

Administration of the
MARINE MAMMAL PROTECTION ACT OF 1972
Annual Report
January 1, 1981 - December 31, 1981

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

MARINE MAMMAL PROTECTION ACT

Report of the Department of the Interior

The Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361-1407, 86 Stat. 1027 (1972), 95 Stat. 979 (1981)) states in section 103(f) that "Within six months after the effective date of this Act (December 21, 1972) and every twelve months thereafter, the Secretary shall report to the public through publication in the Federal Register and to the Congress on the current status of all marine mammal species and population stocks subject to the provisions of this Act. His report shall describe those actions taken and those measures believed necessary including, where appropriate, the issuance of permits pursuant to this title to assure the well-being of such marine mammals."

The responsibility of the Department of the Interior is limited by section 3(11)(B) of the Act to those mammals that are members of the orders Carnivora (polar bear, sea otter, and marine otter), Pinnipedia (walrus), and Sirenia (manatee and dugong). Accordingly, published herewith is the report of the Department of the Interior for the period January 1, 1981, to December 31, 1981, on the administration of the Act with regard to those mammals.

Issued at Washington, D.C., dated MAY 25 1982


Associate
Director

ADMINISTRATION OF THE MARINE MAMMAL PROTECTION ACT OF 1972

January 1, 1981 - December 31, 1981

Report of the Department of the Interior

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INTRODUCTION

AUTHORITY

The passage of the Marine Mammal Protection Act of 1972, hereafter referred to as the Act or MMPA, gave the Department of the Interior responsibility for manatees, polar bears, walruses, sea otters, and dugongs. The Fish and Wildlife Service (FWS or Service) is responsible for managing the marine mammals in the Department of the Interior and for enforcing the moratorium on taking and importing marine mammals and marine mammal parts.

The FWS administers requests for the return of management authority to States, issues permits, conducts research programs, enforces provisions of the Act, publishes rules and regulations to manage marine mammals, cooperates with the States, participates in international activities and agreement. In addition, the Service lists and delists species as endangered or threatened and other Endangered Species Act (ESA) related responsibilities and maintains a close working relationship with the Marine Mammal Commission (MMC) and its Committee of Scientific Advisors.

General information on distribution and migration, abundance and trends, general biology, ecological problems, allocation problems, regulations and research can be found in the 1979 annual report, thus it is not repeated here. There have been no significant changes in the status of the marine otter, Alaska Sea otter, Atlantic walrus, Amazonian manatee, West African manatee, or dugong during this report period.

REAUTHORIZATION AND AMENDMENT

The reauthorization and amendment of the Marine Mammal Protection Act left intact its basic protective philosophy and provisions while clarifying certain definitions and provisions and modifying others to facilitate management efforts by Federal and State agencies. Among the most significant of those amendments are the following:

- Appropriations of funds were authorized for the Department of the Interior to carry out its responsibilities under the Act during fiscal years 1982 through 1984;
- The definition of the term "optimum sustainable population" (OSP) was modified slightly to delete the term "optimum carrying capacity," which was considered to lack independent significance, and to substitute "carrying capacity" or "OSP" in its place, depending upon the context. The House Report on the bill indicates that it was the intent of the Committee that the regulatory definition of OSP (a range of population

sizes between the maximum net productivity level and the largest supportable level) be endorsed, that no change was intended in the meaning or manner by which OSP is calculated, and that modifications of the regulatory definition of OSP may be made in the future if new scientific information in support of such a change becomes available. Thus, the amendments simply clarified the definition of OSP to reflect the practice of the Federal agencies;

-- The definition of the term "depleted" was modified to clarify that a species or population is depleted when it is found to be either below its OSP level or is listed as endangered or threatened under the Endangered Species Act. This amendment, again, simply conformed the text of the Act with the practice of the federal agencies;

-- A new scheme was established to govern non-fishing-related types of incidental taking of marine mammals such as that associated with outer continental shelf exploration and exploitation. The Secretary is directed to authorize such incidental taking by U.S. citizens if he finds that the total of such taking will have a negligible impact on the population of marine mammals, on their habitat, and on the availability of that population for subsistence uses in Alaska. The Secretary must also prescribe regulations setting forth permissible methods of taking so as to ensure the least practicable impact on the population and its habitat and he must also set forth requirements for monitoring and reporting the incidental taking; and

-- The provisions relating to the return of management of marine mammals to States were modified to allow the Secretary to transfer management authority to a State if the State has developed and will implement a program which, among other things, is consistent with criteria set forth in a new section. The State is given the authority and responsibility to make the determinations of OSP and maximum number that may be taken, but a public hearing must be conducted on those determinations, if requested, at which interested parties may present evidence and cross-examine witnesses. The Secretary cannot transfer management authority to the State of Alaska unless the State has adopted a statute and regulations that ensure that subsistence use will be the priority consumptive use of the species. The amendments clearly indicate that the taking of marine mammals by Alaskan natives will be subject to an approved marine mammal management program of the State of Alaska. These amendments were designed to facilitate return of management to States while maintaining essential safeguards and Federal review and, in particular, to resolve the difficult problems associated with the return of management of marine mammals to the State of Alaska.

SPECIES LIST

Species List and Status of Marine Mammals With FWS Jurisdiction Under
the Marine Mammal Protection Act and the Endangered Species Act

<u>Species</u>	<u>Common Name</u>	<u>Marine Mammal Protection Act</u>	<u>Endangered Species Act</u>
<u>Ursus maritimus</u>	Polar bear	Yes	No
<u>Enhydra lutris</u>	Sea otter	Yes	Threatened*
<u>Lutra felina</u>	Marine otter	Yes	Endangered
<u>Odobenus rosmarus</u>	Walrus	Yes	No
<u>Dugong dugon</u>	Dugong	Yes	Endangered
<u>Trichechus manatus</u>	West Indian manatee	Yes	Endangered
<u>Trichechus inunguis</u>	Amazonian manatee	Yes	Endangered
<u>Trichechus senegalensis</u>	West African manatee	Yes	Threatened

*Southern population (California) only.



Polar bear with cub.

APPROPRIATIONS

The most recent funding reauthorization by Congress for the Service was under two sections of the MMPA and for fiscal year (FY's) 1982, 1983, and 1984. These were section 110 (research) and section 114 (administration). The period covered by this report (January 1, 1981 - December 31, 1981), however, overlaps FY 81 and FY 82, and in FY 81 funds were also authorized in Section 109 (grants to States for developing and implementing protection and management). Funds authorized (Auth.) and appropriated (Appro.) for each section for FY 81 and 82 (in \$000) are shown below.

Reporting Year Funding (Jan. 1 - Dec. 31, 1981)

	Section 109		Section 110		Section 114		Totals	
	Auth.	Appro.	Auth.	Appro.	Auth.	Appro.	Auth.	Appro.
FY 81	400	400	2,100	1,000	876	600	3,376	2,000
FY 82	-	-	1,000	1,000	600	600	1,600	1,600

The funding breakdown is as follows:

Marine Mammal Protection Act:

Section	FY 81		FY 82	
	10/1/80 to 9/30/81		10/1/81 to 9/30/82	
Section 109 ^{2/} (Grants-to-States)	Florida	\$184,000	No	
	California	160,000	Appropriation ^{1/}	
	Total	\$344,000		
Section 110 (Research)	Sea otter	\$273,000	Sea otter	\$322,000
	Walrus	120,000	Walrus	98,000
	Polar bear	261,000	Polar bear	302,000
	Manatee	309,000	Manatee	252,000
	Dugong	6,000	Dugong	6,000
	Monk seal ^{3/}	31,000	Monk seal ^{3/}	20,000
	Total	\$1,000,000	Total	\$1,000,000
Section 114 (Administration)	Permit Office	\$ 22,000	Permit Office	\$ 22,000
	Law Enforcement	465,000	Law Enforcement	465,000
	Div. of Wildlife Management	113,000	Div. of Wildlife Management	113,000
	Total	\$ 600,000	Total	\$600,000

^{1/} There were no Section 109 funds appropriated, but the MMPA as amended does authorize the Secretary to make grants to States to manage marine mammals.

^{2/} The Service utilized the remaining \$56,000 of appropriated funds as follows:

Distribution and status of all dugong populations \$6,000
Polar bear harvest monitoring program \$50,000

^{3/} While the National Marine Fisheries Service has primary responsibility for the monk seal, the species does utilize a FWS National Wildlife Refuge.

<u>Endangered Species Act:</u>	<u>FY-81</u>	<u>FY-82</u>
Section 6 (Grants to States)		
California - Sea otter	\$ -0-	\$ -0-
Florida - Manatee law enforcement	202,100	-0-
Information and education	10,000	-0-
Manatee recovery planning	800	-0-
	<u>\$212,900</u>	<u>\$ -0-</u>
Section 15 (carry out responsibilities of Act)		
Research		
Sea otter	\$ 80,000	\$ 53,000
Manatee	70,000	54,000
	<u>\$150,000</u>	<u>\$107,000</u>
Management (Protection, LE coordination)		
Sea otter	\$ 40,000	\$ 49,000
Manatee	108,700	120,100
Monk seal	50,000	50,000
	<u>\$198,700</u>	<u>\$219,100</u>



Sea otter eating mollusk.

SUMMARY OF 1981 PROGRAM

OUTER CONTINENTAL SHELF (OCS) OPERATIONS AND ENVIRONMENTAL STUDIES

The FWS participates in the Department's OCS Minerals Leasing and Development Program, primarily by providing advice, input, and review at various decision stages. The Service provides technical expertise on the management of fish and wildlife resources and the habitats on which they depend. During the report period, the Service participated in several lease sales and suggested protective measures for the appropriate marine mammal species.

The Cook Inlet/Shelikof Strait, Sale 60, was held with four tracts leased in the most northern part of the sale area and nine tracts in the most southern part. The tracts adjacent to Cape Douglas and the Barren Islands which are the primary habitat for sea lions, sea otters, and harbor seals were not leased.

The Service cooperated with the National Marine Fisheries Service in the development of proposed stipulations for the Norton Sound, Sale 57, that would offer some protection to the whales that migrate through the sale area.

The U.S. Geological Survey extended the cut-off date for seismic operations in the Beaufort Sea from March 20, 1981, to April 30, 1981, based on recommendations of the National Marine Fisheries Service and the Service. The extension was granted for 1981 only because of unique circumstances present in the Beaufort Sea area.

The Service also participated in the development of proposed stipulations for the second Beaufort Sea Sale (Diapir Field) to provide protection for the bowhead whale and ringed seal.

Southern California, Sale 68, includes the Channel Islands which contain significant numbers of a variety of marine mammals. Tracts within six miles of the Islands have been proposed for deferment.

The FWS Regional Task Force developed operational stipulations concerning polar bears for the forthcoming surface geological and geophysical exploration of the Arctic Wildlife Coastal Plain.

ECOLOGICAL CHARACTERIZATIONS OF U.S. COASTAL AREAS

The Office of Biological Services (OBS) is continuing to manage a group of studies for the Bureau of Land Management, in support of OCS leasing, and the Environmental Protection Agency known as ecological characterizations. This ecosystem information base is designed to assist decisionmakers in comprehensive coastal resource planning and management. Each of the

characterizations contain a narrative section on marine mammal life histories, species abundance and distribution, migration routes, statistics on harvest by man, and habitat preferences and requirements. Maps on marine mammal distributions are also included. Characterizations have been completed for the following areas: Chenier Plain coastal ecosystems of Louisiana and Texas; the Pacific Northwest coastal region; the rocky coast of Maine; the sea islands and coastal plain of South Carolina and Georgia; and the central and northern California coast. Four other characterizations are currently underway, including: the Mississippi Deltaic Plain region; the Texas Barrier Islands; the northeastern Gulf of Mexico; and the southwestern Florida and Keys region.

The OBS completed the second coastal ecological inventory. The inventory covered 40,150 square miles of California, Oregon and Washington, and their adjacent coastal waters. The inventory's 30 maps depict 356 important plant and animal species, including marine mammals. In addition to the map series, a 159 page narrative report, "Pacific Coast Ecological Inventory--User's Guide and Information Base," is also available. The report provides detailed explanations and technical information about the ecological data plotted on the maps. A comparable study has been started for the Gulf of Mexico.

During this report period, several other publications were released. They are:

1. "Marine Mammals of the Southeastern United States Coast and the Gulf of Mexico" (FWS/OBS-80/41) - describes the life history and distribution of these species using published and unpublished sources, including whaling records.
2. "Aerial Surveys for Manatees and Dolphins in Western Peninsular Florida" (FWS/OBS-80/50) - describes the distribution and abundance of manatees and dolphins observed during aerial surveys conducted from July to December 1979.
3. "Pilot Study of the Marine Mammals, Birds, and Turtles in OCS Areas of the Gulf of Mexico" (FWS/OBS-81/36) - describes the distribution and abundance of these animals seen in aerial overflights conducted August to December 1979.
4. "Distribution and Abundance of Marine Birds and Mammals Wintering in the Kodiak Area of Alaska" (FWS/OBS-81/13).

In addition to these publications, aerial surveys for marine mammals, birds, and turtles in the Gulf of Mexico and nearby Atlantic waters were conducted from April 1980 to April 1981. Results of these surveys are being prepared for publication and will be available in the fall of 1982.

RESEARCH

The Marine Mammal Section of the Denver Wildlife Research Center is responsible for carrying out research under the MMPA. Emphasis has been given to determining the ecological effects of human activities related to development and exploitation of the marine environment on marine wildlife and ecosystems.

Research conducted by the Service or under contract is summarized below.

Service Conducted

1. Polar bear
 - a. Identify areas critical for high denning success and general movement patterns of adult females.
 - b. Develop alternative techniques to capture free-ranging polar bears.
 - c. Produce a model that will simulate population dynamics of Northern Alaska polar bear population.
 - d. Determine biological parameters of polar bears of the western and northern populations.
2. Sea otter and Marine otter
 - a. Determine annual and seasonal distribution, abundance, and composition of populations of sea otters and other marine mammals at Prince William Sound, Alaska.
 - b. Determine biology and management needs for the California sea otter.
 - c. Determine interactions between sea otters and the nearshore community.
 - d. Determine status of marine otter.
 - e. Determine occurrence and habitat survey of sea otters in Baja California
3. Walrus
 - a. Evaluate selected areas for potential use for population assessment of walruses to assess population size, and investigate hauling out patterns.
4. Hawaiian Monk Seal
 - a. Determine status of the Hawaiian Monk seal.
5. Manatee and dugong
 - a. Determine the distribution and status of all taxa and populations of Sirenians.
 - b. Determine basic reproductive and behavioral characteristics of West Indian manatees.
 - c. Define ecosystem relationships of the manatee.
 - d. Determine causes of mortality and salvage stranded manatees
 - e. Develop manatee tagging and tracking technology.
 - f. Determine parasites and environmental contaminants in manatees and dugongs.
 - g. Distribution and status of dugong populations.
 - h. Computer assessment of manatee mortality from salvage data.

Contracts

1. San Nicolas Island (California) survey for baseline data and as a potential sea otter translocation site. Principal investigator: W. Doyle, University of California, Santa Cruz (\$106,000).
2. Abundance, distribution, and feeding habits of manatees wintering between St. Lucie and Palm Beach Inlets, Florida. Principal investigator: J. Packard (\$18,000 - Marine Mammal Commission funds).
3. Site specific study to develop plans for reducing boat/barge related mortality in Brevard County, Florida: Principal investigator: University of Florida (\$65,000).
4. Compilation and mapping of available biological, ecological, and socio-economic information relative to the protection, management, and restoration of the southern sea otter. Principal investigator: J. L. Dobbins Assoc., Ltd. (\$89,000 [\$9,000 - Marine Mammal Commission funds]).

ENFORCEMENT

The Service's Division of Law Enforcement investigates known, alleged, or potential violations of the Act involving the illegal take or importation of marine mammals or their products for which the FWS is responsible. In addition, they assist the National Marine Fisheries Service (NMFS) by making apprehensions and conducting investigations in cases involving species under that agency's jurisdiction. Results of these efforts are referred to the NMFS for its consideration and appropriate action. However, under a NMFS/Service memorandum of understanding, the Service retains authority over those investigations that involve endangered marine mammal species. Violations are referred to the Department's Office of the Solicitor for civil action or to the Department of Justice for criminal action.

One hundred and sixty-four marine mammal investigations were pending at the start of the reporting period, during which Service Agents initiated 167 new investigations. A total of 137 investigations were closed, while 194 were pending at the end of the period. Forty-one civil penalties totalling \$2,102 were assessed and collected during the period. Marine mammal parts and products with an estimated value of \$16,489 were also forfeited as part of these civil actions. Additionally, \$1,964 in fines were paid during the period as a result of criminal convictions under the Act. Because of the major walrus ivory investigation (discussed below), statistics on closed cases for 1981 are low. Data on the walrus ivory investigation will appear in 1982.

Alaska Law Enforcement Actions

A large-scale undercover investigation into the illegal trade in walrus ivory was culminated in February 1981 with execution of 21 search warrants in five States, and the seizure of 10,000 pounds of raw walrus ivory, several polar bear and sea otter skins, and numerous sperm whale teeth.



Raw polar bear skin and walrus tusks purchased by Special Agents in Nome, Alaska, during investigation.

Criminal charges have been filed in U.S. District Court, Anchorage, Alaska, on nine people. Civil penalty proceedings have been initiated against three, and two pleaded guilty in U.S. District Court. One paid a \$10,000 fine, received a two-year probation, and agreed to testify against others involved in the case. The other agreed to pay a \$2,500 civil penalty. All seized ivory, value estimated at \$10,000, was forfeited to the Government. In a jury trial in U.S. District Court, Fairbanks, Alaska, a Fairbanks man was found guilty of possessing and selling raw walrus ivory to undercover Agents. He was given six months imprisonment and \$21,000 fine and placed on two years probation. Criminal charges have been filed, and civil penalty proceedings initiated against several additional people as a result of the investigation.

An Anchorage resident was arrested when he offered to sell two walrus heads and seven tusks to undercover Agents. Charges have been filed in U.S. District Court, Anchorage, Alaska.

Two individuals were arrested when they agreed to sell 10 sea otter hides to undercover Agents for \$3,500. One was sentenced to six months imprisonment, the other 30 days imprisonment and \$5,000 fine in U.S. Magistrate's Court, Anchorage, Alaska. Ten sea otter hides were forfeited.

An undercover Agent accompanied two Alaskans on a sea lion and sea otter hunt near Seward, Alaska. Both were arrested when they agreed to sell the Agent the hides of sea otters and sea lions that were killed. Each was given 10 day jail sentences in U.S. Magistrate's Court, Anchorage, Alaska. Eight sea otter hides were forfeited.

A Kodiak man was fined \$5,000 and placed on two years probation after pleading guilty in U.S. District Court to selling sea otter hides to an undercover Agent. Eight sea otter hides were forfeited.

(Alaska Enforcement Summary)

Active Investigations

Walrus	30
Polar Bear	4
Sea Otter	3

Closed Investigations

Walrus	15
Polar Bear	6
Sea Otter	2

Cases Submitted for Civil Penalty

Walrus	25
Polar Bear	3
Sea Otter	1

PERMITS AND REGISTRATION

The MMPA placed a moratorium on the taking or importing of marine mammals and marine mammal products, but it included exceptions that allow scientific research on these animals, as well as taking them for public display. Such research and taking, however, may be conducted only if there are no adverse effects on the health and well-being of the marine mammal species, populations, and the marine ecosystems of which they are a part.

Section 104 of the Act and Sections 18.23 and 18.31 Title 50, Code of Federal Regulations, which govern the taking and importing of marine mammals under Service jurisdiction, authorize the Director to issue permits for scientific research, public display purposes, and registration for tannery processing. During this report period 3 new permits and 8 amendments were issued. Two new certificates for tannery processing were also issued. No applications are pending. A brief description of each action follows.

Scientific Research Permit Applications

New Permit PRT 2-8328, Department of Vertebrate Zoology, National Museum of Natural History, the Smithsonian Institution, Washington, D.C. This permit authorizes the import and export of dead salvaged materials of any marine mammal for scientific research. This permit was jointly signed by the National Marine Fisheries Service.

New Permit PRT 2-8430, Chief, Marine Mammal Section, Denver Wildlife Research Center (DWRC), U.S. Fish and Wildlife Service (USFWS), Denver, Colorado. This is a comprehensive permit which authorizes all activities for the permittee regarding manatee research. It supercedes permits PRT 2-6983 and PRT 2-4405 for manatees, which are discussed later. Activities authorized under this permit include radio tagging, use of peduncle belts, tail-notching, freeze-branding injured and rescued manatees, studying rehabilitating animals, collection or salvage of injured or dead animals, and export of dead manatee specimens or parts thereof for research purposes.

Amendment to PRT 2-3724, Chief, Marine Mammal Section, DWRC, USFWS, Denver, Colorado. The permittee is authorized to capture, mark, drug, and monitor polar bears with radio telemetry. The permit was amended twice in 1981, first to change the former name of the permittee from the National Fish and Wildlife Laboratory (NFWL) to the present name, and secondly to authorize collection of blood samples for electrophoretic analysis.

Amendment to PRT 2-4405, Chief, Marine Mammal Section, DWRC, USFWS, Denver, Colorado. This permit, which authorized tagging and telemetry of manatees, was amended in May 1981 to authorize export of dead manatee specimens for research. The first export of specimens occurred during June, 1981. This permit, however, has been replaced with Permit PRT 2-8430.

Amendment to PRT 2-4114, Drs. Donald Sniff and John Tester, Department of Ecology and Behavioral Biology, University of Minnesota, Minneapolis, Minnesota. The permittees have had a permit since 1979 to conduct research on sea otters in Alaska and California. The permit was renewed and amended in July 1981, through July 1982, to authorize capture of 100 otters near Amchitka Island, Alaska, for tagging and blood sampling and to capture 200 otters in Prince William Sound for tagging, telemetry, drug experimentation, and relocation.

Amendment to PRT 2-6330, Chief, Marine Mammal Section, DWRC, USFWS, Denver, Colorado. The permittee had been authorized to conduct research on walrus including tagging, marking, radio-telemetry, and use of drugs for immobilization through 08-31-81. The permit was renewed through January 31, 1982.

Amendment to PRT 2-6669, Chief, Marine Mammal Section, DWRC, USFWS, Denver, Colorado. This permit was issued in August 1980 to authorize take of 35 sea otters per year and to tag specimens weighing more than 15 pounds. The permit was amended in June 1981 to increase the number to be taken each year from 35 to 50, and was earlier amended that year to change the permittee's name from the NFWL to the DWRC. The permit

was reissued in October 1981 to include all previous amendments in addition to one other change to authorize the use of drugs for immobilization purposes.

Amendment to PRT 2-6983, Chief, Marine Mammal Section, DWRC, USFWS, Denver, Colorado. The permittee had been authorized through December 31, 1982, to take 20 manatees for radio-telemetry, measure, weigh, etc., collect urine and blood samples, administer drugs for immobilization, and release for research purposes. The permit was amended twice in 1981, first to change the permittee's name from the NFWL to the DWRC, and secondly to authorize permanent tail-notching of captured animals. PRT 2-8430, however, now supercedes this permit (see above).

Public Display Permits

New Permit PRT 2-7607, Point Defiance Zoo, Tacoma, Washington. Permittee is authorized to take four (4) sea otters (one male and three females) from Prince William Sound, Alaska, for public display. The permit expires in September 1981.

Amendment to PRT 2-2507, Vancouver Public Aquarium, Vancouver, British Columbia. The permittee was issued a permit in 1978 to capture four (4) sea otters from Alaska for public display. The permit was renewed to December 31, 1980, but was not used because holding facilities had not been completed. In July 1981, the permittee submitted a new application for the same activity which was approved and issued on September 11, 1981, and will expire December 31, 1982.

Amendment to PRT 2-3542, Sea World, Inc., San Diego, California. The permittee had been authorized to take eight (8) Pacific walrus pups for public display. Only one pup had been taken before the permit expired on December 31, 1981. Consequently, the permit was renewed through December 31, 1984, to authorize taking the seven (7) remaining animals.

Certificates of Registration

New certificate, PRT 2-8062-RA, Larry Amox, White Raven Trading Post, Kodiak, Alaska. This certificate authorizes the holder to receive or acquire and to sell or transfer walrus ivory or skins and polar bear or sea otter skins to Alaskanatives or other registered agents. It was issued during June 1981, and expires June 30, 1983.

New Certificate, PRT 2-8315-RA, Dennis Knuth, Glacier Bear Taxidermy, Palmer, Alaska. This certificate authorizes the holder to receive or acquire and to sell or tranfer walrus ivory or skins and polar bear skins to Alaska natives or other registered agents. It was issued in September 1981, and expires December 31, 1983.

INTERNATIONAL ACTIVITIES

The Service's international efforts to conserve marine mammals and their habitats are an important component of its overall efforts to achieve the objectives of the MMPA. The following describes the principal international activities carried out by the Service during the report period.

Excess Foreign Currency Programs

During this report period, the Service received no new Congressional authorization for use of excess foreign currencies. However, the Service continued work in Egypt, Pakistan, and India using carryover funds authorized in previous years. These authorizations were requested under Section 8 of The Endangered Species Act, which allows such funds to be expended on projects deemed by the Secretary of the Interior to be necessary for the conservation of endangered or threatened species.

Information on critical marine habitats of the Northern Indian Ocean (Sri Lanka, India, Pakistan) collected in 1975 was printed in India for distribution as "Coastal Resources in Sri Lanka, India and Pakistan-Description, Use and Management."

US-USSR Environmental Agreement-Marine Mammal Project

The Service, NMFS, USSR Ministry of Fisheries and USSR Academy of Sciences work together to promote the conservation and effective management of marine mammals of importance to both countries. During this report period, exchange visits involving American and Soviet specialists took place.

In August 1981 two Soviet representatives of research branches of the USSR Ministry of Fisheries took part in walrus immobilization work on Round Island, Alaska; observed radiotelemetry studies of harbor seals at the mouth of the Columbia River in Oregon; and carried out cranio-logical research on seals at the Natural History Museum of the California Academy of Sciences in San Francisco.

A joint Soviet-American marine mammal research expedition aboard the vessel ZRS Zvyagino took place in the Bering Sea during the period February 21 to March 18, 1981. The expedition was organized under the aegis of the Marine Mammal Project of the 1972 US-USSR Environmental Protection Agreement. Details of the cruise are discussed under the walrus status report section.

STATUS REPORTS

Polar bear

A Service biologist was assigned to monitor the subsistence harvest of polar bears by coastal natives. A voluntary hide and skull sealing program was initiated to obtain information concerning the sex and age composition of the total harvest.

In addition to sealing polar bear skulls and hides, Service biologists or the local natives recorded skull and hide measurements. Two rudimentary postcanine teeth were extracted from either the upper or lower jaw and later sectioned for age determination. Hunter information on the sex of the animal will be checked against skull measurements for confirmation since known age polar bears generally exhibit sexual dimorphism in skull growth characteristics. Hunters were solicited to extract complete

genital tract from adult females. Genital tracts will be analyzed macroscopically for placental scars, approximate age of placental scars, and the stage of ovarian follicular development as an indicator of estrus condition and past parturition. General physical abnormalities were noted from hunter observation. Hide measurements were recorded and ear tags or lip tattoo's from animals previously marked by the United States, Canada, or Russia were collected.



Polar bear being marked and tagged.

The following harvest information was gathered during the 1980-81 harvest season for polar bears:

<u>Village</u>	<u>Number Harvested</u>
Barrow	9
Kaktovik	22
Pt. Hope	10
Wales	6
Pt. Lay	1
Little Diomede	1
Shishmaref	29
Wainwright	9
Savoonga	16
Gambell	6
	109
TOTAL	

Bears from which samples were available showed the following sex and age distribution:

Adult males	32%
Adult females	22%
Adult unknown sex	7%
Unknown	13%
Male cubs	9%
Female cubs	5%
Unknown sex cubs	12%

Manatee

There were 114 manatee deaths recorded in 1981. Of the 111 animals that were recovered for necropsy, Service and University of Miami salvagers determined the cause of death as follows: 61 (55 percent) died of undetermined causes, 8 (7 percent) died of natural causes, and 29 (26 percent) were killed directly or indirectly by human activities (23 by collisions with boats and barges, two in navigation locks, and four by other direct human causes) such as shooting and trauma. Thirteen (12 percent) dependent calves were found dead.

One manatee was rescued and released. Three other manatees were released back into the wild: a cow and calf were released in early May near the site where they were rescued nearly a year earlier (the Ft. Meyers-Cape Coral area); and an adult female was released in June in a tributary of the St. Johns River near Jacksonville. Although this manatee was outfitted with a radio tag, efforts to track her by signal were hampered by water salinity. A captive female manatee aborted a female fetus at the Miami Seaquarium. Two distressed manatees were rescued and subsequently died in captivity. Six other manatees were in captivity for rehabilitation this year.

As a result of operational modifications to floodgates in south Florida, mortalities have been significantly reduced. None were reported this year. The Service is working with the Corps of Engineers to further reduce mortalities in navigation locks.

Nearly 30 dead manatees were recovered by mid-February 1981. This is almost half the number recovered in all of 1980. This may have been a result of the severe cold weather, although only four deaths could be positively attributed to cold-related complications. It should be noted that reports of massive fish kills, lethargic sea turtles, and dead sharks were not uncommon in south Florida during the winter months.

During the reporting period, the Service prepared and implemented a Manatee Rescue Contingency Plan. Cooperative Agreements were signed with Sea World and Miami Seaquarium for capturing distressed manatees.

A study was completed by Jane Packard of the University of Minnesota on distribution and feeding habits of manatees in the Hobe Sound-Riviera Beach area of Florida. The report documents distribution, abundance, feeding habits, and sea grass bed distribution in the area. The report also makes detailed management recommendations for the area as well as outlining additional research needs. The Hobe-Sound National Wildlife Refuge is following up this study by sampling established transects to monitor the sea grass beds.

Personnel at the DWRL completed a computer analysis of manatee mortality data covering salvage reports from 1974 through 1980. The analysis is being summarized for publication.

The Service is funding a study to develop site-specific plans to reduce boat/barge related mortalities and injuries to manatees. This study will place particular emphasis on Brevard County, where manatee mortalities and injuries appear to be greatest. The study will identify: 1) trends and patterns of injuries and mortalities; and 2) environmental, demographic, behavioral, or other factors contributing to the high incidence of manatee mortalities and injuries. Additional measures needed to reduce these threats will also be identified. This 2-year study is being funded through a Cooperative Agreement with the University of Florida.

During the report period, the Service conducted 48 informal and seven formal Endangered Species consultations for actions that might impact the West Indian manatee. Consultations are required under Section 7 of the ESA and may be requested for any activity requiring Federal permits or Federal funding before implementation. The results, although not binding, must be considered before decisions are made. They are issued by the Service's Washington, Regional, and Area Offices in the form of "biological opinions". Since manatees are distributed throughout most of Florida's estuaries, bays, and coastal waters, a considerable number of Federal actions affect these marine mammals.

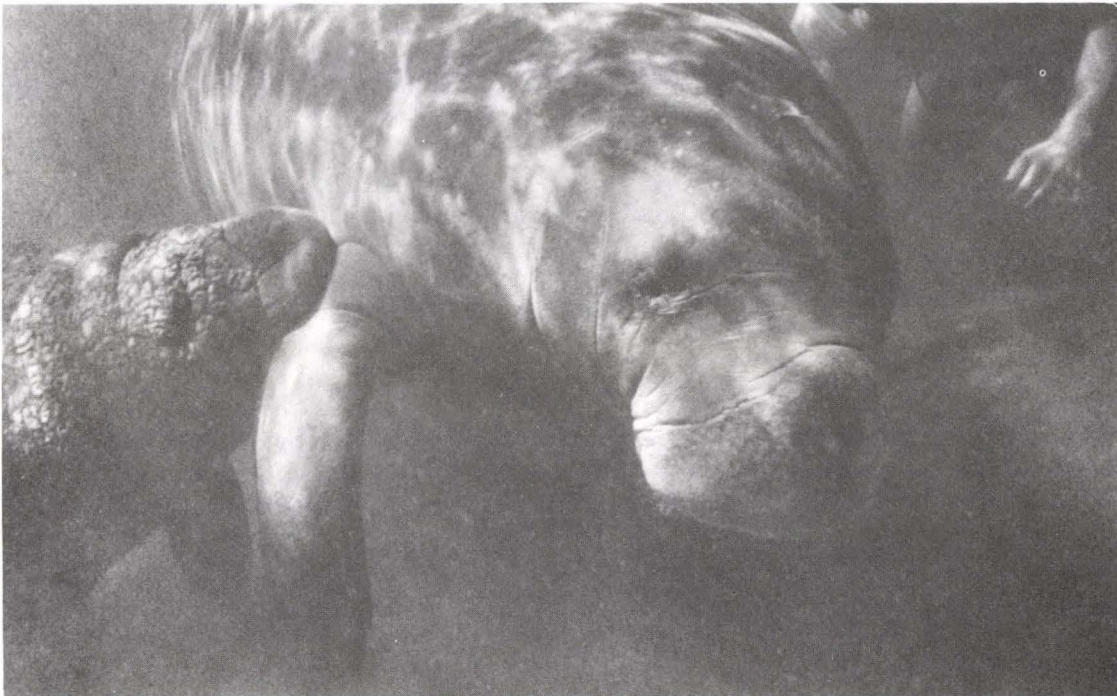
Of the seven formal consultations, one was with the Corps of Engineers, one was with the U.S. Coast Guard, one was with the National Oceanic and Atmospheric Administration (NOAA), and four were with the Service

(see permits PRT 2-4405 amendment, PRT 2-6983 amendment, PRT 2-8328, and PRT 2-8430). Of these seven consultations, the Service issued two findings of "will promote the conservation" and five findings of "is not likely to jeopardize" the West Indian manatee.

Consultation with NOAA involved proposed regulations implementing the Ocean Thermal Energy Conservation Act of 1980; consultation with the Corps involved permit issuance for marina developments at Marco Island; and the Coast Guard consultation concerned a station location at Riviera Beach.

The Manatee Recovery Plan, approved by the Director, FWS, on April 15, 1980, was revised by the preparation of a Comprehensive Work Plan (CWP) which will be appended to the Recovery Plan. Approval by the Director of the CWP is expected in January 1982 (during the next reporting period).

The CWP updates needed recovery efforts and addresses recovery tasks in more detail. Cooperating Federal, State, and private agencies were involved in the development of the CWP through a number of workshops and meetings. From the CWP, detailed proposals are being developed to implement the highest priority tasks. These proposals are being developed by the Manatee Activities Coordinator previously contracted by the Service through a Memorandum of Understanding with the Marine Mammal Commission and a Cooperative Agreement with the Florida Audubon Society. The Service's Manatee Coordinator will take the lead in implementing these high priority tasks.



Manatee calf nursing under water.

The Service was unable to purchase the 42 acres of islands in Kings Bay, Crystal River mentioned in the last report. This was due to appropriations not being approved for this acquisition, and lack of Congressional approval for reprogramming of funds and the Declaration of Taking (condemnation). The Service has leased the bay bottoms from the owner and posted the three sanctuaries against entry during the period from November through March.

The Nature Conservancy has now obtained a purchase option for the islands. Purchase of the islands is considered beneficial for the long range protection of manatees and associated habitats in the Bay. The Service has indicated its willingness to enter a management agreement to provide refuge protection to the islands through the Chassahowitzka National Wildlife Refuge staff.

The Service completed an onsite investigation of a proposed addition to the State's manatee sanctuaries at the Port-of-the-Islands resort in Collier County, Florida. The State plans to adopt a rule to include this area as a sanctuary and restrict boat speeds.

The Service has been working with Palm Beach County personnel regarding passage of an ordinance to restrict recreational diving and boating in the warm water effluent of the Riviera Beach power plant.

The Loxahatchee Council of Governments originated a legislative change to include the Loxahatchee River among the areas regulated for boat speed during the winter. This action is a first step in preparing the way for acceptance of the change by the State legislature this spring.

The Army Corps of Engineers contracted to post seven manatee sanctuaries in cooperation with the State. Screens were installed on navigation locks operated by the Corps in order to prevent manatees from entering the lock structure and possibly becoming pinned between the lock recess walls and the lock support beams. In addition, the manual operation of flood gates adjacent to the locks is being modified.

Sampling and analyses of water, hydrilla, and bottom sediments for copper residues have been completed in the aquatic weed control consultation with the Corps at Crystal River. This information will be combined with FWS feeding habits information and will be used in preparation of a biological assessment.

The operation of the jet-powered retrieval vessel used by NASA for the solid rocket booster in space shuttle launches has been successful and proved efficient. The jet-powered design is used instead of a propeller to prevent manatee mortality and injury as the vessel negotiates the Banana River.

NASA has purchased a "chromoscope," (an echo sounder) that might prove useful in detecting manatees below the surface of the water. The "chromoscope" has not as yet been tested by NASA. The same type of unit has been purchased by a dredging contractor working in the Port Everglades area and their initial test results look promising.

The Florida Power and Light (FP&L) continued to support manatee surveys conducted by the Florida Audubon Society at several power plant effluents. The FP&L has conducted teacher-training workshops and Power Squadron training programs, as well as co-sponsoring the film, "Silent Sirens." They also printed and distributed 25,000 booklets entitled "Boater's Guide to Manatees - The Gentle Giants," made radio public awareness commercials, and provided bumper stickers. In cooperation with FWS, FP&L provided logistical support to the study undertaken by Jane Packard and supplied some funding toward developing a technique for attaching tags or transmitters to manatees.

The Florida Department of Natural Resources (DNR) conducted a study to evaluate the effectiveness of aircraft and boat law enforcement efforts in sanctuary areas. The study compared the relative effectiveness of boat patrols at various levels, air patrols, and combinations of air and boat patrols. Funding was provided to the DNR by the Marine Mammal Commission to organize the Manatee Technical Advisory Committee.

The DNR completed the first phase of a report "A Statewide Survey of Public Awareness and Attitude Toward the Endangered Florida Manatee" dated December 1, 1981. This preliminary report was prepared for the DNR by the Communications and Research Center, Florida State University. The second phase of the report will be conducted in March (during the next report period) and the report will then be prepared for publication and release. This report is part of a project which has been funded in part with ESA Section 6 and MMPA Sec. 109 Grant-in-Aid funding to the State.

The Florida Marine Patrol (FMP) continued enforcement efforts in the manatee sanctuaries, were responsible for operation of the "Manatee Hotline," assisted salvage teams with collecting dead manatees, and responded to distressed manatee reports. The FMP also conducted law enforcement workshops for law enforcement personnel. FMP has been conducting intensive weekend patrols using both full time and auxiliary personnel. The first intensive patrol on December 12 and 13 in Port Everglades resulted in 102 arrests and 40 written warnings.

The State Parks division of the DNR is conducting a twice-daily manatee program for visitors to Blue Spring State Park. The programs consist of a brief talk by park rangers, followed by a showing of the film "Silent Sirens".

The Florida Game and Freshwater Fish Commission initiated aerial manatee surveys of Lake Okeechobee and the Okeechobee Waterway. This should yield new and valuable data in an area where we have little knowledge of manatee distribution. The Commission has made significant contributions regarding enforcement of boat speed regulations for the protection of manatees.

Sea Otters

The Recovery Plan for the southern sea otter was submitted to the Director for approval at the end of the reporting period. It is expected to be approved in January 1982 (during the next reporting period).

On April 15, 1981, a Recovery Team for the southern sea otter was appointed by the Director. The Recovery Team is composed of individuals from the National Park Service, Washington Department of Game, Oregon Department of Fish and Wildlife, California Department of Fish and Game (CDFG), the Ocean View Veterinary Hospital, and the Fish and Wildlife Service.



Captured sea otter entangled in net.

During this report period four formal Section 7 consultations were completed. Of these four consultations, one was with the Environmental Protection Agency (EPA), one was with the Bureau of Land Management and U.S. Geological Survey (BLM/GS), and two were with the Service (see permits PRT 2-6669 amendment and PRT 2-8328). The consultations resulted in one finding of "will promote the conservation" and three findings of "not likely to jeopardize."

A "not likely to jeopardize" opinion was issued on the EPA consultation regarding secondary sewage treatment and construction of a mile-long ocean outfall discharge system for the Santa Cruz waste water treatment facility. This project involved the construction of the outfall discharge system to the 100-foot water depth. The Service recommended that sea otter activity be monitored during and after construction to document any significant disruption of otter behavior and/or habitat.

Service representatives attended a forum on Management of Sea Otters and Shellfish Fisheries in California in February 1981. The forum was also attended by various government agencies and private organizations. Following the forum, a meeting was held between the Marine Mammal Commission, CDFG, FWS, Save Our Shellfish, and Friends of the the Sea Otter. The meeting resulted in the Service assuming the lead in contracting a study to map information pertinent to the biology, ecology, and socioeconomic factors relevant to the management and restoration of the southern sea otter. The final mapping project will be utilized by the Service to identify potential areas for reestablishing one or more populations of sea otters along the Pacific coast from California to Washington State. A number of interested government agencies and private organizations, including the Recovery Team, will provide input through review of the mapping project progress reports. The mapping study was contracted by the Service to James L. Dobbins Assoc., Ltd., and is expected to be completed by June 1982.

Meetings were held with CDFG to discuss and develop the State's Oilspill Contingency Plan. The State is in the process of completing the plan.

The Marine Mammal Commission has provided funds through FWS research to contract a study to identify methods and techniques useful in influencing movements and distribution of otters, to evaluate the practical utility of alternatives, and to identify needed research to further evaluate methods and alternatives. Results of this study will be potentially useful in regulating movements of otters to reduce conflicts with other resources (zonal management) and for oilspill avoidance.

The Service is continuing to fund the ongoing San Nicolas Island study. This study will yield baseline data on the nearshore community describing the structure and organization of littoral and sub-littoral communities. This information may yield, over time, mechanisms for maintaining community structure. The information can be used to compare changes in community structure following introduction or natural reestablishment of otters here or in other locations.

During the report period, 153 sea otter were reported dead by salvage personnel. The salvage program is operated by CDFG in cooperation with FWS and was funded with ESA Section 6 Grant-in-Aid to the State. Of the 153 animals that were recovered, State and Service personnel could determine the cause of death as follows: Five of these animals were known killed directly or indirectly by human causes (all by gunshot wounds), and 13 died of natural causes (shark kills). There were 67 pups and subadults salvaged and five pups were recovered alive, however, none survived. State biologists believe the newly increased monofilament gill net fisheries in Monterey Bay may be of great potential for mortality though no evidence has been collected.

Walrus

Walrus management activities in 1981 included: continuation of the health and harvest study with an additional effort to collect body parts for heavy metals and pesticide analyses; coordination and planning efforts with the Eskimo Walrus Commission; and continued involvement with the Pacific Walrus Technical Committee. The Technical Committee is comprised of Service, Eskimo Walrus Commission, and Alaska Department of Fish and Game representatives.



Pacific walrus.

The population health study and harvest survey was continued in 1981 in the northern Bering Sea villages of Gambell, Savoonga, Little Diomedé, Wales, and Nome during the principal harvest period of May and June. In addition, an effort was made to gather walrus harvest information in several villages of the southern Bering Sea, on and adjacent to Nunivak Island. Teeth were collected for aging purposes. Kidney, liver and blubber samples were obtained for contaminant analysis. The blubber was analyzed for organochlorine residues and the kidney and liver samples were analyzed for heavy metals.

Preliminary findings from the contaminants collection showed cadmium levels in kidneys of over 80 ppm, and in liver of 14 ppm. Organochlorines were present at low levels in some animals. Based on these results, the Service plans to collect these parts again in 1982 for similar analyses.

The numbers of walruses harvested in the six northern Bering Sea villages during the May-June period were as follows: Nome - 489, Little Diomedé - 808, Savoonga - 581, Gambell - 963, Wales - 128, and King Island - 269, for a total of 3,238, or about 30 percent more than during the same period in 1980. The increased harvest could be attributable to the better weather and ice conditions encountered this year.

Contracts during the report period included services and equipment in the villages to assist in the walrus harvest survey, a contract with Kawerak, Inc. to purchase teeth during the spring harvest period, and a contract with the Institute of Marine Science, University of Alaska to evaluate reproductive tracts and classify stomach contents from walrus collected in the spring harvest.

A contract was awarded to the Institute of Marine Science, University of Alaska, Fairbanks, to analyze stomachs and reproductive tracts collected from walruses harvested in 1980. Dr. Francis Fay is the principal investigator for the contract. A preliminary report from that analysis indicates that pregnancy rates are declining and that walrus individual food organisms, such as clams, are significantly smaller in size than those from the samples collected in 1975.

Findings in the present study, compared with those from the 1950's to mid-70's indicate further that some major changes have taken place in the productivity of the population and suggest that the quality and quantity of its food may have changed as well. Rates of reproductive failure appear to have increased significantly (approximately doubled between ovulation and conception and risen to at least five times the former level during gestation). The pregnancy rate of cows with dependent calves appears to have declined by at least 30 percent, and the scarcity of parturient females in the highly selective (for females with new calves) harvest at Gambell suggests that the live birth rate or survival of new calves may have fallen even lower than that.

The stomach contents of the animals taken in the 1980 spring harvest were not markedly different from those obtained in 1975, but they did show a tendency toward the animals' utilization of both smaller clams and a wider variety of other, non-molluscan prey in all areas. Such changes could be interpreted in several ways. Although they might have no relationship to the population status of the walruses, they are, nevertheless, the kinds of changes one might expect to take place if the walrus population were exerting pressure on its food base. As the larger clams are removed, the walruses would be obliged to take smaller ones and, presumably, to seek out larger, alternate prey, some of which had been utilized in small amounts before, whereas others had not previously been utilized at all by walruses.

The changes in feeding habits suggested by these findings do not appear to be great enough to have any significant impact on the health of the walruses, yet an average decrease in fatness of about 50% has become clearly apparent in recent years. Whereas the thickness of the sternal blubber in animals taken in 1958-73 ranged from about 3 to 10 cm, the same measurement on animals taken during 1980 and 1981 ranged from about 0.5 to 7.5 cm. This is a large and highly significant difference, which indicates clearly that the walruses today may be either obtaining much less food or are working much harder to get it, or both. In numerous instances in the 1980 samples, it was found that the animals had eaten hundreds of tiny clam meats weighing no more than 0.1 to 0.2 g. These were much smaller than any encountered in the 1975 samples, which raises the question of the efficiency of a 1,000 kg walrus seeking and consuming such tiny prey, one by one.

The 1980 aerial survey of walruses has been analyzed and shows a minimum population of of 101,000 animals in the U.S. territory. At the same time, the Soviets conducted a survey and estimated over 180,000 walrus in Soviet territory. An additional 20,000 walrus were estimated to be in Bristol Bay and northern Bering coastal areas, producing a total minimum estimate of approximately 300,000 Pacific walrus.

Soviet marine mammal scientists participated in walrus radio-tagging experiments on Round Island and visited the Regional Office. Hopefully, their visit on Round Island will result in cooperative ventures with the Soviets on walrus radiotagging on the Soviet side.

The Soviet-American joint cruise, identified under the International Affairs section, took place between February 21 and March 18, 1981. The cruise was planned to gain a better understanding of the time and place of mating by walruses and their spatial and social organ during the mating season.

Accomplishments of the cruise include:

1. Between 25 February and 10 March, 200 walrus were collected by shooting (100 males and 100 females) to determine their reproductive condition relative to the annual cycle and their age. One-hundred-eighty of the walrus were retrieved (90 males and 90 females) the other 20 sunk and were lost. Approximately 2/3 of the specimen were mature adults. One-third of the adult females already bore a new corpus luteum of pregnancy; 1/3 were nearing full-term pregnancy; and the remainder were approaching estrus or were barren. Most of the adult and subadult males had spermatazoa in the epididymides, but in many of the older bulls they were not motile.
2. The sex and age composition of walrus groups encountered were determined by observation. More than 500 groups of walrus, totaling at least 10,000 animals, were sighted. These were mainly herds of females with immature animals of both sexes. The adult females made up about 68 percent and the young 32 percent. In the vicinity of those herds were lesser numbers of individual adult males. In the area of greatest concentration, the sex ratio of adults was about 1 male to 10 females.
3. The social organization and behavior of the groups were also examined by observation. Adult males in mating displays were observed near several herds of females and young.

Other aspects of walrus biology investigated during the cruise included:

4. Feeding habits, as indicated by contents of the stomach.
5. Physical condition, as indicated by body weight/length and blubber thickness, in relation to sex and age.
6. Parasite fauna and pathological conditions.
7. Skin and blubber thickness on different parts of the body.
8. The relationship of the four different types of body length measurements used by Soviet and American biologists.
9. The length and shape of the tusks in relation to sex and age.
10. Collection of skeletal parts for museums.
11. Distribution of walrus in relation to ice conditions and to other pinnipeds.
12. Feeding and haulout schedules in relation to time and weather.

Objectives of this cruise were mutually agreed on by scientists of both countries at the start of the cruise. All members of the joint party participated in the gathering of measurements and materials from the collected specimens and of observational data.

Monk seal

Although the National Marine Fisheries Service (NMFS) has primary responsibility for the Hawaiian monk seal, primary pupping, hauling, and feeding areas for the seal occur within the Service's Hawaiian Islands National Wildlife Refuge.

The Service entered into a Tripartite Cooperative Agreement for the survey and assessment of the living resources of the Northwestern Hawaiian Islands with NMFS and the Hawaiian Department of Land and Natural Resources (DLNR) in May 1978. This 5-year Cooperative Agreement of intensive research will provide a foundation upon which to base long-range management decisions for the conservation of the species and its ecosystem.

Pursuant to this agreement the Service has cooperated in and conducted monk seal censuses on Tern Island. These census counts are made every 4 days throughout the year. The censuses have shown an increase in use of the island by seals following the end of Coast Guard occupation in early July 1979. Over 150 individual animals using Tern Island have been identified by unique scars or marks.

In a project coordinated by FWS, aerial infrared and color photographs were taken in order to: 1) develop a monk seal census technique; 2) map vegetation, reefs, and seabird colonies; and 3) census seabirds. Both Service and NMFS personnel analyzed the results which indicate a useful, cost-effective technique for monitoring populations, age classes, beach utilization, and pup production. A follow-up project initiated in October 1981 involves monthly aerial photography on all islets at French Frigate Shoals.

The Fish and Wildlife Service has initiated actions at Midway and Johnston Atolls to assist military personnel in the development of educational programs relating to wildlife management for on-site personnel. Both NMFS and FWS are working with the Navy in the planned shift in Midway operations from the military to a defense contract, to insure that provisions are made to avoid disturbance to seals and hauling beaches.