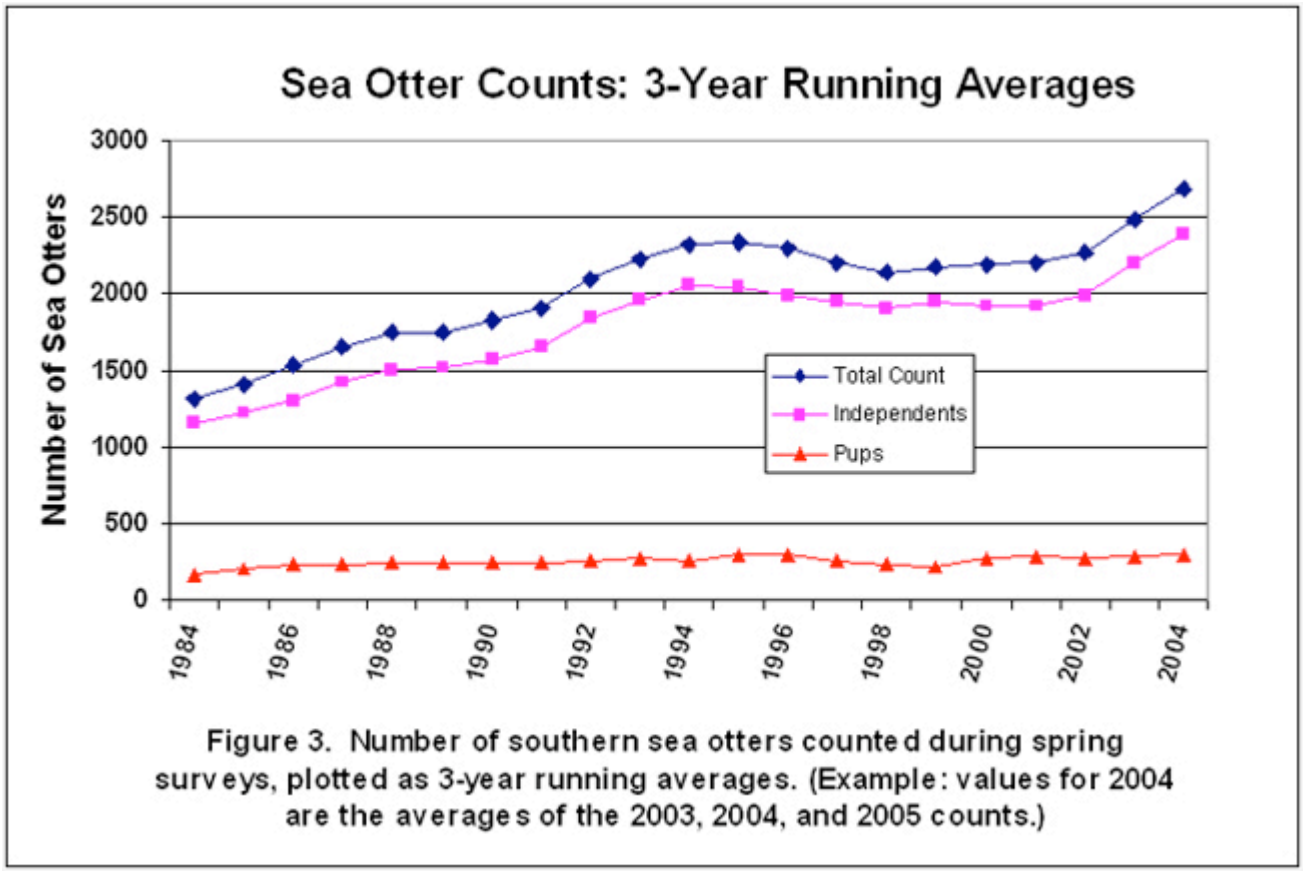


Figure 3. Number of southern sea otters counted during spring surveys, plotted as 3-year running averages. (Example: values for 2004 are the averages of the 2003, 2004, and 2005 counts.)

### b. Causes of Mortality and the Decline

According to the DSEIS, there are three possible explanations for the recently increased mortality and reduced population abundance of the southern sea otter: increases in the rate of infectious disease; incidental losses in coastal fishing gear;[126] and decreases in food abundance.[127]

Disease is responsible for roughly 40 percent of the deaths in animals obtained from the salvage program. Infectious diseases in the southern sea otter are almost entirely the consequence of protozoal encephalitis, acanthocephalan peritonitis, myocarditis, cardiomyopathy[128] and other parasites and microbes for which the sea otter is not a

[126] While there are unconfirmed reports of otters having been incidentally drowned in coastal live trap fisheries, there is insufficient information to evaluate this potential source of mortality.

[127] DSEIS at 49.

[128] Kreuder, C., M. A. Miller, D. A. Jessup, L. J. Lowenstine, M. D. Harris, J. A. Ames, T. E. Carpenter, P. A. Conrad, and J. A. K. Mazet. 2003. Patterns of mortality in southern sea otters (*Enhydra lutris nereis*) from 1998-2001. Journal of Wildlife Diseases 39:495-509. See Also Kreuder, C., M. A. Miller, L. J. Lowenstine, P. A. Conrad, T. E. Carpenter, D. A. Jessup, and J. A. K. Mazet. 2005. Evaluation of cardiac lesions and risk factors associated with myocarditis and dilated

natural host.[129] It is unclear, however, whether there is any common explanation for these diseases such as elevated terrestrially-based pathogen loads, density-dependent nutritional limitation, immune suppression due to low genetic diversity or contaminant burdens. The main factor to note is that future population growth is sensitive to the rate of infectious disease[130]—the population cannot continue its current rate of increase in the face of high rates of infection.

Research on sea otter foraging behavior and movements is ongoing. The data thus far show that sea otters on SNI are larger and spend less time foraging than those in the central part of the range. This indicates that food limitation is a factor in the recovery of southern sea otters in central California.[131]

### c. Recent Increases in Abundance

Figure 3 shows the results of recent spring surveys (conducted in 2000, 2001, 2002, 2003, and 2004) that counted 2,317, 2,161, 2,139, 2,505, and 2,825 sea otters, respectively. "The 2004 count represents an increase of about 13 percent over the 2003 count, and the 3-year running average for 2003 represents an increase of about 9.8 percent over the 3-year running average for 2002."[132]

According to Estes, Hatfield, and Tinker, "Of the 3 main factors that can result in variation in abundance (reproduction, mortality, and movement), variation in mortality has been found to be the principal driver of the patterns and trends of population growth in the California sea otter, while birth rates have remained more or less constant." The most recent trend of population increase appears driven by

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cardiomyopathy in southern sea otters (*Enhydra lutris nereis*). American Journal of Veterinary Research 66:289-299. Mayer, K. A., M. D. Dailey, and M. A. Miller. 2003. Helminth parasites of the southern sea otter *Enhydra lutris nereis* in central California: Abundance, distribution and pathology. Diseases of Aquatic Organisms 53:77-88. See also Miller, M. A., I. A. Gardner, C. Kreuder, D. M. Paradies, K. R. Worcester, D. A. Jessup, E. Dodd, M. D. Harris, J. A. Ames, A. E. Packham, and P. A. Conrad. 2002. Coastal freshwater runoff is a risk factor for *Toxoplasma gondii* infection of southern sea otters (*Enhydra lutris nereis*). International Journal for Parasitology 32:997-1006. Miller, M. A., M. E. Grigg, C. Kreuder, E. R. James, A. C. Melli, P. R. Crosbie, D. A. Jessup, J. C. Boothroyd, D. Brownstein, and P. A. Conrad. 2004. An unusual genotype of *Toxoplasma gondii* is common in California sea otters (*Enhydra lutris nereis*) and is a cause of mortality. International Journal for Parasitology 34:275-284.

[129] DSEIS at 49.

[130] Gerber, L. R., T. Tinker, D. Doak, and J. Estes. 2004. Mortality sensitivity in life-stage simulation analysis: A case study of southern sea otters. Ecological Applications 14:1554–1565.

[131] Bentall, G.B. 2005. Morphological and behavioral correlates of population status in the southern sea otter: a comparative study between central California and San Nicolas Island. Master's Thesis, University of California, Santa Cruz, CA.

[132] DSEIS at 48.

increases in males and possibly non-reproductive (sub-adult) females. This conclusion is based on two findings: 1) the number of females with dependent pups counted during the survey has not increased or changed appreciably since the early 1990s; and 2) the count increases have occurred in areas of the range that are known or suspected to be inhabited primarily by males and juvenile females.[133] Scientists do not know the reasons for these recent population trends and apparent shifts in sex ratio; however, they do know that this increasing trend is unsustainable unless the number of reproductive females also increases, as reproductive females ultimately determine and drive long-term population growth.

The stability of this increasing trend is even more suspect as detailed analysis of the stranded carcass records through 1999, as provided by Estes et al. (2003), indicate a large number of dead prime age (4-9 year old) females. Mortality rates vary substantially across the sea otter's range: in particular, juvenile and sub-adult mortality is higher in the northern half of the range (i.e. near the Monterey Peninsula) than in the central portion of the range (near Cambria), while mortality of all age classes is lowest at the southern end of the range (near Pt. Conception).[134] Also, mortality rates have increased significantly over the past 20 years, with a substantial jump in the death rate occurring around 1995 and persisting through to at least 2003. This mortality increase was most pronounced among prime-age and older females in the north and center of the range, while male mortality rates have actually dropped since the mid 1980s, based on a comparative analysis of telemetry data from the two periods. The data indicates that the welfare of adult females in the north and center part of the range is poor; and thus the overall increase in abundance since 2001 is unsustainable unless female survival improves. Again, infectious disease is foremost among the proximate drivers.

Another factor that must be evaluated in relation to the current increasing population trend is the per capita mortality. The per capita mortality rate (measured as the number of carcasses retrieved during the calendar year divided by the number of sea otters counted during the spring surveys in that same year) is typically higher during periods of sustained population decline. The per capita mortality rate has increased

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[133] Estes J.A., B. Hatfield, and M.T. Tinker, Biological Analysis of Sea Otters and Coastal Marine Ecosystems in Central and Southern California: Synopsis and Update. Western Ecological Research Center and U.S. Geological Survey. Exhibit 11.

[134] Tinker, M. T. 2004. Sources of variation in the foraging behavior and demography of the sea otter, *Enhydra lutris*. Ph.D dissertation, University of California, Santa Cruz. Tinker, M. T., D. F. Doak, J. A. Estes, B. B. Hatfield, M. M. Staedler, and L. Bodkin James. *In press*. Estimating spatial and temporal variation in the demography of southern sea otters. Ecological Applications See also Tinker, M.T., D. F. Doak, and J. A. Estes. *in review* (Conservation Biology). Using demography and movement behavior to predict range expansion of the southern sea otter.

since about the early to mid 1990s; however, there has not been a concurrent decline in this measure of per capita mortality in association with the most recent increases in population counts.[135] It is unlikely that the population can continue to grow in the face of a high per capita mortality rate.

### 2. Current Population Status and Trends of Southern Sea Otters on San Nicolas Island

The history of the sea otter population at SNI confirms that it has failed under the regulatory criteria. By 1990, most of the 140 sea otters that were translocated to SNI had disappeared from the Island. The fate of half the sea otters translocated is known. The remainder, which were unaccounted for, either died or moved into areas along the main part of the range or management zone.[136] From 1990 through 1998, the number of sea otters counted at SNI remained roughly constant, fluctuating between 15 and 19 (independents plus dependent pups; the number of independent animals over this same time period fluctuated between 12 and 17).[137] In eleven out of the last sixteen years, there have been fewer than 25 sea otters out at SNI.

[135] Estes, Hatfield, and Tinker, Exhibit 11.

[136] Recovery Plan at p. 13.

[137] DSEIS at Appendix C-13.

**TABLE 1. POPULATION STATUS OF SEA OTTERS AT SAN NICOLAS ISLAND (SNI), 1987-2003**

| Year | # Released at SNI | # Born at SNI | Maximum # independent sea otters* |
|---|---|---|---|
| 87 | 60 | 1 | 27 |
| 88 | 41** | 1 | 28 |
| 89 | 35 | 3 | 28 |
| 90 | 4 | 5 | 14 |
| 91 | 0 | 8 | 14 |
| 92 | 0 | 4 | 13 |
| 93 | 0 | 6 | 12 |
| 94 | 0 | 5 | 16 |
| 95 | 0 | 3 | 14 |
| 96 | 0 | 6 | 17 |
| 97 | 0 | 5 | 16 |
| 98 | 0 | 3 | 15 |
| 99 | 0 | 4 | 21 |
| 00 | 0 | 6 | 21 |
| 01 | 0 | 7 | 27 |
| 02 | 0 | 8 | 29 |
| 03 | 0 | 8 | 33 |
| 04 | 0 | 7 | 32 |
| Total | 140 | 90 | |

*Totals given here exclude dependent pups and reflect the highest count made in each calendar year. Totals for 1987-1990 are adjusted upwards to include the number of sea otters released at the island in each of those years, even if a released sea otter was not subsequently seen.
**Includes one rehabilitated sea otter from Monterey Bay Aquarium.

Data source: Hatfield 2005, U.S. Geological Survey unpublished data.

In 1999, the counts began to increase, at a growth rate of approximately 10% per year, reaching a high of 38 (total) in 2003.[138] However, the counts at SNI have since

[138]Hatfield, B. B. 2005. The translocation of sea otters to San Nicolas Island: an update. In D.K. Garcelon and C.A. Schwemm eds., Proceedings of the Sixth California Islands Symposium, Ventura, California, December 1-3, 2003.

declined—to 35 in 2004 and 32 in 2005.[139] Although the increasing counts from 1999 through 2003 probably reflects intrinsic population growth, it is uncertain whether the lower counts in 2004 and 2005 represent a cessation of population growth. On the other hand, the fact that the counts have now declined in two successive years, after having increased over each of the preceding 5 years, suggests that the sea otter population at SNI is no longer increasing and may be in decline.[140]

A minimum of 97 pups have been born at SNI since 1990. With the minimum number of births ranging between four and eight per year, there are no reproductive trends. Given the normal maximum longevity of wild sea otters (15-20 years) and the fact that at least one of the original animals translocated to SNI was still alive in 2004, the observed birth rate is sufficient to have driven a much higher rate of population increase.[141] These findings are consistent with the conclusion that failure of the SNI population to increase more rapidly is the result of elevated mortality and/or dispersal away from the island.

### 3. Differences Between the Central California Population and San Nicolas Island—the Case for Needed Range Expansion

An examination of sea otters in central California and SNI provides further evidence for the need to end zonal management and allow natural range expansion. Scientists have contrasted food availability and the body condition and foraging behavior of sea otters, between these sites. Because of the small number of sea otters at SNI and their recent occupation of that environment, food availability is not the essential limiting resource for that population.[142] Scientists have demonstrated that the overall density of benthic invertebrate prey is much greater (1-2 orders of magnitude) at SNI than in central California.[143] The result is the length and mass at age, and the age-specific mass-to-length ratios were significantly greater for sea otters at SNI than in central California. Scientists also looked at dietary composition and time spent foraging and found the diets of sea otters at SNI were diverse at the level of individuals, relatively narrow at the population level, and similar across different individual sea otters.[144]

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[139] Estes, Hatfield, and Tinker Exhibit 11.

[140] *Id*.

[141] *Id*.

[142] *Id.*

[143] Bentall, G.B. 2005. Morphological and behavioral correlates of population status in the southern sea otter: a comparative study between central California and San Nicolas Island. Master's Thesis, University of California, Santa Cruz, CA.

[144] Estes, Hatfield, and Tinker, Exhibit 11.

The dietary patterns of sea otters in central California were quite different, being comparatively narrow at the level of individuals, diverse at the population level, and divergent across different individual sea otters.[145] Time spent foraging and foraging bout lengths for sea otters were also much less at SNI than in central California.[146] These data indicate that food limitation is potentially an obstacle to recovery for sea otters in central California, thus suggesting that sea otters in central California may be at or near the environmental carrying capacity. Therefore, future population growth (and thus delisting) of southern sea otters must be achieved through range expansion rather than increased population density within the present range.

#### 4. Fate of Translocated Animals—The Case to End Zonal Management

When considering whether to end zonal management it is important to review information on the fate and behavior of sea otters that are captured and released elsewhere. According to Estes, Hatfield, and Tinker: "Both the results of the translocation to San Nicolas Island and other shorter-distance relocations within the sea otter's range in central California indicate that individuals of this species have a strong affinity for their established home range, thus displaying the strong tendency to return to these sites when moved elsewhere."[147] Any continuation of zonal management in the future would only result in animals that were moved to central California from either SNI or elsewhere in southern California, returning to their capture locations. In addition, the relocation of sea otters results in increased risk of mortality, due in part to the stress associated with capture, handling, and time out of the water.[148] It may also result from the general lack of familiarity by the animals with their new environments.[149] For males, there is the added risk of death or injury from encountering territorial males in these foreign habitats.[150] Finally, there is the possibility of detrimental effects of the foreign, relocated animals on the recipient population, especially when food resource competition is intense, as seems to be the case in the center of the current mainland range. Even the Recovery Team cautioned that the capture and relocation of a large number of sea otters could result in the deaths of animals, disrupt the existing social structure of resident groups, increase

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[145] *Id.*

[146] *Id.*

[147] *Id.*

[148] *Id.*

[149] *Id.*

[150] *Id.*

competition for resources, and very possibly exacerbate the observed population decline."[151] From a biological standpoint, the increased mortality and stress on the parent population associated with maintaining zonal management will hinder recovery and jeopardize the future existence of the species.

The translocation of sea otters into the parent population can potentially cause that population to decline. Tinker et al. (2000) developed a simulation model to assess population level impacts of translocating sea otters from the "no otter management zone" south of Pt. Conception to the parent population. The authors ran a suite of simulations projecting population dynamics 20 years into the future, both with and without capture/translocation from the "no otter management zone." Their conclusions showed that using virtually all model scenarios (98.2% of 20,000 simulations) resulted in "decreased population size associated with translocation, and approximately half resulted in a decrease of 5% or more from the final population size without translocation." The authors went on to conclude that "[t]he principle impact of translocation in most scenarios was indirect, resulting from curtailment of population growth at the edge of the range or from negative effects to animals in the recipient population…." The conclusions from Tinker et al. support the need both to eliminate any impediment to population growth, through range expansion, and to eliminate negative impacts on the animals found within the main part of the range. In summary, the Tinker et al. study supports the need to end the translocation program and eliminate the "no otter management" zone.

### 5. The Uncertainty of Range Expansion of California Sea Otters

While the range of the California sea otter has been slowly but continuously increasing (especially to the south), there is considerable uncertainty as to the degree to which the population's abundance and range will change in the future. And, in addition, while the geographic boundaries of the range have increased, since 1995 the sea otter population numbers have declined or failed to increase in seven out of the last ten years. It is impossible to know how the various factors that influence reproduction, survival, and redistribution will change in the future. The DSEIS forecasts range expansion of sea otters into southern California over two future time periods—10 and 25 years. The analyses indicate that in 10 more years sea otters will have spread southeastward to about Santa Barbara (with a total of 65 individuals occurring south of Pt Conception), and in 25 years from present the range will have spread to about Carpinteria (with a total of 185 individuals occurring south of Pt. Conception). However, there is substantial uncertainty associated with these predictions--the 95% confidence interval around the estimated number of animals

[151] Draft Evaluation of the Southern Sea Otter Translocation Program, March 1999 at 19.

south of Pt. Conception after 25 years is 60 – 361 individuals. These estimates of sea otter population size south of Point Conception over the next 25 years certainly are not indicative of a substantial front of sea otters reoccupying this area. The uncertainty in predicting how many sea otters will be south of Point Conception over the next 25 years is attributable to variation in the estimated survival rates of prime-age females, and to a lesser degree the movement rates of sub-adult females. More importantly, if the recent decline in female survival (particularly in the center of the range) is density dependent, as appears to be the case, then recovery and delisting of the southern sea otter will depend on population growth near the ends of the current range, as well as range expansion into southern California.[152]

### 6. Sea Otters as Beneficial to Kelp Forest Ecosystems

Another justification for allowing for natural, unimpeded range expansion into southern California is the benefit provided by sea otters to kelp forest ecosystems. Well-studied comparisons between kelp forest systems in California and Alaska show that sea otters can have tremendous benefits to the assemblages of species living in kelp forest ecosystems.[153] Filter-feeding invertebrates and kelp forest fish are enhanced in sea otter-dominated ecosystems. Scientists predict that, overall, the "distribution and temporal stability of kelp forests should increase with the spread of sea otters into Southern California."[154]

### 7. Conclusion

Current data indicate that southern sea otters in the central portion of California are food limited—being smaller and spending more time foraging than those off SNI. In addition, it appears that current population increases are unsustainable due to the high mortality of prime-aged females, much of this mortality being associated with disease. Therefore, recovery and delisting of the southern sea otter depends on population growth near the ends of the current range—specifically range expansion into southern California where prey may be more abundant. According to Estes et al., future population growth and successful conservation of this species will not be achieved simply through "increased population density within the present range."[155]

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[152] Tinker, M.T., D. F. Doak, and J. A. Estes. *in review* (Conservation Biology). Using demography and movement behavior to predict range expansion of the southern sea otter.

[153] Estes, Hatfield and Tinker, Exhibit 11.

[154] *Id*.

[155] *Id*.

Zonal management must be terminated as relocation of sea otters out of the management zone results in mortality from increased stress of capture and handling. Furthermore, relocated males are at increased risk of death from territorial males in these foreign habitats and there are detrimental effects (e.g., increase competition and food limitations) to the parent population of relocating foreign animals.

## B. The Translocation Fails under the Criteria and Violates the Translocation Law

The Service delineated specific failure criteria to identify circumstances under which the translocation program failed. There are five criteria, and failure to meet even one of them requires a finding that the translocation program has failed.[156] In 1999, the Service completed a Draft Evaluation of the Southern Sea Otter Translocation Program, and proposed designating the translocation as a failure. In 2000, the Service also completed the final BO under the ESA, where it determined that moving the animals out of the management zone would jeopardize the species, which would be contrary to the duty imposed on the Service under Section 7 of the ESA.

Under the current federal regulations, "[i]f, based on any one of the criteria, the Service concludes, after consultation with the California Department of Fish and Game and the Marine Mammal Commission, that the translocation has failed to produce a viable, contained experimental population, the Service shall amend the federal regulations to terminate the experimental population, and otters remaining within the translocation zone will be captured and placed back into the range of the parent population. Efforts to maintain the management zone free of otters would then be curtailed after all reasonable efforts had been made to remove all otters that were

156 The five criteria are: 1) If, after the first year following initiation of translocation or any subsequent year, no translocated otters remain within the translocation zone, and the reasons for emigration or mortality cannot be identified and/or remedied; 2) If, within three years from the initial transplant, fewer than 25 otters remain, and the reasons for emigration or mortality cannot be identified or remedied; 3) If, after two years following the completion of the translocation phase, the experimental population is declining at a significant rate, and the translocated otters are not showing signs of successful reproduction (i.e., no pupping is observed); however, termination of the project under this and the previous criterion may be delayed, if reproduction is occurring, and the degree of dispersal into the management zone is small enough that no effort to remove otters from the management or no-otter zone would be acceptable to the Service and the affected State; 4) If the Service determines, in consultation with the affected State and the Marine Mammal Commission that sea otters are dispersing from the translocation zone and becoming established within the management zone in sufficient numbers to demonstrate that containment cannot be successfully accomplished. This standard is not intended to apply to situations in which individuals or small numbers of otters are sighted within the management zone or temporarily manage to elude capture. Instead it is meant to be applied when it becomes apparent that, over time (one year or more), otters are relocating from the translocation zone to the management zone in such numbers that: 1. an independent breeding colony is likely to become established within the management zone or 2. they could cause economic damage to fishery resources within the management zone. It is expected that the Service could make this determination within a year, provided that sufficient information is available; and 5) If the health and well-being of the experimental population should become threatened to the point that the colony's continued survival is unlikely, despite the protection given to it by the Service, State and applicable laws and regulations. An example would be if an overriding military action for national security was proposed that would threaten to devastate the colony and the removal of otters was determined to be the only viable way of preventing loss of the colony. 50 C.F.R. § 17.84(d)(8).

still within the management zone at the time of the decision to terminate the experimental population. Reasonable efforts would include efforts up to the point that the Service and CDFG jointly determine that further efforts would be futile."[157] The Evaluation of the Translocation Program, the 2000 BO, the 2003 RP, and the DSEIS all support a finding that the translocation program has failed.

### 1. Evaluation of Service's Failure Criteria for the Translocation Program

The SNI translocation must be considered a failure pursuant to three sections of the Service's regulations governing the translocation program, and pursuant to one condition of the U.S. Fish and Wildlife Service (FWS)/California Department of Fish and Game (CF&G) MOU:

#### a. Fewer than 25 Animals

Pursuant to 50 C.F.R. § 17.84(d)(8)(ii), the translocation has failed "if within three years from the initial transplant, fewer than 25 otters remained in the translocation zone and the reasons for emigration or mortality could not be identified or remedied." As of 1990, (three years after the initial transplant) there were only 15 otters at SNI—in fact, for eleven of the fifteen years of the Program fewer than 25 otters have been present at SNI. It was not until 2001 that the population exceeded 25 animals. Since then, population growth has been inconsistent and may again be declining. The Program failed to create a founding population of 70 animals, instead, the founding population appears to have numbered as few as 13 animals, and not all of these animals may have reproduced. Such a small population is disproportionately affected by slight shifts in mortality rates and/or emigration, which may ultimately result in the loss of the colony.[158] Subsequent growth and recruitment into the population has naturally been slow and has not consistently met the expected rate of 5 to 15 percent. The lack of growth of the colony has been primarily attributed to poor recruitment, due to mortality or emigration. Reasons for this failure remain unclear and have not been remedied.

#### b. Lack of Successful Reproduction

Pursuant to 50 C.F.R. § 17.84(d)(8)(iii), the translocation has failed if, "after two years following the completion of the transplant phase, the experimental population is declining at a significant rate, and the translocated otters are not showing signs of successful reproduction (i.e., no pupping is observed); however, termination of the

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157 50 C.F.R. § 17.84(d)(8)(vi).

158 DSEIS at Appendix C-24.

project under this and the previous criterion may be delayed if reproduction is occurring, and the degree of dispersal into the management zone is small enough that the effort to continue to remove otters from the management or no-otter zone would be acceptable to the Service and CDFG." Since 1990, the colony at SNI has not declined but has remained stable, and up until the spring of 1998, the number of sea otters in the management zone was relatively small, consisting of two or three animals. The population at San Nicolas declined dramatically during the two years following the completion of the translocation to 13 sea otters, growth or recruitment in the population has been lower than expected,[159] and the founding population of 70 otters was never achieved. Although the population has fluctuated since 1992 and appeared to be "increasing slowly," until 2003, it is unclear whether this increase is adequate to ensure the survival of the colony, and there are significant concerns about the genetic makeup of a colony founded on what is only a small subset of the original 70 sea otters.[160] However, the counts at San Nicolas Island have since declined—to 35 in 2004 and 32 in 2005.[161] The fact that the counts have now declined in two successive years, after having increased over each of the preceding five years, suggests that the sea otter population at San Nicolas Island is no longer increasing and may be in decline.[162] Finally, dispersal into the management zone is increasing and, as already discussed, removal from the management zone has become unacceptable. Thus, Criterion 3 has effectively been met.

### c. Movement from Translocation Zone to Management Zone

Pursuant to 50 C.F.R. § 17.84(d)(8)(iv) the translocation has failed if the Service determines, in consultation with the affected State and the Marine Mammal Commission, that sea otters are dispersing from the translocation zone and becoming established within the management zone in sufficient numbers to demonstrate that containment cannot be successfully accomplished. This standard is not intended to apply to situations in which individuals or small numbers of otters are sighted within the management zone or temporarily manage to elude capture. Instead, it is meant to be applied when it becomes apparent that, over time, (one year or more), otters are relocating from the translocation zone to the management zone in such numbers that: 1) an independent breeding colony is likely to become established within the

159 Although pups were observed from 1987 to 1992, there appeared to be little or no recruitment in the population. DSEIS at Appendix C-24.

160 *Id.* at 25.

161 Estes, Hatfield, and Tinker, Exhibit 11.

162 DSEIS at Appendix C at 25.

management zone; or 2) they could cause economic damage to fishery resources within the management zone. It is expected that the Service could make this determination within a year, provided that sufficient information is available.

While sea otters have not moved from the *translocation zone* to the management zone, the implementation of the translocation program and the management zone has shown that containment cannot be successfully accomplished. Since 1998, groups of 50-150 sea otters have seasonally moved from the *parent range* to the management zone.[163] The Service has determined that containing this emigration is ineffective as a long-term management action due to "difficulties inherent in sea otter capture, the ability of sea otters to return rapidly to the management zone, and the elevated mortality associated with the holding, transport, and release of sea otters."[164] Finally, both the Service and the Recovery Team have determined that the capture, transfer, and relocation of sea otters are detrimental to the species' survival and recovery.[165] Therefore, Criterion 4 has been met because containment is both unsuccessful and detrimental to the southern sea otter's survival and recovery.

### d. Health and Stability of the SNI Population is Threatened

Pursuant to 50 C.F.R. § 17.84(d)(8)(v) the translocation has failed if the "health and well-being of the experimental population should become threatened to the point that the colony's continued survival is unlikely, despite the protections given to it by the Service, State, and applicable laws and regulations. An example would be if an overriding military action for national security was proposed that would threaten to devastate the colony and the removal of otters was determined to be the only viable way of preventing the loss of the colony." The health and well-being of the San Nicolas population is seriously in question due to its small size, vulnerability to an oil spill, epizootic, or other catastrophic event, potential lack of genetic diversity due to the small parent population and apparent inability to reproduce.

### e. Containment Is Not Possible

Condition 5 of the Service/CDFG MOU provides for a determination of failure if sea otters have been established in the management zone (i.e., south of Pt. Conception) in "numbers that exceed the ability of cooperative efforts to capture and remove" them. Such a situation has occurred. In 1998, approximately 100 sea otters were found in and near Cojo Anchorage, just south and east of the northern boundary of the

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[163] *Id.* at 25.

[164] *Id.* at 2, 21-22.

[165] *Id.* at 15, 19-20.

management or "otter-free" zone. While they returned to the parent range in late summer to fall, the sea otters returned to the management zone the following year. Groups of sea otters have seasonally moved into and out of the management zone each year since 1998. The largest group observed in the management zone was observed in February 1999 and numbered 152 animals.[166] It is beyond the capability of the Service or CDFG to achieve containment of this many sea otters.

Overwhelming evidence demonstrates that the translocation of sea otters to SNI has not been successful. The Service expected a mortality rate of three to five percent to result from handling southern sea otters during translocation and containment, the stress of being captured, and being held in captivity. At the expected mortality rate of five percent, seven of the 140 southern sea otters that were moved to SNI would have died. In actuality, 12 southern sea otters died and it is possible that a large percentage of the 70 individuals of unknown fate died as a result of being captured and moved. The Service does not possess any new information indicating that moving animals is likely to result in fewer mortalities or a reduced mortality rate.

The Service and the Recovery Team recognize that the colony at SNI is insufficient to provide southern sea otters with protection from a large oil spill and that the expansion of the sea otter range and ultimate recovery of the species may best be accomplished through natural range expansion. "An obvious impediment to range expansion is maintenance of the management zone and the requirement to capture and relocate sea otters above that zone." Therefore, if sea otters are to expand their numbers and their range to survive a catastrophic oil spill, the Service must declare the translocation a failure.

Finally, in its evaluation the Service identified several circumstances not envisioned when the criteria were promulgated: 1) containment might not be successfully accomplished because of southern sea otters entering the management zone from the mainland range of the parent population rather than from the experimental population at SNI; 2) the founding population of the SNI colony might be fewer than 70 animals; and/or 3) that an "established" population at SNI, defined in the regulations, may be insufficient to attain the recovery goals established for the program.[167] Ultimately, failure is determined, not only by the established criteria, but by the Translocation Program's inability to attain its objectives, which are clearly set out in the final regulations for the establishment of an experimental population of southern sea otters.[168] We believe that the translocation should be declared a failure.

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166 2003 RP at 14.

167 DSEIS at Appendix C-22.

168 50 C.F.R. § 17.84(d)(8) (52 FR 29754; August 11, 1987).

### 2. Revocation or Suspension of Containment Provision is Required by Public Law 99-625

Containment violates P.L. 99-625, and the Service accordingly must discontinue any practices related to containment and declare the translocation program a failure. There is clear authority for such action in P.L. 99-625. As stated in section 1(b), "the Secretary *may develop and implement*…a plan for the relocation and management of the population of California sea otters…." There is no requirement that every aspect of the plan be implemented at every point and time. Clearly, the Service has been provided with the discretion to develop a plan that could, in circumstances such as those presented here, call for a suspension or revocation of the containment requirement when so many factors indicate that it would be in violation of law, as well as at odds with the principles underlying the experimental population program, for sea otters to be captured and removed from this zone. The "containment" provision of 50 C.F.R. § 17.84(d)(6) must be suspended for three reasons: 1) P.L. 99-625 envisioned a successful translocation as a prerequisite for capture and removal; 2) the Pt. Conception zone is unlawful because it is inconsistent with recovery; and 3) containment is not feasible and violates the prohibition on lethal take. Each of these issues will be discussed separately.

#### a. The Need for a Successful Translocation

In 1986, Congress passed P.L. 99-625 to clarify and define the authority held by the Service to translocate southern sea otters from their then-current range to another location. The primary purpose of P.L. 99-625 was to allow the Service to apply the principles established under section 10(j) of the ESA, 16 U.S.C. § 1539(j), to the sea otter recovery program. Under section 10(j), Congress created a procedure to authorize the Service to translocate members of a species listed under the ESA from their existing range to other locations for the purpose of addressing the threats to their continued existence and promoting recovery.[169]

As stated in H.R. Report No. 99-124, "[t]he legislation is intended to allow the Fish and Wildlife Service to use the process they have begun under section 10(j) of the Act." Thus, it was the clear intent of Congress that P.L. 99-625 be used, like section 10(j), as the mechanism for achieving recovery of the species.[170]

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169 Wyoming Farm Bureau Federation v. Babbitt, 199 F.3d 1224, 1234, 1235 (10th Cir. 2000) (flexibility created by section 10(j) "allows the Secretary to better conserve and recover endangered species;" section 10(j) reflects paramount objective of the ESA to conserve and recover species); United States v. McKittrick, 142 F.3d 1170, 1174. See also H.R. Rep. No. 97-567 at 33 (1982), reprinted in 1982 U.S.C.C.A.N. 2807, 2833; H.R. Conf. Rep No. 97-835, at 30 (1982) reprinted in 1982 U.S.C.C.A.N. 2860, 2871.

170 H.R. Rep. No. 124, 99th Cong., 1st Sess. 14 (1985).

In enacting P.L. 99-625, Congress defined the clear relationship between the successful establishment of the experimental population within the translocation zone and the concept of a management zone from which sea otters would be captured and removed under appropriate circumstances. Congress acknowledged the relationship between these two zones in stating that "[t]he delineation of the translocation and management zones are critical to the success of the translocation plan."[171] In the legislative history, numerous references are made to the fact that the translocation zone must be defined so as to provide the greatest possible protection to the translocated population and to ensure the successful establishment of that population.

Clearly, in enacting the translocation law, Congress envisioned a scenario under which a successful translocated population would thrive at SNI. A successful breeding population at SNI would advance the recovery goals of this species and allow for the implementation of a management zone where capture and removal would take place under appropriate circumstances without risk to the species or individual animals. In effect, Congress recognized the existence of a "quid pro quo" – the establishment of a successful translocated population in exchange for a sea otter management zone.[172]

Thus, it is clear that successful implementation of the translocation zone and enforcement of the management zone goes hand-in-hand. One cannot exist without the other. In the absence of a thriving and successful population in SNI, there is no reason or justification for capture and removal of animals from the management zone. Indeed, to proceed with the containment of sea otters from the management zone when the population at SNI is anything short of fully successful contradicts the very purpose and objective of P.L. 99-625.

Any question about the need for balance between a successful translocation and the implementation of the management zone is further dispelled by reference to

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171 *Id.* at 16.

172 This principle is reflected in the statement made in conjunction with the enactment of Public Law 99-625 by Senator Cranston:

> The translocation that the Fish and Wildlife Service has proposed is an important step in this direction [the designation of additional sites within the species historic range for restoration and protection of sea otters and the designation of areas where otters would not be allowed]. In addition to establishing zones where sea otters would and would not be maintained, the proposed action calls for important research to be conducted on the relationship between sea otters and the nearshore ecosystems. This information is likely to be crucial to eventual determinations under the Marine Mammal Protection Act of the optimum sustainable population level for the California sea otter. This determination should, in turn, make it possible for the Service, and cooperation with other interested parties, to chart a course for sea otter protection and management that will satisfy the goals of the Endangered Species Act and the Marine Mammal Protection Act while reducing the potential for conflict between sea otter protection actions and other resource uses." 132 Cong. Rec. S17323 (Oct. 18, 1986) (emphasis added).

statements made in the administrative record developed by the Service regarding the translocation. For example, the EIS states: "As required by P.L. 99-625, maintenance of the management zone would continue indefinitely, even after the sea otter is delisted, unless the translocation fails".[173]

As this history demonstrates, the essential "quid pro quo" envisioned by Congress in 1986 and the Service in developing its regulations has failed to materialize. The translocation to SNI has been a dismal failure. By now, the SNI populations should number 150 or more animals.[174] The population has clearly failed to meet this test. Not only is the population well below carrying capacity, it meets the failure criteria of the experimental population regulations as demonstrated in the previous section.

The need for range expansion to achieve recovery remains as strong as ever. Unfortunately, the SNI population is not advancing the purposes originally envisioned when P.L. 99-625 was enacted or the zonal management concept was developed. As a result, it is at odds with the concept underlying P.L. 99-625 for sea otters to be captured and removed from the management zone considering the absence of a successful population at SNI. To proceed with any type of containment under these circumstances violates the clear intent of Congress and the long-standing understanding that served as the basis for the zonal management proposal.

### b. The Pt. Conception Boundary Is Invalid

In addition to this fundamental principle – that there should be no attempt to proceed with zonal management of sea otters in the absence of a successful translocated population – Congress also set forth specific requirements that would govern the establishment and implementation of the management zone. One of these requirements is the mandate that the management zone be established so as to "not include the existing range of the parent population *or adjacent range where expansion is necessary for the recovery of the species*."[175] As explained in the legislative history, in creating the zone to provide sufficient room for range expansion, the Service "must accommodate, among other important biological needs, the feeding

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[173] 1987 EIS at B-20.

174 As stated in the 1987 EIS: It is conceivable that, under ideal conditions, nearly all of the 15 adult females and some of the 40 females translocated as immature could be reproducing within the first 2-3 years of the initial growth and reestablishment stage; however, the new population could not be deemed established until a minimum estimated population size of 150 animals had been achieved, in combination with attainment of an annual recruitment for 3 of the preceding 5 years of no less than 20 animals. Conceivably, this could occur five years after the translocation was initiated. If reproduction and population growth did not occur at this rate, the period of initial growth and reestablishment would simply continue until the criteria were met, or until it was determined that the experimental population had failed. 1987 EIS at B-26.

175 Pub. L. No. 99-625, § 1(b)(4)(B), 100 Stat. 3500 (1986).

behavior of the sea otter."[176] Thus, foraging, as well as all other biological needs of the sea otter, must be taken into account in establishing this zone.

The management zone now clearly violates that requirement. It has become increasingly clear in recent years that removing sea otters that migrate south of Pt. Conception is fundamentally inconsistent with the recovery of the species. This point is made clear in the revised recovery plan for the southern sea otter. There are four fundamental reasons why the southern sea otter management zone is not a viable option:[177]

- The Southern Sea Otter Recovery Team believes that any future translocations, which are similar to the concept of forcible removals and relocations of remaining sea otters in the management zone, "are not a useful means of recovering the southern sea otter population, in large measure because of their high cost and low probability of success." The Team goes on to say, "[t]he fact that the population is not increasing reinforces the need for this changed recovery strategy."[178]
- Based on what the experts learned about the trajectory of the *Exxon Valdez* oil spill, the "safeguarded" population at SNI would not be protected from a single catastrophic event. The southern sea otter population would need a range that greatly exceeds the present distribution.
- The translocation has not been successful. Out of the 140 sea otters moved to the island between 1987-1990, only small numbers have been observed since 1990, and many years will be required before the population is large enough to be considered an effective reserve to buffer against possible local extinction.[179]
- Since 1998, large groups of sea otters have seasonally migrated into the management zone. The Service has stated that they do "not have the capability to capture and translocate this number of sea otters annually".

Thus, the expert group of sea otter biologists assembled by the Service to determine what actions are necessary for recovery of the species has determined that the Pt.

176 132 Cong. Rec. S17322 (Statement of Senator Cranston).

177 2003 RP at xi and 165.

178 2003 RP at 19.

179 *Id.* at 21.

Conception management zone boundary is a serious impediment to recovery[180] and, therefore, violates P.L. 99-625.

Finally, other documents prepared by the Service relative to this species indicate the serious problems that enforcement of the Pt. Conception zonal management boundary create for recovery of the species. For example, the 2000 BO confirms this problem. As the Service concluded: "the translocation program has not been as successful as was desired and . . . cessation of the containment program is considered the primary action for promoting the recovery of the southern sea otter."[181] The Service also states that, "our analysis indicates that the capture of large numbers of southern sea otters in the management zone and their release into the parent range would likely have substantial adverse effects on the ability of this subspecies to survive and recover. We are unable to define the exact number of southern sea otters that could be moved from the management zone into the parent range before such substantial adverse effects are likely to occur."[182]

In addition, the Service's 1999 draft report on the "Evaluation of the Southern Sea Otter Translocation Program," included the following observation regarding the Pt. Conception zone: Given that the southern sea otter population has declined in four out of the last five years, "members of the Recovery Team cautioned that the capture and relocation of a large number of sea otters could result in the deaths of animals, disrupt the existing social structure of resident groups, increase competition for resources, and very possibly exacerbate the observed population decline."[183]

This information and expert analysis makes a compelling case as to why the containment provisions of the translocation regulations can no longer be enforced. There is no credible evidence in the record, or argument that has been advanced, that the Pt. Conception boundary can be enforced to capture and remove sea otters without interfering with species recovery. As a result, the Service should take immediate action to implement the Preferred Alternative.

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180 The Recovery Team believes that the primary action for promoting the recovery of the southern sea otter at this time should be the cessation of the management zone, and that without such a change in management, the likelihood of recovery will be significantly lessened due to the stress and social disruption of capturing animals and relocating them from the management zone. *Id.* at 22.

181 2000 BO at 29.

182 *Id.* at 36.

183 1999 Draft Evaluation at 19.

### c. Containment Violates Public Law 99-625 Because It Is Not Feasible and Will Result In Lethal Take

It is equally clear that capture and removal of sea otters cannot be undertaken by either feasible or non-lethal means. Many sea otters are certain to die as a result of capture and removal. The Service's 2000 BO notes that "the stress of being captured, held in captivity, and (for some individuals) undergoing surgery to implant tracking devices resulted in a mortality rate that was higher than the anticipated mortality rate of three to five percent (Benz, pers. comm. in Service 1987b) that had been expected to result from the handling of southern sea otters during translocation."[184]

The 2000 BO also states that, "[b]y the time of the 1993 draft evaluation, seven southern sea otters had died at Monterey Bay Aquarium while waiting to be translocated to SNI or after surgery to implant radios, three died at SNI while waiting to be released, one died after being captured in the parent range for translocation and released at the point of capture, and four died within two weeks of being released after being captured during containment activities".[185] This level of mortality is far higher than what was anticipated when the program was developed. For example, the 1987 BO estimated a mortality rate of no more than three to five percent from the actual translocation (two to four otters lost).[186] The current estimate of expected mortality—17 percent—is orders of magnitude higher. Under no reasonable interpretation can a mortality rate of 17 percent be considered "non-lethal."

In addition, given the current circumstances, containment is not "feasible." The Service's 2000 BO contains a section entitled "Previous Reviews of the Translocation Program." In this section, the Service confirms that continuing the enforcement of the management zone is not a feasible option. In 1992, the Service drafted a document for a meeting with the CDFG. "As stated in the draft document, in 1992, the major issues the Service viewed as affecting the recovery of the southern sea otter were the existence of the management zone and the feasibility of non-lethal containment techniques".[187] In 1995, the Service again raised concerns about the viability of maintaining the management zone for southern sea otters using non-lethal techniques. In a status report for the translocation program, the Service stated that "containment

[184] 2000 BO at 13.

[185] *Id.* at 13.

[186] See 1986 Biological Opinion at 14.

[187] 2000 BO at 11.

activities were labor intensive and that, over the long-term, existing techniques were inadequate to maintain a management zone free of southern sea otters."[188]

In addition, the following points on the feasibility of containment were made in the technical consultant meeting on September 26, under the heading, "Difficulties Encountered with Sea Otter Containment":

- Capture operations were labor intensive and frequently unsuccessful.
- Coordination of transport and release of otters were often very challenging.
- Some otters were found dead shortly after they were released in the parent range.
- Some otters returned to the management zone after being moved hundreds of miles away.

In addition, the Service's 1999 report on the translocation program made the following observations:

- Detection and confirmation of sea otters in the management zone is difficult and, upon confirmation and attempts to organize a capture, the animal had often left the zone.
- The inherent difficulty with non-lethal containment was evident from attempts to capture sea otters in the vicinity of San Miguel Island. Efforts to capture otters near the island proved to be very difficult due in large measure to the unfavorable environmental conditions experienced and inaccessibility of target animals.

Taken together, this evidence clearly demonstrates containment is infeasible and will result in lethal take. Such action violates P.L. 99-625 and should not be allowed.

## C. Zonal Management Must Be Terminated Under the ESA and MMPA

The best scientific evidence available demonstrates that not only should the translocation program be declared a failure because it meets the criteria, but also because the program's containment provision violates both the ESA and the MMPA. In particular, containment must be discontinued for three reasons: 1) capture and removal of sea otters from the management zone has been found to jeopardize the continued existence of the species, 16 U.S.C. § 1536(a)(2); 2) capture and removal of sea otters from the management zone violates the Secretary's affirmative duties to conserve and recover this species, 16 U.S.C. §§ 1533(f), 1536(a)(1); and 3)

[188] *Id.* at 14.

prohibiting range expansion conflicts with the goal of the MMPA to restore marine mammal populations to their optimum sustainable population level, 16 U.S.C. § 1362 (2).

1. Zonal Management Violates Section 7(a)(2) of the ESA

Section 7(a)(2) of the ESA places a duty on each federal agency to "insure that any action authorized, funded, or carried out by such agency…is not likely to jeopardize the continued existence of any endangered species or threatened species…"[189] An action may not proceed unless "jeopardy" can be avoided. P.L. 99-625, which authorized the sea otter translocation program, explicitly recognized the applicability of Section 7's "no jeopardy" mandate to the functioning of the program.[190] Indeed, consistent with the intent behind P.L. 99-625, the original 1987 BO for the program found it "to be a well-designed recovery action that maximized the opportunity for success while minimizing negative impacts on the parent population" and "would not likely jeopardize the continued existence of the species."[191] Updated information makes clear, however, that this is not the case.

In 1999, the Service re-evaluated its "no jeopardy" finding based upon the receipt of "substantial new information on the population status, behavior, and ecology of the southern sea otter that revealed effects of containment that were not previously considered."[192] This information that containment was hindering rather than helping sea otters had been accumulating over the years. In 1991, the Service stopped translocating otters to SNI due to low retention and survival.[193] In 1993, the Service discontinued containment efforts due to concerns about the unexpected deaths of otters that occurred during and shortly following their removal from the management zone.[194] The southern sea otter Recovery Team also recommended in 1998 that the practice of moving sea otters from the management zone to the parent population be discontinued "because moving large groups of sea otters and releasing them within the parent range would be disruptive to the social structure of the parent population."[195]

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[189] 16 U.S.C. § 1536(a)(2).

[190] *See* Pub. L. 99-625; 66 Fed. Reg. 6649, 6651-52 (January 22, 2001).

[191] 66 Fed. Reg. at 6649-50.

[192] *Id*. at 6650.

[193] *Id*.

[194] *Id*.

[195] *Id*.

The Service's 2000 BO ultimately found that capture and removal of sea otters from the management zone would cause jeopardy to the species. As explained in the opinion, this conclusion was based on the following reasons:

> 1. Reversal of the southern sea otter's population decline is essential to its survival and recovery. Continuation of the containment program will result in the capture, transport, and release of large numbers of southern sea otters from the management zone into the parent population. These actions may result in direct deaths of individuals and disrupt social behavior in the parent population to the degree that those affected individuals will have reduced potential for survival and reproduction. These effects will exacerbate the recent decline of the southern sea otter population.
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> 2. Expansion of the southern sea otter's distribution is essential to its survival and recovery. Continuation of the containment program will result in the exclusion of southern sea otters from the area south of Point Conception. This effect will perpetuate the species artificially restricted range and its vulnerability to the adverse effects of oil spills, disease, and stochastic events.[196]

Furthermore, the Service found no "reasonable and prudent alternatives" to the program that would avoid jeopardy to the species.[197] Based on these conclusions, the Service stated that it would not remove any southern sea otters from the management zone until the program underwent a comprehensive re-evaluation.

The best available science shows now, as it did in 2000, that the containment portion of the translocation program violates the ESA's mandate to avoid jeopardy to the species. The Service has not developed any alternative that can avoid this result, except complete termination of the program. In order to comply with the explicit requirement of the ESA to avoid jeopardy to the species, as well as comply with the original spirit of the translocation program itself, the Service must adopt the Preferred Alternative and formally bring an end to all aspects of the translocation program.

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[196] 2000 BO at 37.

[197] 2000 BO at 37 ("[W]e conclude that, at this time, there are no reasonable and prudent alternatives that would avoid jeopardy to the species while still meeting the intended purpose of the containment program which is to remove southern sea otters from the management zone.").

### 2. Zonal Management Violates the Service's Affirmative Duty Under the ESA

In addition to the prohibition against actions that would cause jeopardy, the ESA also imposes on the Service an affirmative duty to act in the interest of sea otter conservation. This duty is found in section 7(a)(1) of the ESA. In addition, section 4's provisions for recovery planning call for actions necessary to delist species.[198] Ending zonal management has been identified as critical to allowing sea otters to expand their range, itself identified as essential to sea otter recovery. Failing to take such action would violate the Service's affirmative duty under the ESA.

Section 7 imposes an affirmative duty on the Secretary to "utilize such programs [under his jurisdiction] in furtherance of the purposes of this chapter."[199] The purposes of the ESA include providing "a program for the conservation" of listed species[200]. The term "conservation" is, in turn, defined to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary."[201] Section 4(f) further directs that the Secretary "shall develop and implement plans…for the conservation and survival of endangered species and threatened species…."[202]

As the zonal management program is a program of the Service, the ESA requires that it be utilized in furtherance of sea otter conservation and recovery. As discussed above, overwhelming evidence now shows that this program actually jeopardizes the continued existence of the species. Although the 2000 BO leaves open the possibility that a comprehensive reevaluation of the program might lead to the development of reasonable and prudent alternatives that can avoid jeopardy, 7(a)(1) makes clear that the Service's duty goes farther—any alternative must further sea otter conservation and recovery.

This position is supported by the 2003 Revised Recovery Plan for the Southern Sea Otter, where it is stated that: "the Recovery Team believes that, given changed circumstances such as the recent observed decline in abundance and shift in the distribution of otters to include the range designated as an otter-free zone, it is in the

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[198] 16 U.S.C. §§ 1536(a)(1), 1533(f).

[199] 16 U.S.C. § 1536(a)(1).

[200] *Id.* at § 1531(d).

[201] *Id.* at § 1532(3).

[202] 16 U.S.C. § 1533(f).

best interest of recovery of the southern sea otter population to declare the experimental translocation of sea otters to SNI a failure and to discontinue the maintenance of the otter-free zone in southern California."[203] Although the Service retains some discretion in implementing the recommendations of the Recovery Plan, that discretion must be exercised in the interest of the species and be rationally based on the evidence before it. As made clear by one court, "[a]n abuse of discretion occurs when an agency which Congress mandates 'shall develop and implement a recovery plan' refuses to act on the behalf of species the [Service] knows were in 'imminent peril.'"[204]

This conclusion by the Recovery Team must be deferred to by the Service in this decision-making process. It is a basic tenet of administrative law that agencies are entitled to substantial deference on matters within agency expertise and that this deference is at its height when dealing with scientific or technical matters. *See Baltimore Gas and Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983). The Service's decision, reflected in Alternative 3C, to adopt the Recovery Team recommendations to declare the translocation a failure and allow range expansion to occur naturally for the recovery of the species, is exactly the type of matter to which this proposition applies. Furthermore, the Service would need a strongly compelling reason to ignore the recommendations of the Recovery Team for this same reason. "Although the Court must defer to an agency's expertise, it must do so only to the extent that the agency utilizes, rather than ignores, the analysis of its experts." *Defenders of Wildlife v. Babbitt*, 958 F. Supp. 670, 685 (D.D.C. 1997) (citing *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479, 483 (W.D. Wash. 1988)).

Based on these requirements, it is clearly inappropriate for the Service to leave in effect a regulatory requirement that mandates that sea otters must be captured and removed from the management zone thus impeding conservation and recovery of the species.[205] The Service accordingly must discontinue any practices related to containment and declare the tanslocation program a failure.

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[203] 2003 RP at 28.

[204] *Sierra Cub v. Lujan*, 1993 WL 151353 (W.D. Tex. Apr. 26, 1993).

[205] The courts have construed this authority to impose upon the Secretary of the Interior a strong mandate. *See Carson-Truckee Water Conservancy Dist. v. Clark*, 741 F.2d 257, 262 (9th Cir. 1984)(duty to conserve requires federal agencies to affirmatively and "actively pursue a species conservation policy" and to dedicate "all means at their disposal" in doing so). This means that the Secretary cannot carry out programs adverse to sea otter recovery and conservation. There is no question under the Service's own analyses, as well as the overwhelming weight of expert opinion, that enforcement of the management zone will be adverse to the best interest of this species. In addition the Service's review of the status of the San Nicolas Island translocation, clearly demonstrate that the translocation has failed. The BO noted that: "Expansion of the southern sea otter's distribution is essential to its survival and recovery. Continuation of the containment program will result in the exclusion of southern sea otters from the area south of Point Conception. This effect will perpetuate the

### 3. Section 17.84(d)(6) Violates the MMPA

Sea otters are also protected by the MMPA, enacted in 1971. One of the primary purposes behind the MMPA is the Congressional finding that marine mammal stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their OSP.[206]

"Optimum sustainable population," is in turn defined as "the number of animals [in a marine mammal stock] which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element."[207] As southern sea otters are listed as a threatened under the ESA, they are clearly below the OSP for the species.[208] In furtherance of achieving OSP for all marine mammals, the MMPA prohibits the take (harassment, hunting, killing, or attempt to harass, hunt, capture or kill) of marine mammals.[209] The MMPA also authorizes the Secretary to "develop and implement conservation or management measure to alleviate impacts" on "rookeries, mating grounds, or other areas of similar ecological significance to marine mammals" if such impacts "may be causing the decline or impeding the recovery of a strategic stock," including a threatened species.[210]

The Service believed that the translocation program would result in a "better understanding and defining the OSP for this population under the MMPA".[211] In theory the sea otter translocation, if properly designed and implemented, should provide the necessary foundation for restoring the southern sea otter to a non-threatened status and maintaining OSP.[212] This objective has not been met and the

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species' artificially restricted range and its vulnerability to the adverse effects of oil spills, disease, and stochastic events." See 2000 Biological Opinion at 37.

[206] 16 U.S.C. § 1361(2).

[207] 16 U.S.C. § 1362(9).

[208] *See id*.; 41 Fed. Reg. 30120 (1976). There are, in effect, three tiers of legal protection for marine mammals. Under the MMPA, if a stock is below its OSP level, it is considered "depleted." 16 U.S.C. § 1362(1). This is an extra layer of protection below the more stringent requirements for listing as threatened or endangered under the ESA. Threatened and endangered species are automatically considered "depleted" under the MMPA. *Id*.

[209] 16 U.S.C. §1371 (a)(1); *id*. §1362(13); 50 C.F.R. §18.3.

[210] 16 U.S.C. § 1382(e). *See also* 16 U.S.C. § 1362(19)(defining "strategic stock").

[211] 52 FR. 29754 (1987).

[212] *Id*. at 29771.

population at SNI is not even close to carrying capacity or OSP—it cannot be considered a significant reservoir for repopulating the parent population in the event of an oil spill. Furthermore, containment of the population violates the MMPA as it would prevent it from reaching its OSP. As with the requirements of the ESA, the MMPA clearly provides the authority and the intent for the Service to take actions that will allow the southern sea otter to recover. Ending zonal management is an essential step, clearly within the Secretary's authority, to making recovery achievable.

## D. Termination of Zonal Management Results in Ecological and Economic Benefits

A recent report[213] by Dr. John Loomis, Environmental Economist in the College of Agricultural Sciences at Colorado State University, developed estimates of tourism, ecosystem and existence-bequest benefits resulting from an expanded range for southern sea otters into historically occupied habitat off the coast of Santa Barbara and Ventura counties in southern California. The economic analysis shows that substantial economic benefits can be gained from allowing sea otters to naturally expand their range into areas off the southern California coast. The Loomis report concludes that if, "in fact, the final Supplemental Environmental Impact Statement on the Southern Sea Otter Translocation Program allows for unlimited population growth, eventual expansion of southern sea otter populations and range would provide more than $100 million in annual economic benefits to California households."[214] In addition, the report concludes that, "expansion of southern sea otter populations along the Santa Barbara coast would result in at least $1.5 million in direct tourism income related to sea otters to a best estimate of $8.2 million annually in Santa Barbara and Ventura counties from the initial expansion of sea otter populations reported by USFWS. These direct income effects do not reflect any multiplier effects, consideration of which may double these direct income estimates."[215]

While ecosystem services are more difficult to measure, it is widely known that sea otters are also a keystone species in sustaining healthy kelp forests off the California coast. The expansion of sea otter populations will aid in the restoration and maintenance of kelp forests off the coast of Santa Barbara. These kelp forests provide many valuable services, directly and indirectly, to humans. These services include reduced shoreline erosion, carbon storage that can moderate climate change, and

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[213] Loomis, John B., 2005. Economic benefits of expanding California's Southern sea otter population, Prepared for Defenders of Wildlife, December 2005, available online at *http://www.biodiversitypartners.org/econ/pub/Loomis_Dec2005_final.pdf.* Exhibit 12.

[214] *Id.*

[215] *Id.*

improved habitat for numerous invertebrates such as mussels and clams, and several fish species. The ecosystem services provided by kelp forests have been valued by other scientists at $7,600 an acre per year.[216]

### 1. Discussion of the Economic Valuation Framework

The DSEIS discussion of economic values of the Southern California Bight[217] omits indirect use values (ecosystem service values) produced by the Bight ecosystem. Sea otters are a keystone species and are important in regulating the functioning of the kelp forests. The DSEIS explicitly states that recolonization of sea otters from Point Conception to Santa Barbara is expected to result in re-growth of kelp beds in that area, with expected mid- to long-term positive impacts on commercial kelp harvests.[218] Given the high value of the ecosystem services delivered by kelp forests (e.g., reduction of coastal erosion, nursery and habitat provision for a variety of species used by humans), the ecosystem service (indirect use) value provided by sea otters is likely an important component of the sea otters' overall economic value. The omission of ecosystem service values from the theoretical discussion of the economic valuation framework does not, however, result in the complete omission of the associated values from the actual impact analysis. The DSEIS does consider the value of increased kelp and finfish production that are expected to result from the proposed alternative.[219] However, it does not mention the benefits associated with reduced rates of coastal erosion. Estimation of the monetary value of these benefits is likely difficult, but they should at least be mentioned for the sake of providing a complete picture of the impacts related to the action proposed in the DSEIS.

The DSEIS states that opportunity costs, specifically, time value and travel costs, can be used to quantify, with varying degrees of reliability, the economic value of non-rival onsite uses of the Bight.[220] Although this statement is technically correct in that it concedes that the opportunity cost approach leads to biased estimates of the value of these activities, it is also somewhat misleading, because the opportunity cost approach always leads to the *underestimation* of the full value of a resource. This is due to the fact that the consumer surplus of the activities is not captured in opportunity cost approaches.

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[216] *Id.*

[217] DSEIS, section 4.4.1, pp. 50-51.

[218] DSEIS, section 4.4.1, pp. 206-207.

[219] *Id.*

[220] DSEIS, last paragraph, p. 50.

More troubling is the statement that "[b]ecause of the difficulty and speculative nature of attempts to quantify offsite non-rivalrous consumption and all types of non-use value (including existence value), we do not explicitly address these values as socioeconomic impact topics."[221]

The quantification of non-use values is no more speculative than the quantification of non-rival use values (e.g., wildlife watching) based on travel cost data. In fact, the travel-cost approach may miss a large, and generally *unknown*, portion of the total use value of a resource, namely, the consumer surplus. By comparison, non-use values can be quantified using well-tested economic tools such as contingent valuation and conjoint analysis. Arguably, if well-established protocols for survey design are followed,[222] the degree of accuracy of value estimates based on "speculative attempts" like contingent valuation (CV) and conjoint analysis may very well be higher than that of value estimates based on travel cost data. A CV study has been conducted for the southern sea otter.[223] Building on that study, Loomis estimated the value of different magnitudes of increases in southern sea otter populations.[224] Both of these studies should be discussed in the final SEIS, and their relevance to the economic impacts of the proposed alternatives should be assessed.

### 2. Discussion of the Economic Values Associated with Implementation of the Proposed Action (Alternative 3C)

The proposed action (Alternative 3C) is expected to lead to beneficial impacts on kelp harvesting, recreational finfish fishing, and ecotourism.[225] In addition, the DSEIS states that the proposed action would reduce incidental take permits for sea otters in the management zone and the translocation zone.[226] These actions will lead to an

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[221] DSEIS, p. 51.

[222] *See* Arrow, Kenneth, Robert Solow, Paul R. Portney, Edward E. Leamer, Roy Radner, and Howard Schuman, 1993, Report of the NOAA Panel on Contingent Valuation, *Federal Register* 58(10):4601-14. See also Carson, R.T., R.C. Mitchell, M. Hanemann, R.J. Kopp, S. Presser, and P.A. Ruud, 2003, Contingent valuation and lost passive use: Damages from the Exxon *Valdez* oil spill, *Environmental and Resource Economics* 25(3): 257-286.

[223] Hageman, R., 1985, Valuing Marine Mammal Populations: Benefit Valuations in a Multi-Species Ecosystem, Administrative Report LJ-85-22, National Marine Fisheries Service, La Jolla, California.

[224] Loomis, John B., 2005. Economic benefits of expanding California's Southern sea otter population, Prepared for Defenders of Wildlife, December 2005, available online at *http://www.biodiversitypartners.org/econ/pub/Loomis_Dec2005_final.pdf.* Exhibit 12.

[225] DSEIS, p. 216.

[226] Presently, Public Law 99-625 provides exemption from prohibitions against incidental take of otters in the management zone (for otherwise lawful activities) and the translocation zone (for defense-related activities only)(DSEIS, page 18). These exemptions would also continue under the no action (baseline) scenario. Under Alternative 3C, all southern sea otters would be regarded as belonging to the same population, and hence would be covered by the ESA and MMPA prohibitions

increase in the sea otter population. All of these impacts carry positive economic values, that is, they are beneficial for overall societal welfare. Given that alternative 3C does not cause any negative impacts compared to the baseline scenario (no action), this alternative would generate net benefits compared to the baseline scenario. The potential magnitude of these benefits, at least those associated with potential increases in sea otter populations (*e.g.,* tourism and non-use values), should be indicated, because relevant estimates are available from the Loomis study.[227]

The DSEIS states that incidental take permits of sea otters would decline under the proposed action (alternative 3C). As a result, the number of deaths of sea otters would be expected to decline, and consequentially the sea otter population would be expected to increase. Estimates of the economic value of these impacts could be generated by developing upper and lower-bound scenarios of the increase in the sea otter population in the Southern California Bight, and by applying the results of the Loomis study[228] to these increase scenarios. This would yield upper and lower bound estimates of the direct and passive use values associated with sea otter populations increases under alternative 3C. Such estimates would be very useful in presenting readers of the Final SEIS with an understanding of the relative magnitude of potential impacts of changes in sea otter management in the Southern California Bight.

Estimates of the economic value of projected increases in sea otter populations would also be very useful in understanding the net economic impact of such increases. For example, Table 6-44[229] of the DSEIS shows that increases in sea otter populations over present levels are expected to result in losses to the sea urchin, spiny lobster, and crab fisheries and associated industries (under both the baseline and the proposed action). It would be helpful to know whether these expected negative economic impacts are smaller, comparable, or larger than the economic benefits generated by increasing sea otter populations.

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against incidental take. As a result, incidental take by commercial fisheries would cease to be lawful because the MMPA does not authorize incidental take for that purpose by commercial fisheries.

[227] Loomis, John B., 2005. Economic benefits of expanding California's Southern sea otter population, Prepared for Defenders of Wildlife, December 2005, available online at *http://www.biodiversitypartners.org/econ/pub/Loomis_Dec2005_final.pdf.* Exhibit 12.

[228] *Id*.

[229] DSEIS, pp. 220-225.

## E. The Adverse Effects on Fisheries Are Overstated and Are Based on Incorrect Assumptions

In Chapter 4 and under Alternative 1 in Chapter 6, the Service thoroughly reviews the literature for southern sea otters and the various other prey and commercially sought species. However, when judging the impacts of southern sea otter range expansion the Service fails to adequately evaluate the impacts, largely because it ignores the data provided in favor of a simplistic evaluation model. The model merely assumes that all commercial fisheries that interact with sea otters from Pt Conception to Santa Barbara would decrease by 10% annually and those at SNI would decrease by 1% each year.[230] This model is overly simplistic and scientifically unfounded. It wrongly assumes that sea otters will eliminate all fisheries and will do so equally (failing to recognize that sea otters do not prey on all species equally and in the same proportions), does not account for recruitment, climatic changes, or changes in fishing pressure. Furthermore, it uses landings data rather than actual abundance estimates and recruitment for these prey species. In the final SEIS, the Service should use available ecosystem models such as ecopath or ecosim to more realistically assess the impacts of southern sea otter range expansion. In the remainder of this section we will discuss our concerns with the various assumptions.

### 1. Assumption 1 – Range Expansion

The Service assumes that: "Over the next 10 years, southern sea otters are expected to extend their range and approach equilibrium densities along the coastline from Point Conception to Santa Barbara. We assume that shellfish fisheries will be eliminated from Point Conception to Santa Barbara during this period. The affected area corresponds to CDFG statistical blocks 654, 655, 656, and 657."[231] The assumption that shellfish fisheries will be eliminated from Point Conception to Santa Barbara over the next ten years is not correct. First, Estes and Van Blaricom (1985)

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[230] "To establish a landings baseline, we employ a 10-year average (1994-2003) for each area to mitigate the effects of cyclic variations in populations, adverse weather, market demand, and other factors that influence catch from one year to the next. From the 10-year average, we project sea urchin harvest impacts as a direct function of sea otter occupation in each area. Along the affected coastline (Point Conception to Santa Barbara), the 10-year landings average is 194,463 pounds. We assume that once an area is permanently occupied by sea otters, the commercial sea urchin fishery would no longer be viable in that area. Thus, we assume that sea urchin landings along the affected coastline would decrease 10 percent (19,446 pounds) each year, from 194,463 pounds to 175,016 pounds in 2005 to 155,170 pounds in 2006, and so forth to zero landings in 2014. Around SNI, the 10-year landings average is 1,152,340 pounds. We assume that the commercial sea urchin fishery in this area would decrease by approximately 10 percent over 10 years. Thus, we assume that sea urchin landings from SNI would decrease by approximately 1 percent (11,523 pounds) each year, from 1,152,340 pounds to 1,140,816 pounds in 2005 to 1,129,293 pounds in 2006, and so forth to 1,037,106 pounds in 2014." DSEIS.

[231] DSEIS at 90.

concluded that some shellfish fisheries (*e.g.,* rock crabs, northern razor clams, butter clams, littleneck clams, and mussels) can persist in the presence of sea otters, whereas others (commercial sea urchin and abalone fisheries) cannot. In addition, the DSEIS and personal communication with fishermen confirm that some commercial/recreational (e.g. crab and lobster) fisheries can exist in the presence of sea otters. Second, the DSEIS notes that sea urchins and abalone may coexist with sea otters if they can find cryptic and inaccessible habitats such as deep cracks and crevices in rocky areas or depths beyond where sea otters forge that afford protection from sea otter predations.[232] Third, several fishermen at the public hearings noted that they had successfully fished for crab and lobster in the presence of sea otters (*See* comments in Section V). The Service must acknowledge this information and as it moves forward with the implementation of this program, continue to both study the effect of sea otters on shellfish fisheries, and develop a comprehensive research program to investigate the benefits of constructing cryptic habitat to protect invertebrates.

### 2. Assumption 2 – Shellfish Harvest by Fisheries

The Service assumes that "shellfish resources are fully exploited by commercial/recreational fisheries and, where applicable, sea otter predation. We further assume a perfect inverse relationship between sea otters and shellfish fisheries, so that any increase (decrease) in sea otter predation would lead to a proportional decrease (increase) in fishery harvests. This assumption may lead to an overestimation of impacts, especially during the early phases of sea otter reoccupation of an area (*i.e.*, measurable impacts may occur later in time than projected here)."[233] The assumption that shellfish resources are fully exploited by commercial/recreational fisheries may be correct; on the other hand, this may be an underestimate as these resources may be actually over-fished. The Service notes that "[h]uman exploitation has significantly affected the five abalone species that have been subjected to commercial and recreational harvest in southern California…."[234] Likewise, "human harvest has considerably reduced densities of red sea urchins in many areas of the northern Channel Islands."[235] And harvests of sea urchins have "exhibited a pattern resembling the serial depletion that characterized the decline and collapse of the abalone fisheries in the mid-1990."[236] A wide variety of reef fishes have been reduced

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[232] DSEIS at 79 and 87 *See also* Riedman and Estes 1990.

[233] DSEIS at 90.

[234] DSEIS at 37.

[235] DSEIS at 80.

[236] DSEIS at 56.

through recreational and commercial harvest, including the benthic feeding labrid, the sheephead.[237] Other once-common species, such as the giant sea bass, are now seldom seen. Abalone stocks have collapsed to such a low point that take of all kinds is now prohibited. All of these declines have been due to human harvest—not sea otter predation. Confounding an accurate assessment of predation impacts is the lack of an absolute sea urchin abundance estimate for the Southern California Bight. The results of 2001 relative abundance indices for sea urchins at sixteen sites at the Channel Islands indicate a "decline in sea urchin abundance overall when compared to recent years, although it remains extremely high."[238] This assumption does not consider increased harvest, variability in sea urchin recruitment, and climatic changes (e.g., El Niño). Without an accurate assessment of the status of these fisheries and either relative or absolute abundance indices, the Service can not validate its assumption nor can it effectively monitor or predict the impact of sea otter predation. Consequently, assuming that increased sea otter predation would lead to a proportional decrease in harvest is scientifically unfounded—nothing presented in the DSEIS substantiates this assumption.

### 3. Assumption 3 – Sea Otter Distribution

The Service assumes that: "Effects of sea otter habitation along the coastline are assumed to be equally distributed across time and space. For example, we assume that a 50 percent occupation of an area, consisting of *X* blocks, would result in a 50 percent decrease in shellfish harvest across all *X* blocks."[239] Again, the assumption of a proportional decrease in shellfish harvests with sea otter habitation is invalid. Sea otter prey consumption is not proportional across all shellfish species. Sea otters feed on a wide array of benthic invertebrate species, including but not limited to sea urchins, crabs, clams, mussels, abalones, and other gastropod mollusks. As the Service noted, sea otters in central California "consumed sea urchins (39.8%), mole (sand) crabs (14.4%), other crabs (8.8%), abalones (3.8%), snails (3.3%), and spiny lobsters (1.2%). Some prey items (28.0%) were unidentified."[240] More recent data substantiate that sea otters are dietary generalists at the population level, preying on more than 24 major taxa. However, they are specialists at the individual level, with

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[237] Dayton, P.K. 2003. The importance of the natural sciences to conservation. The American Naturalist 162:1-13.

[238] DSEIS at 32.

[239] DSEIS at 90.

240 DSEIS at 28. See also USFWS (U.S. Fish and Wildlife Service). 1990. Third Annual Report: Southern Sea Otter Translocation to San Nicolas Island, August 1989-July 1990.

most individual diets dominated by 2-6 taxa.[241] The generalist nature of the population compounded by the specialized diet of individuals supports that an assumption of a proportional decrease in shellfish harvests is not valid.

Therefore, when estimating the impact of sea otter predation on shellfish fisheries the Service must consider these data as they demonstrate that not all fisheries will be equally affected as the Service assumes; instead the likely result will be that sea urchin fisheries will be more heavily impacted than crab or lobster fisheries.

### 4. Assumption 4 – Commercial Fishery Cessation

The Draft SEIS concludes that areas reoccupied by sea otters along the coastline from Point Conception to Santa Barbara would likely cease to support commercial sea urchin diving, lobster harvesting, and crab harvesting. The Service assumes "that when sea otters permanently reside in a given area, the commercial fisheries for lobster, crab, and sea urchin will no longer be viable in that area. Although it is unknown whether the presence of sea otters would eliminate the lobster sport fishery entirely, we make the conservative assumption that the sport fishery would also be adversely affected at the same rate as the commercial fishery in areas where sea otters become established. Thus, commercial and recreational fisheries are assumed to be mutually exclusive with, and equally affected by, sea otter predation."[242]

This is a considerable overstatement with respect to lobster and crab harvesting as there is no evidence that the presence of sea otters would entirely eliminate either species. For the reasons stated under Assumption 3, this assumption is invalid and has little scientific basis, especially as it pertains to the crab and lobster fishery. Sand crabs constitute less than 15% of sea otter diet and spiny lobsters even less at 1.2%, there are no data available on what percentage that cancer and Dungeness crabs represent in a southern sea otter diet. Estes and Van Blaricom (1985) indicated that because there has not been a considerable overlap in the range of southern sea otters and spiny lobsters in the recent past, they could not draw a conclusion regarding the effects of sea otters on lobster fishing.[243] Therefore, the effects of sea otters on spiny

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[241] This individual specialization can be broken down into three types—type 1 specialists were characterized by large prey (e.g., cancer crab and abalone), type 2 by intermediate size prey (e.g., bivalves and worms) and type 3 by turban snails. Tinker, Tim; Estes, JA; Staedler, MM; Bodkin, JL. 2005. Alternative Diet Specialization in the Southern Sea Otter: Energetic Implications of a Behaviorally-Mediated Foraging Polymorphism, 16th Biennial Conference on the Biology of Marine Mammals, San Diego, CA December 12-16.

[242] DSEIS at 90, 94, 97-98, 100.

[243] Estes, J.A. and G.R. Van Blaricom. 1985. Sea otters and shellfisheries. Pp. 187-235, *in* J.R. Beddington, R.J.H. Beverton, and D.M. Lavigne, eds. 1985. Marine Mammals and Fisheries. London: George Allen and Unwin.

lobster populations are uncertain. Although the sea otters at SNI are known to prey on lobsters, lobsters may be less vulnerable to sea otters because of their mobility. Also, with little or no information on the effects of sea otter predation on recreational fisheries, the Service cannot assume that recreational fisheries will be equally affected by sea otter predation. Recreational fisheries are often not prosecuted to the same level, with the same gear, and in the same areas as commercial fisheries.

### 5. Assumption 5 – Sea Otter Reoccupation Rates

The Service states: "To simplify calculations, effects of sea otter reoccupation are assumed to be equally distributed across time. For example, we assume that 10 percent of impacts would accumulate each year, summing to 100 percent in year 10."[244] This assumption is not borne out in reality. According to the Service, in March of 1998, approximately 65 sea otters were found in and near Cojo Anchorage, just south and east of the northern boundary of the management or "otter-free" zone. By April, the number grew to over 100.[245] This started a pattern of sea otters moving into the area through the spring and early summer and then returning to the parent range during the late summer or fall. Sea otters have seasonally moved into and out of the management zone each year since 1998. The largest group was observed in February 1999 and numbered 152 animals.[246] The 2002 spring survey found 8 sea otters in the management zone.[247] This information clearly demonstrates that movement into the management zone is seasonal and highly variable. It is unlikely that only 10% of the animals would move into the area each year and take up residence. In some years it may be 50 or 100%, in others zero. In addition, there is still a strong seasonal migration component that results in considerable uncertainty as to if and when sea otters will become year-round residents in the management zone. As discussed in Section III A, there is "considerable unavoidable uncertainty" surrounding the estimate that 117 (median number) independent sea otters will reside year-round along the coastline from Point Conception to Santa Barbara over the next 10 years.[248]

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[244] DSEIS at 91.

[245] 2003 RP at 15.

[246] *Id*.

[247] *Id*.

[248] DSEIS at 74.

### 6. Assumption 6 – Transfer of Fishing Effort

The Service assumes "that once commercial catch is eliminated from a statistical block, any effort expended in another block would not increase total landings for southern California. Thus, the resulting change in landings and ex-vessel revenue may be overestimated."[249] This assumption may also be invalid. If fishing effort changes to another block that contains healthier, more abundant fish/invertebrate stocks, landings may actually increase.

### 7. Assumption 7 – Sea Otter Growth Rate

The Service assumes "that the sea otter population at SNI will increase at a 9 percent annual growth rate over the next 10 years." There is considerable "uncertainty involved in predicting population growth, particularly of a small colony."[250] The sea otter population is projected to increase at a 9 percent annual growth rate to 79 animals in 2014.[251] Between 1990 and 2004, an average of 5.6 sea otters have been born each year at SNI. Since 1993, the population has been increasing at a rate of 8.7% annually—this estimate is within the assumed 9 percent annual growth rate. However, for 11 of the 16 years (including 1990), the number of sea otters at the island remained below 25. The high count for 2004 was 32 adult (or sub-adult) sea otters. Indeed, there recently has been a decline in the size of the SNI population. The emigration from the island to other areas and the highly variable population at the Island makes the future of the colony uncertain, and calls into question the validity of this assumption despite the fact that 18 years have passed since the initial translocation.

### 8. Assumption 8 – Comparison of Sea Otter Population Growth Rates and Fisheries Declines

The Service states: "At SNI, we assume that changes in shellfish fisheries are inversely proportional to changes in the percentage of carrying capacity occupied by the colony. If the colony increased by 9 percent annually, it would grow from 32 animals in 2004 to 79 animals in 2014. With an estimated carrying capacity of about 500 animals, the sea otter population at SNI would increase from 6 percent of carrying capacity in 2004 to 16 percent of carrying capacity in 2014, resulting in a 10 percent decrease in commercial shellfish harvests over 10 years."[252] In comparison to

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[249] DSEIS at 91.

[250] DSEIS at 76.

[251] DSEIS at 76,77.

[252] DSEIS at 91.

other fisheries on the mainland, the Service expects only minimal impacts to the fisheries at SNI.[253] But as stated in our critique of Assumption 3, the flaw is that the Service infers an inversely proportional relationship between the percentage of the carrying capacity of the colony and the changes to shellfish fisheries (i.e., more sea otter predation = less fishery harvest) that is not substantiated by the scientific literature. SNI has had a widely fluctuating population and to date, these fisheries have coexisted with sea otters. It is surprising that the Service does not appear to have actual data on the impact of sea otter predation at SNI on the sea urchin, lobster, and crab harvests, pre- and post- translocation, since the pre-translocation phase specifically mandated "collection of baseline data on the ecosystem at the translocation site".[254] Instead the Service chooses to use a flawed assumption (especially in light of the available landings data which fluctuates widely) that these fisheries may decrease by only 10 percent.[255]

### 9. Assumption 9 – Abalone Fisheries

The Service also dismisses the "potential for reopening the abalone fishery for any species during this 10-year time frame," concluding "that sea otter range expansion would preclude the possibility of recreational or commercial abalone fishing in reoccupied areas."[256] These statements are misleading regarding the interaction between sea otter and abalone. As sea otters recovered from the Pacific maritime fur trade, and their numbers and range in central California spread during the mid-1900s, abalone numbers plummeted.[257] Sea otters are also known to be strongly size-selective consumers,[258] preferring the largest available individuals as their prey. So how can sea otters and abalone co-exist? Shallow reefs often are interspersed with cryptic habitats—cracks and crevices in the rocky substrate that provide refuges from predation, and where macroalgal accumulates resulting in larger and more reproductively fit abalone. When sea otters are abundant, kelp density increases and

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[253] DSEIS at 94, 98, and 100.

[254] 52 Fed Reg at 29765 (1987).

[255] DSEIS at 94, 98, and 101.

[256] DSEIS at 109, 207.

[257] Estes, J. A., and G. R. VanBlaricom. 1985. Sea otters and shell-fisheries. pp. 187–235 *in* R. H. Beverton, D. Lavigne, and J. Beddington, eds. Conflicts between marine mammals and fisheries. Allen and Unwin, London. *See Also* Fanshawe, S., G. R. VanBlaricom, and A. A. Shelly. 2003. Restored top carnivores as detriments to the performance of marine protected areas intended for fishery sustainability: a case study with red abalones and sea otters. Conservation Biology 17:273–283.

[258] Estes, J. A., and D. O. Duggins. 1995. Sea otters and kelp forests in Alaska: generality and variation in a community ecological paradigm. Ecological Monographs 65:75–100. See Also Estes, J. A., and P. D. Steinberg. 1988. Predation, herbivory, and kelp evolution. Paleobiology 14:19–36.

abalones and other species of macroinvertebrates occur almost exclusively within these cryptic habitats.[259] Thus, in an indirect way, intense predation may have promoted the evolution of large bodied, reproductively fit, and diverse abalone in the eastern North Pacific Ocean.[260]

In addition, sea otter predation is expected to have only a minor impact on abalone fishery restoration for the endangered white and candidate black abalone species.[261] This is because white abalone predominately reside at deeper depths and at offshore banks—areas where sea otters do not typically forage

Southern sea otters generally "forage in shallow waters, usually in depths of 25 meters or less, and only rarely in depths exceeding 40 meters (Riedman and Estes 1990)."[262] In a paper, in press, by Tinker et al., sea otter maximum dive depth is discussed.[263] The paper concludes that the *maximum* (emphasis added) depth overall for females is 50.5 meters, with an "Average Individual Max Depth" of 32.1 meters. For males, the maximum diving depth overall is 88 meters, with an "Average Individual Max Depth" of 67.1 meters. According to Tinker et al., "[m]ales tended to utilize greater maximum depths than females: critical foraging habitat for females (the depth range that included 95% of recorded foraging dives) was 2–20m, while for males it was 2–35m. For males, both dive depths and the duration of the post-dive interval were greater at Pt. Conception than at San Simeon."[264] Since sea otters rarely dive to depths greater than 40 meters, any potential interactions with fisheries at these depths is uncommon. Estes, Lindberg, and Wray conclude that humans have over-fished and are responsible for the collapse of the California abalone species, while abalone and southern sea otters have evolved to co-exist in complex interdependence.[265]

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[259] Lowry, L. F., and J. S. Pearse. 1973. Abalones and sea urchins in an area inhabited by sea otters. Marine Biology 23:213–219. Fanshawe, S., G. R. VanBlaricom, and A. A. Shelly. 2003. Restored top carnivores as detriments to the performance of marine protected areas intended for fishery sustainability: a case study with red abalones and sea otters. Conservation Biology 17:273–283.

[260] Estes, J.A. D.R. Lindberg, and C. Wray 2005. Evolution of large body size in abalones (*Haliotis*): patterns and implications. Paleobiology 31(4): 591-606. Exhibit 13.

[261] DSEIS at 22.

[262] DSEIS at 27.

[263] In press. Tinker, M.T., Estes, J.A., Ralls, K., Williams, T.M., Jessup, D., & Costa, D.P. (2005). Population Dynamics and Biology of the California Sea Otter (*Enhydra lutris nereis*) at the Southern End of its Range. MMS OCS Study DRAFT REPORT. MMS Cooperative Agreement Number 14-35-0001-31063. Coastal Research Center, Marine Science Institute, University of California, Santa Barbara, California.

[264] *Id.*, point 3 in Abstract.

[265] *See supra* note 260.

By way of conclusion, it is only as a result of these highly conservative assumptions that the DSEIS concludes these fisheries may no longer be viable along the mainland coast from Point Conception to Santa Barbara. The impacts identified in the DSEIS associated with potential declines in fisheries appear to be overstated. There is no evidence that expansion of the sea otter range will result in a significant decline in lobsters, crabs or abalone. In addition, even if there are fishery declines along the mainland coast, the industry should not realize any significant impacts at the Channel Islands for some time due to the predicted slow rate of sea otter population increase offshore.[266]

## F. Termination of Zonal Management is Required to Meet Public Trust Obligations and Comply With the U.S. Ocean Commission Report

Congress passed the Oceans Act of 2000, calling for establishment of a Commission on Ocean Policy (COP) to establish findings and develop recommendations for a coordinated and comprehensive national ocean policy. Pursuant to that Act, the President appointed sixteen COP members drawn from diverse backgrounds, including individuals nominated by the leadership in the United States Senate and House of Representatives. The COP held sixteen public meetings around the country and conducted eighteen regional site visits, receiving testimony, both oral and written, from hundreds of people. Overall, the COP heard from some 447 witnesses, including over 275 invited presentations and an additional 172 comments from the public, resulting in nearly 1,900 pages of testimony.[267]

Following extensive consideration and deliberation of a broad array of potential solutions, the COP presented its preliminary report in early 2004. Comments were solicited from state and territorial governors, tribal leaders, and the public; the response was overwhelming. Feedback was received from thirty-seven governors (including 33 of the 34 coastal state governors), five tribal leaders, and a multitude of other organizations and individuals—over one thousand pages in all.
The final report lays out the COP's conclusions and detailed recommendations for reform.

The Ocean Commission Report establishes a set of overarching principles to guide ocean policy. Those that pertain most to consideration of the Alternatives within the DSEIS include sustainability, ecosystem-based management, preservation of marine biodiversity and adaptive management. Careful consideration of these factors clearly weighs in favor of selecting the Preferred Alternative.

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[266] DEIS at 88 and Appendix F.

[267] U.S. Commission on Ocean Policy. *An Ocean Blueprint for the 21st Century*. Final Report Washington DC, 2004 at 3.

### 1. Sustainability

The premise surrounding sustainability is that ocean policy should be designed to meet the needs of the present generation without compromising the ability of future generations to meet their needs.[268] As already demonstrated in these comments, if southern sea otters are to recover, natural range expansion must progress and zonal management must be terminated. The current policy of zonal management is unsustainable and jeopardizes the continued existence of southern sea otters for future generations.

### 2. Ecosystem-based Management

U.S. ocean and coastal resources should be managed to reflect the relationships among all ecosystem components, including humans and nonhuman species and the environments in which they live.[269] Applying this principle will require defining relevant geographic management areas based on ecosystem, rather than political, boundaries. Sound ocean policy requires managers to simultaneously consider the economic requirements of society, the need to protect the nation's oceans and coasts, and the interplay among social, cultural, economic, and ecological factors.[270] Ocean policies cannot manage one activity, or one part of the system, without considering its connections with all the other parts. Thus, policies governing the use of U.S. ocean and coastal resources must become ecosystem-based, science-based, and adaptive.[271] Ecosystem-based management looks at all the links among living and nonliving resources, rather than considering single issues in isolation.[272]

The translocation program is not ecosystem-based management—it is single species management. Moreover, it is now clear that the translocation program, and in particular zonal management, is a failed management tool. Its narrow scope and purpose not only fails to achieve its recovery goals for southern sea otters, but it does not adequately provide for the multiple activities that occur in the translocation and management zone (e.g., fisheries, ecotourism, resource extraction, and military activities). Its implementation does not incorporate the broader biological and physical environment that results in changes in habitat use and prey availability for southern sea otters, as well as changes in commercial and recreational fisheries.

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[268] *Id.* at 61.

[269] *Id.* at 62.

[270] *Id.* at 63.

[271] *Id.* at 63.

[272] *Id.* at 63.

The Preferred Alternative in the DSEIS moves toward ecosystem-based management and focuses on the multiple activities occurring within the existing translocation and management zones. The analyses of the alternatives generally evaluates and acknowledges the array of multiple uses (e.g., fisheries, ESA recovery efforts, ecotourism) within the translocation and management zones and works toward managing these activities in a way that balances competing uses while preserving and protecting the overall integrity of the species diversity and ocean and coastal environments. The impacts to commercial and recreational fisheries are carefully considered and weighed as are the impacts to the ocean and coastal ecosystem. While the Service maintains that sea otters will have an adverse impact on a number of commercial fisheries, the ecosystem benefits far outweigh the questionable impacts to a small segment of southern California fisheries. The Service should continue to monitor the effects of implementation of the Preferred Alternative not only on southern sea otters but on the ecosystem as a whole, and support research to devise strategies that will mitigate any potential deleterious effects on commercial shellfish fisheries.

### 3. Preservation of Marine Biodiversity:

The COP recommends that downward trends in marine biodiversity should be reversed where they exist, with a desired end of maintaining or recovering natural levels of biological diversity and ecosystem services.[273] One of the central goals for ecosystem-based management should be the explicit consideration of biodiversity on species, genetic, and ecosystem levels.[274] Every species makes some contribution to the structure and function of its ecosystem; thus, an ecosystem's survival may well be linked to the survival of all species that inhabit it.

*Species diversity,* or the number of species within an ecosystem, is one measure of biodiversity.[275] Within a single-species population, it is important to preserve *genetic diversity*—the bedrock of evolution.[276] Maintaining genetic diversity is important for species to adapt to changing environmental conditions. It is also important to understand and protect *ecosystem diversity,* the number of different ecosystems and different kinds of ecosystems, on Earth. Despite the importance of biodiversity to ecosystem functions and values, very little is known about how biodiversity arises, is

[273] *Id*. at 64.

[274] *Id*.

[275] *Id*.

[276] *Id*.

maintained, and is affected by outside forces including climate variability and direct human impacts.

Southern sea otters were once part of the species diversity within southern California, their presence contributed to greater ecosystem diversity. The indirect effects of sea otter-kelp forest ecosystems are well-known.[277] A three-trophic level interaction that occurs among sea otters, sea urchins, and the kelps and other fleshy macroalgae creates a "trophic cascade" and promotes marine biodiversity.[278] In the case of sea otters and kelp forests, sea otters eat sea urchins and sea urchins eat kelp.[279] Thus, where sea otters are present in sufficient numbers, sea urchins are rare and kelp forests flourish. The trophic cascade among sea otters, sea urchins, and kelps further influences the ecosystem in three general ways—by altering primary production (the highly productive kelps fix large quantities of inorganic carbon through photosynthesis), by creating three-dimensional habitat for other species (much as terrestrial forests create habitat for insects, birds, and numerous other species), and by reducing the force of coastal waves and currents (in an analogous manner to the way that wind velocity is attenuated by terrestrial forests).[280] For example, the growth rate of filter-feeding invertebrates is significantly greater in sea otter-dominated ecosystems because of the resulting increased production and availability of particulate organic carbon in coastal waters.[281] Kelp forest fish populations are enhanced in sea otter-dominated ecosystems and thus the diet and foraging behavior of other fish-eating species is altered by the presence or absence of sea otters.[282]

The translocation program and zonal management must be terminated to promote and preserve this type of marine biodiversity. Since, the recovery of southern sea otters is highly dependent on range expansion; species diversity within southern California can only be improved and maintained by terminating zonal management. The presence of southern sea otters in this area will in turn promote ecosystem diversity through

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[277] Estes, J.A. 2005. Carnivory and trophic connectivity in kelp forests. Pp. 61-81 in, J.C. Ray, K.H. Redford, R.S. Steneck, and J. Berger (eds.). Large carnivores and the conservation of biodiversity. Island Press, Washington, D.C.

[278] Paine, R.T. 1980. Food webs: linkage, interaction strength, and community infrastructure. J. Anim. Ecol. 49:667-685. See Also. Carpenter, S.R. and J.F. Kitchell (eds.). 1993. The Trophic Cascade in Lakes. Cambridge Univ. Press, New York.

[279] Estes, Hatfield, and Tinker, Exhibit 11.

[280] *Id*.

[281] Duggins, D.O., C.A. Simenstad, and J.A. Estes. 1989. Magnification of secondary production by kelp detritus in coastal marine ecosystems. Science 245:170-173.

[282] Reisewitz, S.E., J.A. Estes, and S.A. Simenstad. 2006. Indirect food web interactions: sea otters and kelp forest fishes in the Aleutian archipelago. Oecologia 146: 623-631.

improved kelp forest communities and greater numbers of kelp forest fishes, invertebrates, and plants.

### 4. Best Available Scientific Information and Adaptive, Precautionary Management

Finally, ocean policy decisions should be based on the best available understanding of the natural, social, and economic processes that affect ocean and coastal environments, and adoption of the Preferred Alternative achieves this objective. As the Alternative 3C is implemented, the Service should establish clear goals, monitor the progress, and provide new information to continually improve the scientific basis for future actions. The Service should also undertake a periodic reevaluation of the goals and effectiveness of it revised recovery efforts, and incorporate new information in future recovery actions.

The evaluation of the impacts of southern sea otter predation on commercial and recreational fisheries and the rate of range expansion in the DSEIS are ripe with scientific uncertainty. Scientific uncertainty is, and will probably always be, a reality of and obstacle t the conservation and management of southern sea otters but, as the COP recognizes, it should not be an excuse to not move forward with precautionary conservation actions that place the species conservation and recovery as the priority. Because scientists cannot predict the behavior of southern sea otters, humans, or the environment with accuracy, the Service cannot be expected to manage with complete certainty. What is missing from the DSEIS is an estimate of the level of uncertainty associated with the information provided. The Service must work to estimate this level of uncertainty, especially as it relates to the impacts of sea otter predation on fisheries, and incorporate this level of uncertainty into the decision-making and analysis process. In addition, the DSEIS does not contain a plan to undertake the research and data collection needed to reduce the uncertainties. The Preferred Alternative is the most risk adverse and scientifically sound conservation and management action—meeting the objectives of precautionary ecosystem-based management. Nevertheless, after a decision is implemented, the Service must continue to gather the information needed to reduce uncertainty, periodically assess the status of southern sea otters, and modify activities as appropriate.

Only Alternative 3C in the DSEIS will meet the goals of the Ocean Commission Report and ensure the sustainability of southern California ecosystems for the benefit of future as well as current generations. The Preferred Alternative embodies a balanced precautionary approach, applying judicious and responsible management practices based on the best available science and on proactive, rather than reactive, policies. Implementation of the Preferred Alternative will preserve marine biological diversity and promote the recovery of southern sea otters. However, the DSEIS lacks

an implementation plan for the Preferred Alternative that include scientific assessments, monitoring, and mitigation measures to reduce environmental risk where needed, and periodic reviews of any restrictions and their scientific bases. We recommend that the Service develop and include such a plan in the Final SEIS.

## G. Termination of Zonal Management is Consistent with the California Coastal Zone Management Plan

Termination of the translocation program by the Service is a federal activity that affects the natural resources of the California coastal zone and, under the Coastal Zone Management Act (CZMA), it must be carried out in a manner which is consistent with the enforceable policies of the California Coastal Management Program (CCMP) to the "maximum extent practicable."[283] Therefore, the Service must submit a determination of consistency to the California Coastal Commission for concurrence at least 90 days before final termination of the program. The Coastal Commission must base its decision upon the enforceable policies of the California Coastal Act.[284]

The Coastal Commission concurred with the translocation program in 1987. However, at that time the Coastal Commission noted that later developing factors could change the project's consistency with the CCMP.[285] The Service has now determined "that the translocation program has failed to fulfill its primary purpose as a recovery action and that our recovery and management goals for the species cannot be met by continuing the program."[286] Numerous reasons were cited by the Service for the failure of the translocation program, most notably: translocation was much less successful than expected; capturing and moving otters was very difficult; containment of otters at SNI was likely to jeopardize the species' continued existence; and recovery of the species requires that otter populations be permitted to expand naturally.[287]

The Coastal Commission reviewed the initial translocation program in 1987 under the following provisions of the California Coastal Act:

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[283] 16 U.S.C. §1456(c)(1).

[284] Cal. Pub. Resources Code, sections 30000 et seq.

[285] Commission Adopted Findings on Consistency Determination, July, 7, 1987, at 1 (Commission Findings).

[286] DSEIS at 9.

[287] *Id.* and Appendix C.

- Section 30230: "Marine species shall be maintained, enhanced and where feasible restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a way that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms for long term commercial, recreational, scientific and educational purposes."
- Section 30231: "The biological productivity and the quality of coastal waters…appropriate to maintain optimum populations of marine organisms…shall be maintained and where feasible restored…."
- Section 30260: "Coastal dependent industrial facilities shall be encouraged to locate or expand with existing sites…. [W]here new or expanded coastal –dependent industrial facilities cannot feasibly be consistent with other policies…, they may nonetheless be permitted…if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible."

The Coastal Commission found the translocation program consistent with these policies for the following reasons:

- The project on balance provides special protection to species of special biological significance;[288]
- The existence of a second population of sea otters would provide additional safeguard against harm to sea otters from existing oil spills and would increase the safety with which otherwise approvable energy development can go forward; and [289]
- A properly maintained management zone will substantially mitigate the loss of fishery landings from SNI.[290]

It is now known, as shown in these comments, that the assumptions upon which the Coastal Commission relied to make these findings are no longer valid.

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[288] Commission Findings at 16.

[289] *Id.* at 18.

[290] *Id.* at 25.

First, translocation does not provide protection to species of special biological significance; to the contrary, relocating sea otters results in increased risk of mortality due to stress, lack of familiarity with new environments, increased competition, and territorial encounters with other otters. Moreover, otters have a strong affinity for their home range and are likely to return to sites when moved elsewhere. In fact, the Service concluded based upon substantial new information on the population status, behavior and ecology of sea otters that continuing containment and restricting the southern sea otter north of Point Conception would likely jeopardize the species' continued existence and violate section 7(a)(2) of the ESA.[291]

Second, translocation and zonal management have not been successful in establishing a second, self-sustaining population at SNI, and does not provide a safeguard against harm to sea otters. In fact, the best safeguard appears to be to leave the otters alone. The Recovery Plan notes that "even if the population at SNI persists, many years will be required before the population is large enough to be considered an effective reserve to buffer against possible local extinction," and therefore recommends "it would be beneficial to allow the otters currently on SNI to remain there rather than capturing them and returning them to the mainland population."[292] The 2000 BO concludes that excluding otters from the area south of Point Conception "will perpetuate the species' artificially restricted range and its vulnerability to the adverse effects of oil spills, disease, and stochastic events."[293] Therefore, the Service has concluded that additional translocations are not the best way to increase the range and number of sea otters, and that range expansion "will occur more rapidly if the existing population is allowed to recover passively than…translocating sea otters."[294]

Third, sea otters provide tremendous benefits for maintaining healthy kelp forests and the invertebrates and fish species living in kelp forest ecosystems; kelp forests also provide many valuable services to humans; and impacts on fisheries are not extensive and are insignificant compared to the benefits of terminating zonal management. The DEIS forecasts that with 10 years of range expansion, 65 individual otters will spread south of Point Conception to Santa Barbara, and in 25 years 185 otters will spread south to Carpinteria. If true, this does not represent a significant threat to fisheries. The DSEIS also assumes that commercial fisheries that interact with sea otters from Point Conception to Santa Barbara would decease by 10%, and those at SNI would decrease by 1% per year. Even if true, these impacts are insignificant compared to

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[291] 2000 BO at 73.

[292] 2003 RP at 28.

[293] 2000 BO at 37.

[294] 2003 RP at 28.

jeopardizing the survival of sea otters from zonal management; moreover, as demonstrated above adverse effects on fisheries are overstated and based upon incorrect assumptions, and no evidence exists to support the argument that expansion of the sea otter range will result in a significant decline in lobster, crabs or abalone populations.[295] For these reasons, termination of the translocation program and zonal management is consistent with sections 30230, 30231 and 30260 of the California Coastal Act and the enforceable policies of the CCMP to the maximum extent practicable.

## H. The Environmental Community Plan for Sea Otter Recovery

### 1. The Need to Address Current Threats

The southern sea otter plays a pivotal role in shaping the nearshore California marine ecosystem. A threatened species under the ESA, the southern sea otter has suffered significant declines during the late 1990s and in recent years, with the population stabilizing and even showing signs of increasing in the annual Spring count. However, the overall health of southern sea otters is an immediate concern. Infectious diseases and parasites consistently account for 40-50% of southern sea otter mortality. Many of these diseases appear to be newly introduced and are related to human activities and forms of pathogen pollution. Until we better understand avenues for disease transmission and the root cause of the previous declines, the prognosis for recovery of the southern sea otter is poor. Southern sea otters are sentinels, so the same diseases that kill sea otters are a threat to human health, the viability of shellfish resources, the long-term health and viability of California's nearshore ecosystems, and the health and viability of businesses that rely on a clean ocean.

In addition, the southern sea otter still faces many of the same threats that were applicable at its listing: habitat degradation, from oil spills and other contaminants; incidental and intentional take by entanglement in fishing gear and shooting; and disease. Because of low numbers and limited range, this population is especially vulnerable to the extinction risk posed by potential oil spills along the central California coast, and a single spill could cause catastrophic declines from which the population may be unable to recover. In addition, contaminant levels may be contributing to decreased disease resistance and reduced reproductive rates, thereby further hampering the population's ability to recover. Finally, there is some indication that food availability may be a limiting factor in population growth, with both habitat destruction and fishery practices as factors affecting prey abundance.

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[295] *See* Section III.E.

If the southern sea otter is to recover, it is imperative that its numbers and range increase. Given the southern sea otter's current status and previous decline, the Service must take stronger and immediate action to implement recovery efforts. The ability to make effective management decisions about this population depends on having the most current and complete information available on abundance and distribution, overall health, and factors that may be hindering recovery. The 2003 RP estimates that it will take more than $10 million dollars over 20 years to recover this species—we believe that this is likely an underestimate.[296] Our organizations request that the Service request 3 million dollars annually for the implementation of the priority activities in the recovery plan. These funds are needed to:

- continue population surveys to determine size, rate of change, and distribution, and to conduct investigations of food web interactions and affects of possible food limitations;
- assess the health of the population and conduct research on the sources and levels of contaminants in sea otters and their habitat and how this might be contributing to the decline;
- continue monitoring and enforcement activities to eliminate intentional take;[297]
- continue efforts to reduce incidental mortality due to commercial fishing, including funding for observers in coastal gillnet fisheries and investigations of the degree to which incidental take in trap and pot fisheries are affecting the population; and
- implement management and contingency/response plans to reduce the risk to sea otters from oil spills.

Long-term conservation of the southern sea otter, as well as recovery itself, will require research on several key issues discussed below. In the meantime, we urge the Service to support the Southern Sea Otter Research and Recovery Act.

### 2. Actions Necessary for Recovery

Our organizations support the Recommended Recovery Actions in the 2003 RP. We are especially pleased that, with the publication of this DSEIS, the Service has taken the critical step to "evaluate failure criteria for the translocation program to determine if the experimental population at SNI has met one or more failure criteria and whether

[296] The Recovery Team noted that additional costs for recovery were yet to be determined in the Recovery Plan. 2003 RP at x.

[297] Especially filling the recently vacated position held by the chief enforcement officer, Bill Talkin, to oversee the Central coast.

continuation of sea otter containment may jeopardize the sea otter population or hinder recovery."[298] Specific recovery actions of priority are listed below.

### a. Disease

The Service must determine infection rates, and how and to what degree infections are communicable. The Service should complete a five-year intensive necropsy study to evaluate the rates of disease exposure, identify key factors in the disease cycles, assess immune function, and develop comparative data with more vigorous sea otter populations. Continuation of a mortality monitoring system is critical, and the Service should consult with experts to develop a research plan to collect and analyze tissues for evidence of stress or disease, determine sources of disease agents and stress, and minimize factors causing stress and disease.

### b. Incidental Take In Fishing Gear

The Service must continue to evaluate causes of sea otter mortality; monitor incidental take in commercial fisheries;[299] evaluate the effectiveness of fishing regulations to prevent sea otter take; evaluate incidental take in trap/pot fisheries; and determine and take possible steps to reduce or eliminate sea otter mortality incidental to fisheries. The Service must also fully implement the incidental take provisions of the MMPA to conduct stock assessments, estimate bycatch in fisheries, and mitigate any bycatch. We recommend that the Service fulfill its obligations under this section and complete the required stock assessments and estimates of bycatch.

### c. Oil Spills

The Service should work to implement and monitor the United States Coast Guard's vessel management plan; assess current risk of tanker accidents and other sources of oil spills, including off-shore oil platforms, pipelines, and marine terminals; and implement an oil spill contingency plan that includes a sea otter response plan. In addition, a report prepared by Dr. Deborah French, Applied Sciences Associates, acknowledges in its conclusion that "a catastrophic oil spill could impact a majority

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[298] 2003 RP at x.

[299] The Service must specifically continue to monitor incidental take of sea otters in gill and trammel nets, live-rockfish traps, and shellfish traps.

(>50%) of the southern sea otter population."[300] The author concludes that the risk of such an event occurring has not been adequately quantified in the Recovery Plan. Furthermore, Dr. French concludes that the Recovery Plan does not adequately address the additional and interacting stresses of biological factors and human-interaction on the risks to the population.[301]

### d. Contaminants

The Service must determine sources (non-point and point) of environmental contaminants and biological toxins. It must also evaluate their role in sea otter mortality by determining contaminant levels in sea otter prey and habitat, analyzing tissues from southern sea otters for environmental contaminants, and archiving tissues for future analysis. The Service must work together with the appropriate water quality agencies (State Water Resources Control Board, Regional Water Quality Boards, and the California Environmental Protection Agency) to ensure that municipal sewage treatment facilities and municipal stormwater permits in Monterey, Santa Cruz and San Luis Obispo counties contain adequate management measures to address threats to sea otter health from contaminants, and that existing water quality monitoring programs such as Mussel Watch and SWAMP (Surface Water Ambient Monitoring Program) are funded to efficiently collect the needed data. In addition, given the critical impacts that biological pathogen contamination have on southern sea otters, it is critical that a monitoring program for biological pathogens be established.

### e. Other

The Service must consider prey availability (resource limitations) and thus indirect effects of commercial shellfish fisheries as it relates to prey competition. Specifically, it should evaluate the impacts of abalone, urchin, crab, and lobster fisheries on sea otters. It should also determine the impact of nets and strong lights used (at night) in the squid fishery in proximity to kelp beds inhabited by sea otters. The Service should consider the importance of squid as a food source for sea otters, and impacts of commercial squid fishing on food availability. Finally, the Service should look at the sustainability of kelp harvesting and evaluate its impact on sea otters, invertebrate and fish populations.

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[300] Dr. Deborah French, "Final Report: Review of Draft Southern Sea Otter Recovery Plan (Revised) Sections on Oil Spill Risks and Impacts" April 2000.

[301] *Id*.

The recovery of the southern sea otter will require dedicated funding, which to date has been lacking. The Recovery Plan and the efforts of the Implementation Team provide a blueprint for action. The Southern Sea Otter Recovery and Research Act, if enacted, may offer the mechanism to provide the funding necessary to undertake this critical research. Wildlife managers are finding that it is no longer sufficient just to monitor trends and abundance in marine species. Comprehensive conservation and recovery requires a multidisciplinary approach with an evaluation of the health of aquatic species and their ecosystems being a key component. Now, more than ever, human-related threats such as contaminants, over-fishing, and habitat degradation require a strong interface between research and policy to devise mitigation strategies to enhance the survival and health of aquatic species and their ecosystem. With a consistent and adequately funded effort to carry out this environmental community plan, combined with the adoption of Alternative 3C, the southern sea otter will be well on the way to recovery.

## IV. Responses to Public Hearing Testimony

The Service held two public hearings on the DSEIS on the Translocation of Southern Sea Otters—the first in Santa Barbara and the second in Monterey. Forty-one individuals testified at the November 1 hearing in Santa Barbara—29 supported the Preferred Alternative and 11 opposed declaring the translocation a failure and abolishing the management zone. At the November 3 hearing in Monterey, 27 spoke in favor of the Preferred Alternative and one against.

Those that spoke in opposition to the Preferred Alternative raised issues that fall into several categories: 1) the motivation to declare the translocation a failure is to eliminate fisheries; 2) the DSEIS fails to address the main obstacle to sea otter recovery, i.e., water quality/pollution and disease; 3) failure to implement the translocation program places the Service in contempt of Congress. An additional theme may be that sea otters will compete with invertebrate fisheries. However, several fishermen stated that they have successfully co-existed with sea otters and have not found them a threat to their fisheries.[302]

### A. Motivation To Declare The Translocation A Failure Is To Close Fisheries

Several comments inferred that the motivation of the Service (and supporters of the Preferred Alternative) to declare the translocation a failure was specifically to close or

[302] See comments of Rick Gutierrez and Charlie Graham, Santa Barbara, California November 1, 2005 at 72 and 78.

eliminate commercial fisheries that interact with southern sea otters.[303] Our organizations are not opposed to commercial fishing and several of the organizations that have endorsed these comments are actively engaged in discussions with the fishing industry to establish areas of common interest (*See* CG Discussions—Section II). The Service also recognizes that implementation of the preferred alternative will place an economic burden on the fisheries: "To mitigate the effects that may occur as a result of this alternative, if chosen, we would propose to work closely with the CDFG and affected fishers to develop fishery management strategies that would minimize effects on individual fishers."[304]

Our organizations support this proposal and recommend that the Service work with both the fishing and conservation community to devise a plan to reduce the economic hardships associated with implementation of the preferred alternative and develop a research program to investigate strategies that would facilitate the coexistence of southern sea otters and commercial fisheries.

## B. The DSEIS Fails To Address The Main Obstacle To Sea Otter Recovery—Water Quality/Pollution And Disease

Several opponents stated that disease and water pollution are the major threat to sea otters that must be addressed.[305] The DSEIS acknowledges the role of disease: "Disease is responsible for roughly 40 percent of the deaths in animals obtained from the salvage program. Infectious diseases in the southern sea otter are almost entirely the consequence of parasites and microbes for which the sea otter is not a natural host (USFWS 2003)."[306] While our organizations concur with this statement and recognize the linkage between poor water quality and disease, removing this obstacle

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[303] "They're moving down naturally as it is, and i think their reason for this plan, for a lot of groups, is because they want to eliminate commercial fishing." Statement of Guy Robinson, At The Public Hearing Of The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 46.

[304] DSEIS at 6.

[305] "Over 50 percent of the otters dying in this state are dying from diseases caused, for the most part, by humans. And it's only mentioned briefly, there's just a brief mention in your EIS about this disease problem, and frankly, nobody is doing a dang thing about it, and I don't hear any environmental groups that are particularly interested in cleaning up the problem that urbanization is causing in this state." Statement of Bruce Steele, Public Hearing on The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 47. See also " …the pollution kills them. So when the sea otters come down from their nice little virgin land up there and meet all the boats and filth in marina del ray and down here, not gonna work too well… fix the pollution, you know, concentrate on those things, and if you really want to save the sea otter…", Statement of Robert Laumer, Public Hearing on The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 80.

[306] DSEIS at 49.

to recovery must be a priority action for the implementation of the recovery plan—it is not a requirement associated with the evaluation of the translocation program. This obstacle must be removed if southern sea otters are to fully recover; however, determining the success or failure of the translocation program is a separate analysis with established failure criteria (*See* Discussion in Section III-B). The DSEIS is a supplement to the environmental impact statement that established the translocation program, and as such its sole purpose is to evaluate the success of the program in light of new recovery goal and information.

Our organizations believe that eliminating the multiple barriers to sea otter recovery is essential. It is not just improving water quality and eliminating sea otter disease, but a collection of recovery efforts that includes: allowing for natural, unimpeded range expansion; reducing incidental take in fishing gear; minimizing the threat of oil spills; attaining a better understanding of prey resource limitations; and promotion of natural resource conservation and sustainability. These recovery efforts are not mutually exclusive and our organizations believe that all efforts are critical. Finally, contrary to the assertions of the fishermen, many of our organizations are engaged in efforts to improve the water quality along the California coast. For example, Defenders of Wildlife and The Ocean Conservancy are actively involved in water quality efforts such as providing comments, testimony, suggested improvements, and advocating for more funding for: 303d Impaired Water Body Listings, Areas of Special Biological Significance; Monterey Stormwater Management Plan; Morro Bay/Cayucos Sewage Treatment Plant Upgrade; and water quality monitoring programs.

The list of our work on water quality is exhaustive. The Ocean Conservancy and NRDC prepared a 70-page report entitled, "Practical Plan for Pollution Prevention" in 2005 recommending specific measures to reduce stormwater pollution in the Monterey region.[307] The report was commended by the Central Coast Regional Water Quality Control Board as a useful model for dealing with stormwater pollution contributing to sea otter health risks.[308] The Ocean Conservancy, Natural Resource Defense Council (NRDC), and Defenders of Wildlife also are working with the State Water Board and regional water boards to protect the State's most fragile and biologically important water bodies, "Areas of Special Biological Significance." The Ocean Conservancy and NRDC issued a report to prevent illegal wastes from contaminating these marine water quality protected areas, which include prime sea otter habitat in Pacific Grove, Carmel Bay, Point Lobos, Julia Pfeiffer Burns

[307] Practical Plan for Pollution Prevention: Storm Water Solutions for the Monterey Region. The Ocean Conservancy and the Natural Resources Defense Council (2005).

[308] Comments by Jeffrey Young, Chair, Central Coast Regional Water Quality Control Board, Hearing on the Monterey Regional Storm Water Management Plan, February 9, 2006.

Underwater Park, Salmon Creek and the Fitzgerald Marine Reserve.[309] The Ocean Conservancy, NRDC and Defenders of Wildlife also are working with the City of Morro Bay to upgrade its sewage treatment plant from primary treatment to help address sea otter health issues from parasites and infections. The Ocean Conservancy served as a co-chair of the State's Public Advisory Group to provide recommendations for improving the State's Total Maximum Daily Load (TMDL) program for cleaning up impaired waters throughout California. The Ocean Conservancy and other groups worked on a major campaign to comprehensively regulate major sources of pollution along the central coast of California from agricultural and logging operations. We also have been working to secure sufficient funding for clean water programs from bond programs (e.g., Propositions 40 and 50), to remove the cap on fees for point source pollution discharge permits, and to increase funds for ambient water quality monitoring such as the Surface Water Ambient Monitoring Program.

While all of these actions are needed to improve water quality, this is not a substitute for terminating zonal management and adopting Alternative 3C. The conservation of the southern sea otter requires actions on multiple fronts, and providing for natural range expansion is critical to all of them.

## C. Failure To Implement The Translocation Program Places The Service In Contempt Of Congress

Several fishermen claimed that by failing to remove sea otters from the management area the Service was in contempt of Congress and that the Translocation Law explicitly require such action.[310] Sections III B and C provide ample evidence to dispute this assertion. To the contrary, continued implementation of the translocation program and removal of sea otters from the management zone would violate the ESA, MMPA, and the P.L. 99-625 (Translocation Law). In summary, the Service has established that continuation of containment will jeopardize the existence of southern sea otters. Prohibiting the natural range expansion will violate the MMPA mandate to recover southern sea otters to their OSP, and the stress and deaths associated with translocating and removing sea otters from the management zone violates the non-

[309] California's AquaGems: Areas of Special Biological Significance, The Ocean Conservancy and the Natural Resources Defense Council (2005).

[310] "There's a law on the book that says you are supposed to move otters. There have been a hundred otters up at coal oil all year. No one's done anything. Five years ago there was probably 150 otters that moved into this supposed no otter zone, no one did anything. So, I think that the reality of all this is, there is not a no otter zone. Fish and Wildlife Service basically is, in my mind, in contempt of Congress by deciding that this is the policy we'll take when the law says you're supposed to go out and move otters…" Statement of Leonard Marcus, Public Hearing on The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 84.

lethal removal provisions of P.L. 99-625. Therefore, continuation of the containment places the Service in violation of these statutes.

## D. Southern Sea Otters Will Compete With Commercial Fisheries

The hearings produced conflicting testimony regarding the potential for conflict with commercial fisheries from fishery participants themselves. One fisherman claimed that southern sea otters will compete with commercial fisheries,[311] while others stated that they have co-existed with sea otters for some time.[312] The reality is that, while sea otter expansion will have an effect on fisheries, it is nowhere near as significant as supporters of zonal management argue. While numerous reports exist of sea urchin, crab, and clam populations declining after sea otters inhabit an area,[313] other studies have shown that shellfish populations that find suitable refugia can continue to flourish and support fisheries. In addition, other marine ecosystems can benefit. For example, kelp forests appear to grow profusely in suitable areas where sea otters reduce the number and size of sea urchins. In turn, kelp forests provide shelter and food for various species of fish, which become established in areas where kelp forests regenerate.[314] Clearly, the benefits of translocating sea otters will outweigh any impact to fisheries.

## E. Detailed Response to Selected Comments from the November 1, 2005 Santa Barbara Hearing

### Statement from Guy Robinson, Fisherman:

"I've heard statements recently made by people, groups that support this, that make wild claims of lobster traps catching otters and they would like to eliminate the fishery that way. This would just encourage them to do that."

### Response:

311 With the 100 otters that are located at point conception right now, that totals 430,000 pounds per year, or 1,178 pounds a day. With the competition on the sea, between the commercial activities and these otters, can and will that ocean sustain that type of population south of point conception, because the health of the bottom out there is not very good. Statement of Fred Hendrix, Public Hearing on The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 35.

312 "The sea otters have always worked hand and hand next to me. I know they eat crab. I know they eat urchins. I used to be an urchin diver also, and abalone diver.……the sea otter has lived, at least next to me for the last 30 years, and I have not seen any depletion of my resource that I pick." Statement of Rick Gutierrez, Public Hearing on The Draft Supplemental Environmental Impact Statement, Translocation Of Southern Sea Otters, November 1, 2005, Santa Barbara, CA at 72.

313 Generally, only more widely scattered, well-hidden, and smaller individuals remain after sea otters become established. DSEIS at 45.

314 DSEIS at 45.

To clarify, there is some concern about interactions of sea otters with trap and pot gear, based on historical data[315] that show that sea otters have been trapped in lobster, crab and fish traps/pots. Unfortunately, the current extent of this mortality is unknown as is the overall impact to the southern sea otter population. Our groups recommend that the Service monitor these fisheries to quantify the level of interaction.

**Statement from Phillip Beguhl, Fisherman:**

"To reintroduce otters—and that's the wrong word—to introduce a nonnative species into this zone, between Conception and the Rincon, and periodically the north coast of the islands, is going to have a huge effect on the care and capacity of otters."

**Response:**

Sea otters are not a non-native species to California. Southern sea otters, prior to the beginning of the fur trade in the late 1700s to the early 1900s, ranged to Baja California and there was an estimated 16,000-20,000 sea otters in California.[316]

**Statement from Robert Laumer, Environmentalist and Sea Urchin Diver:**

"This tourism thing, billions of dollars, that's good, but I don't think the sea otter really likes the tourists. The pollution kills them. So when the sea otters come down from their nice little virgin land up there and meet all the boats and filth in Marina Del Ray and down here, not gonna work too well."

**Response:**

At various hearings on sea otter issues, there has been testimony similar to Mr. Laumer's that the waters off Southern California are too polluted and are a threat to sea otter health. While water quality is a threat, many conservation groups are working within the regulatory framework to clean up coastal waters so that all species, including sea otters, can live in an unpolluted environment. Stakeholders representing conservation, fisheries, other industries, tourism, etc. should work collaboratively to address the pollution issue and work on ways to improve the health of our oceans.

**Statement from Steve Rebuck, Abalone Fisherman:**

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[315] Review of Finfish and Shellfish Trap Studies: Do These Traps Drown Sea Otters and If So What Can Be Done About It? By Jack Ames, DFG; Brian Hatfield, USGS; and Andy Johnson, Monterey Bay Aquarium. Poster presentation at the Society for Marine Mammalogy's 16th Biennial Conference on the Biology of Marine Mammals, December 12-16, 2005.

[316] An Estimation of Carrying Capacity for Sea Otters Along the California Coast. By Kristin Laidre, Ronald Jameson and Douglas Demaster. Marine Mammal Science 17(2):294-309 (April 2001).

"In regards to pollution, 1994, the Fish and Wildlife Service and the Marine Mammal Commission funded a study by the Dobbins Group, Dobbins mapping study, which showed that this region down here, south of Point Conception, is unsuitable habitat for sea otters, based on the economic impacts, and also the pollution that occurs down here. This is not a healthy area for sea otters."

**Response:**

See response to Mr. Robert Laumer's statement regarding pollution in Southern California and it being an unsuitable place for sea otters to live. Specific to the comment on Southern California being an "unsuitable place for sea otters," the DSEIS has the following:

> San Miguel and Santa Rosa Islands have a large area of high quality habitat within the 40m bathymetric contour. Alternative 2 would provide additional habitat (relative to Alternative 1) to allow for the achievement of recovery and OSP, but it would still prevent sea otters from reoccupying most of the suitable habitat in the Southern California Bight.[317]

**Statement from Steve Rebuck, Abalone Fisherman:**

"Now, one of the jobs I had for eleven years, I was a technical consultant to the Southern Sea Otter Recovery Team. We actually had a deal to delist the sea otter in California at a number of 2650, if it reached that number for three years in a row. I think that's happened."

**Response:**

This statement is incorrect, as the Final Southern Sea Otter Recovery Plan (April 2003) reflects the delisting number as 3,090. Specifically the Plan reads: "DELISTED: 'The southern sea otter population should be considered for delisting under the Endangered Species Act when the *average* (emphasis added; this refers to a 3-year running average) population level over a 3-year period exceeds 3,090 animals.'" This benchmark has not been reached.

**Statement from Peter Halmay, CA Sea Urchin Fisherman:**

"The alternatives here do not even address the healthy marine ecosystem, nor the well-managed and abundant fisheries."

**Response:**

[317] DSEIS at pp. 151.

Alternative 3C details how allowing sea otters to reoccupy areas in Southern California will provide for healthy kelp forest ecosystems that result in greater abundance of various kelp forest fish and invertebrates. The benefits of a healthy kelp forest ecosystem include buffering against coastal erosion and nurseries for fish.

**Statement from Peter Halmay, CA Sea Urchin Fisherman:**

"This will not be a recovery of the sea otters, and merely allowing them to move into a more polluted area is certainly not going to be in the right direction."

**Response:**

See the response to Mr. Laumer and Mr. Rebuck regarding sea otters and pollution.

**Statement from Peter Halmay, CA Sea Urchin Fisherman:**

"It seems to me that the common ground group was working on something very similar to alternative 2, except that alternative 2 doesn't address the three objectives that we have. So we have -- we're working on another alternative that's similar to 2, and in fact modifying the translocation plan, but taking care of the idea that we have to have healthy sea otters to have recovery."

**Response:**

Three of the groups endorsing this comment document, Defenders of Wildlife, Friends of the Sea Otter, and The Ocean Conservancy, have been part of the Common Ground discussions. While we are interested in continuing our discussions with the fishing representatives, CGC was not discussing a particular alternative (see discussion in Section II). There was not a unanimous agreement within the CGC about any other alternatives, other than to agree that we would continue to examine and discuss the fishing communities' proposed alternative. All of the environmental groups on these comments are in complete support of Alternative 3C.

**Statement from Chris Miller, Vice President of the California Lobster and Trout Fishermen's Association:**

"I'd just like to give a personal observation as a long time fisherman that we've had the translocation, which is approximately about 160 animals, I guess, were translocated to San Nicolas Island, and about 40 have maintained there, and then we had a natural event where the El Niño, extreme El Niño even moved a couple hundred otters below Point Conception, and now we have around 40 to 50 otters that are currently residents of that area."

**Response:**

There were 140 sea otters and one pup translocated to SNI. Since the translocation

ended in 1990, there have never been more than 37 sea otters out at the Island.

## V. Conclusion

Our organizations strongly support the Service's Proposed Action, Alternative 3C, to allow sea otters to "remain in areas where they now reside," terminate the translocation program and eliminate the "no-otter management zone." We support this proposed action for six reasons.

First, the sea otter translocation program has not fulfilled its intended purpose—it has failed. The existence of a management zone that attempts to restrict sea otter range expansion is counter to actions needed to recover this species. P.L. 99-625, while prohibiting sea otters from freely migrating south of Point Conception, was predicated on the assumption that a successful translocation that furthered sea otter recovery would justify a management zone. Under the original program, it was predicted that, between 11 and 30 years from when the last sea otter was translocated in 1990, 150 to 500 sea otters should be at SNI. In fact, 16 years later, there are only about 30 sea otters. In addition, from 1990 to 2005, there have been less than 25 sea otters in at least eleven of those years. Thus, the absence of a thriving and successful sea otter population at SNI eliminates any grounds for the capture and removal of sea otters from the "no-otter management zone."

Second, this proposed action by the Service reflects the expert findings in both the 2000 BO and the 2003 RP made by a team of esteemed scientists and Service staff. These documents conclude that:

> After reviewing the current status of the southern sea otter, the environmental baseline for the action area, the effects of the continuation of the containment program, and the cumulative effects, it is the Service's biological opinion that continuing the containment program and restricting the southern sea otter to the area north of Point Conception (which marks the current legal boundary between the parent range and the management zone, with the exception of the translocation zone at SNI) is likely to jeopardize its continued existence.[318]

The Service must acknowledge that the expert Recovery Team opposes enforcement of the management zone.

[318] Service BO at p. 37; FWS RP at pp. 14.

Third, the translocation has met four of the failure criteria. Additionally, the Service should include in the final SEIS a recognition that "success" of the population and the translocation program can no longer be defined solely in terms of those criteria and whether a mere 25 animals are present at SNI, as was the relevant standard in the early 1990s. It appears unlikely that the desired goal of achieving the carrying capacity of the population will ever be reached. Therefore, the Service should also consider promulgating an additional regulatory test which would specify that failure to achieve carrying capacity and the recovery goals by this time results in an automatic failure determination.

Fourth, an additional "changed circumstance," reflected in the Recovery Plan, must now be included in the decision making process. Our improved knowledge about the impact of oil spills on sea otters and the prospects for such a spill in California demonstrates that it is clear that the SNI population alone is not enough to ensure recovery.[319] Also, the premise that a management zone to restrict parent range expansion would not be inconsistent with recovery is no longer valid.

Fifth, the 1986 law requires the management zone to have been drawn to provide sufficient room for expansion of the recovery of the species. As the Recovery Plan acknowledges, the current zone does not provide sufficient range and habitat for biological, as well as oil spill risk-related reasons[320] Thus, the current zone violates the 1986 law. This legal requirement is the reason the so-called "No Action" alternative (i.e., enforcement of the zone) would be illegal.

Finally, in response to the Service's consideration of socioeconomics in the DSEIS, our comments clearly demonstrate that an expanded southern sea otter population, into historically occupied waters off the coast of Southern California, would provide millions of dollars in annual economic benefits to California. Section III (D) reveals that an expansion of the sea otter population south of Point Conception, in Santa Barbara County, and eliminating the "no-otter management zone" would result in $100 million in annual economic benefits to California households. There would be significant benefits specifically to Santa Barbara and Ventura counties from an increase in tourism, recreation-related visits and jobs. The area's environment would also improve by way of a healthier coastal ecosystem.

In conclusion, we thank the Service for undertaking this long-overdue review and urge the adoption of the Preferred Alternative as a final rule. Our groups remain interested in exploring consensus solutions to this issue that address the legitimate

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[319] Service RP at p. 20, point #2; p. 24-25, points #2 & #3.

[320] Service RP at p. 28.

needs of all affected parties, and look forward to working with the Service to craft a workable and common sense solution and final rule that ensures the long-term protection and recovery of the southern sea otter.