

## DEPARTMENT OF COMMERCE

## National Oceanic and Atmospheric Administration

## 50 CFR Part 216

[Docket No. 50219-8058]

## North Pacific Fur Seal; Pribilof Island Population; Designation as Depleted

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Final rule.

**SUMMARY:** The NMFS is designating the Pribilof Island population of North Pacific fur seals as depleted under the Marine Mammal Protection Act (MMPA). This action is required by the MMPA when a species or population stock falls below its optimum sustainable population (OSP). Since the current Pribilof Island population of North Pacific fur seals is below 50 percent of the population levels observed in the 1940s and early 1950s, this population is below the level which can maintain maximum net productivity, the lower bound of the OSP range. Once a population stock is designated as depleted, the MMPA requires the application of certain additional restrictions on taking and importation.

EFFECTIVE DATE: June 17, 1988.

FOR FURTHER INFORMATION CONTACT: Georgia Cranmore, 202-673-5351.

## SUPPLEMENTARY INFORMATION:

## Background

A Status Review of the North Pacific Fur Seal (*Callorhinus ursinus*) on the Pribilof Islands, Alaska, was prepared in response to a petition by the Humane Society of the United States to add the North Pacific fur seal to the U.S. List of Endangered and Threatened Wildlife, under the Endangered Species Act of 1973 (ESA), 16 U.S.C. 1531-1543. A notice of the NMFS determination not to list the fur seal as a threatened species, incorporating the complete text of the Status Review for the Pribilof Island population, was published in the *Federal Register* on March 6, 1985 (50 FR 9232). The denial of the ESA petition was based on a number of factors, including the size of the species' population. However, conclusions regarding the status of the Pribilof Island population indicated that it was below 50 percent of its carrying capacity based on a comparison of current population levels and those observed in the 1940s and early 1950s.

Carrying capacity is the number of animals that a given ecosystem can support in terms of food availability,

space requirements, and other factors. Carrying capacity can change if one or more of the environmental factors on which the population depends also changes. In the case of the Pribilof Island population of North Pacific fur seals, however, the Status Review concludes that the carrying capacity of the Bering Sea and North Pacific Ocean for fur seals has probably not changed significantly since peak numbers of animals were observed during the 1940s-1950s.

Carrying capacity is the upper bound of a range of population levels known as Optimum Sustainable Population (OSP). When consistent with its objective of maintaining the health and stability of the marine environment, the goal of the Marine Mammal Protection Act of 1972 (MMPA), 16 U.S.C. 1361-1407, is the maintenance of OSP for marine mammals. OSP as defined at 50 CFR 216.3 is a range of population levels from the largest supportable within the ecosystem (carrying capacity) to the population level that results in maximum net productivity (MNP). MNP is the greatest net annual increment in population numbers or biomass resulting from additions to be population due to reproduction and growth, less losses due to natural mortality (see 41 FR 55536, December 21, 1976).

The Status Review found that the population size of North Pacific fur seals at which maximum productivity would occur is at least 60 percent of the carrying capacity. Since the Pribilof Island population is at less than 50 percent of carrying capacity, it falls below the lower bound of OSP and is, by definition, depleted. The MMPA defines "depletion" to mean, among other things, "any case in which the Secretary [of Commerce], after consultation with the Marine Mammal Commission and the Committee of Scientific Advisors on Marine Mammals established under \* \* \* this Act, determines that a species or population stock is below its optimum sustainable population \* \* \*." The Marine Mammal Commission (MMC) provided a formal recommendation to designate the Pribilof Island population of North Pacific fur seals as depleted under the MMPA.

Once a species or population stock has been designated as depleted, intentional takings from that population are permitted only for research purposes or for subsistence and handicraft purposes by Alaskan Natives. Small incidental takes resulting from other activities may be authorized under certain circumstances. The following MMPA restrictions apply: A depleted species or population stock is not

eligible for a waiver of the moratorium on taking and importation, 16 U.S.C. 1371(a)(3)(A); it may not be taken or imported for public display purposes and no taking may be permitted in the course of commercial fishing operations, 16 U.S.C. 1371(a)(3)(B); it may not be taken under the small take exemption of section 101(a)(4), 16 U.S.C. 1371(a)(4); however, Pub. L. 99-659, signed November 14, 1986, extends the coverage of section 101(a)(5), 16 U.S.C. 1371(a)(5), to depleted species such that small incidental takes of such species or population stocks can be authorized for specified activities other than commercial fishing; and regulatory restrictions under the MMPA may be imposed on the taking of the species or stock by Alaskan Natives, 16 U.S.C. 1371(b). In the case of the Pribilof Island population of fur seals, subsistence regulations have already been issued under the authority of the Fur Seal Act of 1966, as amended, (FSA), 16 U.S.C. 1151 et seq. (See 51 FR 24828, July 9, 1986). Thus, the NMFS does not contemplate further rulemaking regarding Native taking of fur seals as a consequence of this depletion designation.

Until 1985, management of fur seals fell only partially within the purview of the MMPA by virtue of section 113. Section 113 provides that the MMPA shall not be considered to contravene the provisions of any existing international treaty or convention and its implementing legislation which applies to the taking of marine mammals. The exception created by section 113 of the MMPA clearly covered the Interim Convention on Conservation of North Pacific Fur Seals of 1957, and ensured that the Convention, and the FSA sections that implement the Convention, superseded application of certain provisions of the MMPA. These views received judicial approval in *International Fund for Animal Welfare v. Baldrige*, 594 F. Supp. 129 (D.D.C. 1984). Judge Gesell found that the fur seal population was below its OSP level, but that the commercial harvest was not barred by the MMPA's moratorium on taking as long as the Convention remained in force.

From 1957 through 1984, a commercial harvest of fur seals on the Pribilof Islands was conducted under the authority of the Convention. The Convention came into force on October 14, 1957, and was extended in 1963, 1969, 1976 and 1980. Under the terms of the 1980 extension, the Convention expired on October 14, 1984. On October 12, 1984, the United States, Canada, Japan and the Soviet Union signed a Protocol

that, upon acceptance by all four nations, would have extended the Convention until October 13, 1988. Japan, Canada and the Soviet Union ratified the 1984 Protocol. On March 20, 1985, the President transmitted the Protocol to the Senate, requesting its advice and consent. On June 13, 1985, a hearing was held on the Protocol before the Senate Committee on Foreign Relations, but no final action was taken.

In consultation with the Departments of State and Justice, and the MMC, NOAA determined that no commercial harvest could be conducted under existing domestic law, absent Senate ratification of the Protocol extending the Convention or provisional application of the Protocol. Accordingly, on July 8, 1985 (50 FR 27914), the NMFS issued an emergency interim rule to govern subsistence taking of North Pacific fur seals for the 1985 season under the authority of section 105(a) of the FSA. The purpose of the interim rule was to limit the take of seals to a level providing for the legitimate subsistence needs of the Pribilofians and to restrict taking by sex, age and season for herd management purposes. A permanent subsistence rule was proposed on May 15, 1986 (51 FR 17896), and a final rule was published on July 9, 1986 (51 FR 24828).

During consideration of the subsistence harvest regulations, a number of issues were raised concerning the OSP of the fur seals. In the preamble to the 1985 rule, the NMFS summarized the findings of the March 6, 1985, Status Review concerning OSP, and requested comments on and any additional data relevant to the issue of depletion for the North Pacific fur seal. At that time the MMC provided its formal recommendation to designate the Pribilof Island population of North Pacific fur seals as depleted under the MMPA. Four other commenters on the rule also requested a finding of depletion. Since a finding of depletion is a condition precedent to regulation of a subsistence harvest under the MMPA but not under the FSA, the NMFS chose not to make such a finding part of its 1986 proposed rulemaking, under section 105(a) of the FSA, and to address the issue independently. As noted by the MMC in comments on the interim rule, the designation of depletion carries with it certain restrictions which may affect the interests of private parties and other Federal and state agencies. Interested parties were therefore provided an opportunity to review and comment on the proposed designation as an issue separate from the proposed subsistence rules.

On December 30, 1986 (51 FR 47155), a proposed rule was published to add the Pribilof Island population of North Pacific fur seals to the list of depleted species at 50 CFR 216.15. At the request of a number of Native Alaskan and subsistence interest groups and their representatives, a public meeting was held in Anchorage, Alaska, on January 21, 1987, to accept oral comments on this proposal. An extension of the public comment period from a 39-day (ending February 6, 1987) to a 67-day comment period (ending March 6, 1987) was granted to accommodate the special needs of rural Alaskans (52 FR 4365, February 11, 1987). Comments were received and accepted through March 30, 1987.

On September 1, 1987, NMFS received a petition regarding this rulemaking from the St. Paul Aleut Community and the Pribilof Aleut Sealing Commission. The petition requested a reopening of the record, an environmental impact statement, an adjudicatory hearing, peer review, and a contribution to a Bering Sea Scientific conference. NMFS denied the petition on September 28, 1987. Copies of the petition and our response, containing specific bases for denial, are available from the information contact listed above. On December 31, 1987, the public comment period was reopened for 60 days as discussed below.

#### Public Comments on the Proposed Rule

##### (a) *Public Meeting in Anchorage, Alaska*

The following individuals appeared at the public meeting in Anchorage and provided their views and recommendations on the depletion of Pribilof Island fur seals:

Anthony Philemonoff, Tanadgusix Corporation  
 Michael E. Wheeler, St. Paul Traditional Village Council  
 Adrian Melovidov, St. Paul Traditional Village Council  
 Ron Philemonoff, Pribilof Fur Seal Commission  
 Larry Merculieff, Pribilof Fur Seal Commission  
 Agafon Krukoff, Aleut Corporation  
 Dalee Sambo, Inuit Circumpolar Conference<sup>2</sup>  
 Vernita Zilyis, Rural Alaska Resources Association  
 Dave Monture (through Zilyis), Indigenous Survival International  
 Mike Zaharof, Mayor, St. Paul, Alaska  
 Suzanne Iudicello, Center for Environmental Education  
 Patrick Kozloff (written), Aleut Leader  
 Cindy Lowry, Greenpeace, Alaska  
 John Grandy, Humane Society of the United States

Julie Kitka, Alaska Federation of Natives

##### (1) Effect on Subsistence Harvests

Of the 15 individuals who appeared at the public hearing on this issue, only the three representatives of environmental groups supported the proposed NMFS action. Seven speakers questioned the impact of a depletion finding for fur seals on Aleut subsistence uses. Most felt that animal welfare organizations would use the depletion designation to force additional restrictions on the Aleut subsistence hunt or force its complete elimination. As one St. Paul Island resident put it, "animal rights groups have shown their ability to manipulate Congress through public misinformation campaigns to prevent action to ratify an international treaty. There is little to prevent these groups from imposing their will on the agency and forcing a totally arbitrary administrative decision to further restrict or eliminate our subsistence rights once a depletion finding is made." This speaker further outlined the cultural and nutritional significance of seal meat on the Pribilof Islands. He listed a number of major changes that have been imposed on the Pribilofians in recent years, namely, the withdrawal of Federal jobs and services in 1984 (as the result of the 1983 Amendment to the FSA), cessation of the commercial skin harvest in 1985 (as a result of the expiration of the treaty), and publication of permanent subsistence harvest regulations in 1986. Designation of the Pribilof Island fur seal as depleted is considered by this speaker to be a final and unacceptable attack on the Aleut way of life.

Two speakers complained of implications that Aleuts may waste seal meat taken in the subsistence harvest, apparently in reference to the "wasteful manner" criteria of the MMPA. One speaker said "such regulatory language impugns the integrity of the Aleut people and all aboriginal people." One St. George Island resident demanded a reevaluation of the facts to "determine whether the subsistence harvest or any activities by the Pribilofians has or can have an impact on the size of the herd."

One of the consequences of a depletion finding for any marine mammal species is that regulatory restrictions under the MMPA may be imposed on the taking of the species or stock by Alaskan Natives. In the case of the Pribilof Island population of fur seals, however, subsistence regulations have already been issued and, as stated in the preamble to the proposed rule, "NMFS does not contemplate further rulemaking regarding native taking of

fur seals as a consequence of a possible depletion designation" (51 FR 47156). In his opening address at the public hearing in Anchorage, Deputy General Counsel of NOAA, Timoth R.E. Keeney, made the following comments regarding this issues:

There are apparently some misconceptions concerning the effect of the proposed rule on the subsistence harvesting. First, let me remind you that last July, 1986, we published permanent regulations governing the subsistence harvest of fur seals on the Pribilof Islands. At that time, it was anticipated that a depletion designation would be appropriate for Pribilof Island fur seals and that a separate rulemaking would follow to address this issue.

In other words, the subsistence regulations of last summer were predicated upon the probability that this species would be declared depleted. We do not need and do not intend to alter the subsistence regulations as a result of any designation of depletion under the Marine Mammal Protection Act. A depletion designation should not affect subsistence hunting.

The subsistence regulations at 50 CFR 215.31 were promulgated under the authority of both the FSA and the MMPA. Both acts provide for subsistence harvests, regardless of the status of the species if such taking is "not accomplished in a wasteful manner." The wasteful manner criteria was intended as a cap or safeguard for the native taking exemption and is not intended in the Act or in our regulations to insult or impugn the motives of native peoples.

Three speakers representing environmental groups emphasized that they are not proposing changes to the current subsistence regime and said they recognized the contribution of fur seals to the diet and culture of Pribilofians. One speaker stated that

I want to make it clear from the point of view of the Humane Society of the United States and for most of the organizations we've been associated with over time, including the two that have preceded us, there should not be in this depletion matter nor in anything else that we've said today, any implication that we are talking about eliminating subsistence use.

Indeed, we have continually supported the rights of the Aleuts to use fur seals to meet subsistence needs and we want to continue to do that.

The comment of one of the Pribilofian speakers concerning the possible impact of the subsistence harvest on the size of the herd is particularly relevant here. Any discussion of restrictions on subsistence take as a consequence of a depletion finding would include an assessment of possible contributions of the subsistence harvest to the population decline. Research conducted

under the terms of the treaty indicates that a harvest of females or harem bulls could have a disastrous effect on the already declining fur seal population. One of the causes of the population decline observed prior to the 1970s was the female harvest, 1956-1968. In contrast, based on available information, a harvest of subadult males at levels which allow for the future reproductive needs of the population will probably have no negative impact on long-term population trends. Clearly, an annual harvest in the range of 1,423 (1986 harvest total) to 1,802 (1987 harvest total) mostly subadult males, or less than 0.25 percent of the stock, could not be expected to contribute to a population decline or prevent a return to high population numbers.

#### (2) Possible Changes in Carrying Capacity

The second major concern addressed at the public hearing on the proposed rule was the determination of carrying capacity of the environment for fur seals. Six speakers challenged the NMFS conclusion that the carrying capacity for fur seals probably had not changed significantly since peak numbers were reached in the late 1940s to early 1950s. Several speakers pointed out that a number of species in the eastern Bering Sea are declining in numbers and concluded that the carrying capacity of this ecosystem had changed. One speaker gave a slide presentation on the rates of decline for certain seabirds. He pointed out the coincident declines of red-legged kittiwakes, common murre, Steller (northern) sea lions, and North Pacific fur seals near the Pribilof Islands. This speaker shared the view of most Aleut representatives that a reduction in pollock, thought to be due to overfishing, is the cause of the observed declines.

Several speakers claimed that the fur seal's carrying capacity had declined within the last two decades due to reductions in food availability and reduced habitats caused by pollution, including marine debris. One speaker believes that, although the Pribilof Island seal population reached its peak 40 years ago, it is now at its "natural equilibrium level" with a few, lower carrying capacity. Factors noted by the NMFS in the preamble to the proposed rule, namely relative stability in pup numbers in recent years, an increase in pup weights and a decline in duration of feeding trips at sea, are evidence, according to this speaker, of a "healthy population adjusting to a new equilibrium level."

Biomass trends for several species of groundfish in the Bering Sea indicate

that major components of this ecosystem have changed dramatically during the 1970s and early 1980s. Fluctuations in species populations of seabirds and marine mammals in this area could be related to changes in food availability, disease, toxic substances, or other factors. If food resources are limiting, however, as suggested by several speakers, we would expect to see reduced mean body sizes, reduced growth rates and higher pup mortality in the Pribilof population of fur seals. On the contrary, as discussed in the preamble to the proposed rule (51 FR 47159), the average body size and body length in this population has increased. Pup mortality rates on land are as low as those observed during the 1920s when the population was rapidly increasing.

As mentioned by one of the speakers, fur seals are vulnerable to changes in food availability near the Pribilof Islands during the breeding season. However, any changes in food availability near the Pribilof Islands that might explain a population decline of one-third in less than a decade, very likely would be reflected in increases in the length of the feeding cycle at sea near the Pribilof Islands as males and nursing females search for scarce resources. On the contrary, however, feeding trips to sea have declined in duration since the 1950s. This may be in response to an increase rather than a decrease in food availability near the Pribilof Islands and is consistent with the observed increase in pup weights. Toxic substances, such as heavy metals, are a potential factor in the fur seal decline that was mentioned by a number of speakers. As discussed in the preamble to the proposed rule (51 FR 47159), mortality in seals from toxic substances in their environment has not been demonstrated despite regular examination of seal tissues for such concentrations.

If changes have occurred in the resources or measurable abiotic components of the fur seal's ecosystem that would be detrimental to the Pribilof Island fur seal population, these changes have gone undetected in field studies. Fur seals, as indicators of current environmental conditions, have characteristics in common with populations that are not limited by their natural environment. Current pup mortality on land, growth rates, and the variance in mortality rates on land and at sea are all characteristic of a population substantially below its carrying capacity.

In addition to the statements made at the public meeting, written comments were also received on the determination

of carrying capacity for fur seals and further discussion of this issue can be found below. Two speakers questioned the pup estimates from the 1950s and felt our estimates were too high. As stated in the preamble to the proposed rule:

In view of the lack of complete reliability on the estimates of pups \* \* \* other comparisons can be made to provide insight into the approximate level of decline in the population \* \* \* . [There are] several indicators, in addition to pup numbers, that might suggest the current status of the population relative to the apparent peak in abundance in the 1940s and early 1950s. In 1983, harem bull estimates (down 53 percent), idle male estimates (down 56 percent), and commercial harvest levels (down 50 percent), had all declined significantly since the 1940s and early 1950s. The foregoing information, and preliminary analyses of photographs of rookery space utilization since about 1915, suggests a decline of about 50 percent in the population. (51 FR 47158)

### (3) Timing of Our Decision

Six speakers stated that insufficient information was available to make a depletion finding and urged postponement of the decision until further research can be completed. NMFS is unable to grant this request. Since at least 1983, annual reviews of the Pribilof Island fur seal population, prepared for the North Pacific Fur Seal Commission, concluded that this population is probably below its OSP. While there exists uncertainty regarding some of the underlying data, our estimates indicate that the North Pacific fur seal population on the Pribilof Islands is currently below 50 percent of its carrying capacity, based on current population levels (about 800,000) compared to those of the 1940s and early 1950s (about 2.2 million). Since the late 1970s, the Pribilof Island population has declined by one-third. Once the Interim Convention expired, and management of the fur seals came under the MMPA, an affirmative decision on depletion became mandatory since current information indicates that the population is below its OSP. Should new, significant information become available in the future, based on additional research and further analysis of historical data, for example, a review of this decision would be appropriate. In addition, any future increase in the population above the lower end of the OSP range would be grounds for removing this population from the list of depleted species.

(b) *Written comments on the proposed rule.* During the first public comment period, from December 30, 1988 to March 6, 1987, the following groups and individuals submitted written comments on the proposed rule:

Senator Ted Stevens  
North Pacific Fishing Vessel Owners Association  
Alaska Factory Trawler Association  
Marine Mammal Commission  
Senator Frank H. Murkowski  
Humane Society of the United States  
U.S. Department of the Interior  
Dan C. Heinemeier  
Center for Environmental Education  
Alaska Department of Fish and Game  
Greenpeace U.S.A.  
Alaska Groundfish Data Bank  
Lydia T. Black  
International Association of Fish & Wildlife Agencies  
The Wildlife Legislative Fund of America  
International Wildlife Coalition  
Living Resources, Inc.

Of the 17 groups and individuals who provided 56 pages of written comments, seven supported the depletion designation. Nine commenters expressed concern regarding effects of the designation on fisheries, OCS oil and gas activities, commercial seal harvests, or the chances of renegotiating the Interim Convention. Most recommended a delay in rulemaking to accommodate additional research and analysis. One commenter requested an extension of the comment period. It should be kept in mind that the purpose of this rulemaking is to determine whether or not the Pribilof Island population of North Pacific fur seals fits the definition of "depletion", i.e., is it below OSP? The decision to be made is primarily a scientific one, and NMFS does not have the discretion from that finding on the basis of any potential consequences of a depletion designation.

#### (1) Possible Changes in Carrying Capacity

Five commenters questioned the assumption, discussed in the preamble to the proposed rule, that the carrying capacity of the Bering Sea and North Pacific Ocean for fur seals has probably not changed significantly since peak numbers of animals were observed during the 1940s and 1950s. These commenters believe that the carrying capacity for fur seals must have changed because a significant groundfish fishery has been operating in this area since the 1960s, pollution, including entangling plastic debris, must have increased during this period, major changes in fish and shellfish populations have been recorded, and declines in seabirds and other marine animals are coincident with the fur seal decline.

Reasons for what these commenters believe to be a decline in the ability of the environment to support higher fur seal populations include reduction in

food available to fur seals due to foreign fishing in the Bering Sea, and/or changes in water temperature or other physical parameters. As discussed above in response to the public meeting comments, and also discussed in the preamble to the proposed rule, we have not detected any effects on fur seals due to possible reductions in food resources or changes in their physical environment. On the contrary, fur seals show increases in body size and increased pup survival rates characteristic of healthy, growing mammal populations. Declines in numbers of fur seals, demonstrated by declines in pup estimates and counts of adult males, appear to be the result of factors causing increased mortality of juvenile age classes at sea (See 51 FR 47159-47160). Entanglement in marine debris may be a significant cause of this mortality, but other, as yet undetermined, factors may be contributing to the decline, as well.

The Marine Mammal Commission (MMC) agrees with our assessment, discussed in the preamble to the proposed rule, that it is unlikely that the carrying capacity for the fur seal's habitat has been reduced significantly. This assessment is based, in part, on an examination of changes in length and size of individual animals, and duration of feeding trips to sea, which suggest increased rather than decreased availability of food. The MMC included with their comments a copy of Swartzman, G.L. and R.T. Haar, 1983, Interactions between fur seal populations and fisheries in the Bering Sea, Fishery Bulletin, Vol. 81, No. 1, pp. 121-132. This report concludes that the changes which have been observed in the fur seal population do not support the hypothesis that fur seal carrying capacity has been reduced by fisheries for important fur seal prey species such as walleye pollock and Pacific herring.

Regarding the impact of the start of a major pollock fishery in 1964 with peak yields in the early 1970s, the authors note that

Study of the fur seal diet data indicated that walleye pollock comprised a larger part of the fur seal diet in the 1970's, after the establishment of the fishery, than earlier, although average pollock size appeared to drop significantly. This trend may have been induced by an increased harvest of older fish. Since walleye pollock are cannibalistic, the removal of the older fish by the fishery could result in lower mortality among the younger pollock stocks, the outcome being an increase in the pollock resource available to both the fishery and the fur seal.

While NMFS does not believe that food is a current limiting factor for the

Pribilof Island fur seal population, work is proceeding on further analyses of feeding behavior, diet, and the relationships between fur seals and their prey species in the Bering Sea and North Pacific Ocean. Identification and elimination of the cause or causes of the population decline is a major objective of the NMFS fur seal conservation plan.

On this issue, the Alaska Department of Fish and Game (ADF&G) provided the following opinion

During the period over which the Pribilof Island fur seals have declined in abundance, commercial fisheries have expanded greatly in some parts of their range. The supplementary information with the proposed rule states that parameters such as pup weight and body size of older animals have increased in recent years, which shows "that the ecosystem can still support a fur seal population as high as that observed in the 1940s and 1950s." This is incorrect. The increases referred to suggest an increase in *per capita* food availability, but do not show that food availability in the environment is still adequate to support 1.8 million fur seals. In other words, if the carrying capacity for fur seals was reduced by 50 percent while the population declined by 60 percent, the remaining seals would experience a *per capita* increase in food availability, and show the growth responses that have been documented.

NMFS agrees that the current and historic relationship between fur seals and the fisheries remains unclear. No numerical model exists to provide an answer with any reasonable degree of certainty on the number of fur seals that could be maintained by current prey resources. A plausible, intuitive argument is that the removal of millions of tons of groundfish by commercial fisheries since the 1960s would decrease the carrying capacity of the Bering Sea for fur seals. However, some model results indicate that removal of larger, older fish by fisheries has in fact increased the availability to fur seals of the smaller, younger sizes that they prefer to prey upon. This would have the effect of improving the fur seal's lot. Moreover, we cannot find any evidence of food limitations in individual fur seals.

ADF&G suggests that our findings, i.e., increased pup weights and juvenile body sizes, are not indicators that the carrying capacity can still support about 2 million fur seals, but only show a *per capita* increase in food availability consistent with a reduction in carrying capacity. We are not, however, merely comparing findings in 1940-1950 to current data. An extensive time series of data exists since 1940-1950 on pup weights, length of harvested seals, teeth weights, pup mortality rates, depth of dives and duration of trips to sea. These

data show no evidence over the entire period for catastrophic changes in food or other environmental factors that might explain the loss, for example, of over one-third of the population since the late 1970s.

ADF&G also pointed out that "the data regarding the past and present size of the fur seal herd are actually extrapolations of estimates rather than counts." This refers to the method used to estimate the size of the Pribilof Island herd, namely, estimates of pups born, information on the age/sex structure of the population and age-specific survival estimates. Only adult males (territorial bulls) are directly counted. These counts show a decline of over 50 percent since the 1940-1950s and are still declining (1987).

ADF&G commented on the population decline rate as follows:

Extrapolations of total population size from estimates of pup production may be seriously biased if the relationship of population size to carrying capacity changes. Productivity is likely to respond in a density-dependent fashion such that *per capita* production of pups will decrease as the population approaches carrying capacity (K). In a population at or near carrying capacity, the proportion of females giving birth on the rookeries each year will be lower, and therefore the total population size may be under estimated from pup counts. This factor, in combination with problems in estimation techniques that occurred especially during the years of high pup abundance, suggests that the actual decline in population size may be less than indicated. Data other than pup estimates also suggest that the population size has declined in recent years, but the actual magnitude of the decline is poorly understood.

Work is in progress on St. Paul Island to assess any changes that may be occurring in fur seal natality rates. At this time, we are not convinced that such changes as ADF&G suggests are affecting population size estimates. As discussed earlier, in addition to pup estimates, the magnitude of the population decline can be estimated from photographs of rookery space utilization since about 1915, direct harem bull counts (down 53 percent) and idle male estimates (down 56 percent).

Another commenter provided his opinion that "the North Pacific fur seal is not presently depleted." According to this commenter the fur seal "may now be below 50 percent of the maximum population size that occurred in the 1940's and 1950's. It is not 50 percent below the long term carrying capacity for fur seals." The commenter states:

The key issue is whether the large size of the population in the 1940's and early 1950's is a valid "benchmark" on which to make a

determination about carrying capacity of the marine environment that supports fur seals. In my opinion the high numbers of the late 1940's and early 1950's were a short term anomaly which resulted from the rapid recovery of a population reduced to very low numbers in the 1910-1918 period. I seriously doubt that such a population size can ever again be reached *except* through the same mechanism of recovery from very low numbers resulting from severe exploitation or unusual natural calamity. In either case the maximum attainable population size can not be maintained for long in nature.

This commenter notes two examples of "artificially high populations that exist for a short period of time", Weddell seals in McMurdo Sound, Antarctica and Pacific walrus. According to this commenter, the pre-exploitation size of the Weddell seal population was about 2,000. This population was greatly reduced by harvesting and subsequently increased to 3,000 and has since declined to less than 2,000. In this commenter's opinion, a parallel situation is underway with Pacific walrus, where peak numbers observed in 1978-82 "were not sustainable over time." It is the opinion of NMFS, however, that the population of North Pacific fur seals in the 1940s-1950s was not an artificially high, peak level that is not sustainable over time. Indeed, the maximum numbers and relative stability, as evidenced by direct bull counts, lasted almost 20 years. This high population level was ended by the large harvests of female seals in the late 1950s-1960s. The effect of the female harvest should have passed through the population by the mid-late 1970s, and the population could by that time have begun to return to high levels. In our view, by the mid-1970s another factor or factors had begun to increase mortality of, especially, juvenile age classes. The cause of this mortality is not yet completely understood.

The MMPA does not require that marine mammal populations be kept at maximum recorded levels, but that they be maintained at optimum sustainable levels. In the case of the Pribilof Island fur seal we believe this level is at least 60 percent of the numbers attained during the 1940s-1950s. To assume that the high populations of this time were "not sustainable over time" merely because they were not indeed sustained due to improper management (i.e., the female harvest) begs the question of the appropriate carrying capacity for this species. This commenter claims that "major changes in abundance of several components of the Bering Sea ecosystem" and changes in the physical environment "argue against the presumed stability in carrying capacity

for fur seals." An intuitive argument can indeed be made for a reduction in the carrying capacity. But, to repeat, we find no evidence in nearly 30 years of consecutive data on the fur seals themselves to suggest that there are environmental factors limiting the population to current, or lower, levels.

### (2) Effect on Commercial Fisheries

The MMC and the Alaska Factory Trawler Association (AFTA)/North Pacific Fishing Vessel Owners Association requested additional information on the expected impacts on commercial fisheries of a depletion designation for fur seals. Two other commenters questioned our assessment of the level of incidental take of fur seals in foreign and domestic fisheries. Under the MMPA, permits for incidental taking during the course of commercial fishing may not be issued for depleted species.

Six domestic general permits issued by NMFS in 1984 authorize the incidental take of North Pacific fur seals and other marine mammals in the North Pacific Ocean. A total of 25 fur seals are authorized to be taken annually incidental to commercial fishing operations. These 5-year permits expire on December 31, 1988. If Pribilof Island fur seals are designated as depleted, NMFS under present law may not issue permits for their incidental take, although we know that these animals will inevitably be taken in the course of some fisheries operations.

NMFS has interpreted its authority under the MMPA to include discretion to issue permits for incidental taking when populations covered by the permit will not be disadvantaged, without requiring proof that all other species that might possibly be taken are also within OSP. However, in a recent decision involving a permit issued to the Federation of Japan Salmon Fisheries Cooperative Association to take Dall's porpoises incidental to commercial salmon fishing, a much stricter interpretation of the MMPA has been adopted by the courts (*Kokechik Fishermen's Ass'n, et al. v. Secretary of Commerce, et al.*, No. 87-5239, slip op. (D.C. Cir. February 16, 1988)). The courts considered whether or not NMFS may legally issue a permit allowing incidental taking of one protected marine mammal population that was above OSP knowing that other protected marine mammals (not demonstrably at OSP) would also be taken. The courts held the permit NMFS issued to the Federation to be invalid and "contrary to the requirements of the MMPA." This decision may be appealed.

In response to concerns about impacts on commercial fisheries that have arisen out of this case, NMFS announced its decision to support an amendment to the MMPA (See 52 FR 19874, May 28, 1987). This amendment could allow incidental, but not intentional, takings of small numbers of depleted marine mammals by vessels engaged in commercial fishing if such taking will have only a negligible impact on the affected population. NMFS is now considering whether or not it can reissue domestic general permits for fisheries that might take depleted stocks or species for which no OSP determination has been made (See 53 FR 2069, January 26, 1988). Consequences of a depletion determination for the Pribilof Island population of North Pacific fur seals will depend on these deliberations and on potential Congressional action on MMPA reauthorization during 1988.

One commenter suggests that unreported incidental takes could be higher than expected and states that

For example, the fur seal has been one of the species covered in the domestic general permit issued to the North Pacific Fishing Vessel Owners Association \* \* \*. There are no observers on these U.S. based fisheries, so there are no actual estimates of numbers of fur seals taken. A review of entanglement in North American Fisheries (CEE, Marine Wildlife Entanglement in North America, in press) has shown that fishermen tend not to report incidents under the permit certificates of inclusion. With increased participation by U.S. based fishermen in several of the bottom fish trawl fisheries in the North Pacific, which are known to take fur seals, the exclusion of the fur seal from the general permit could have a significant impact in reducing mortalities if the prohibition is enforced. On the other hand, an incentive of no prosecutions for accidental takings could conceivably be used as the basis for a scientific observer program aboard U.S. vessels.

Along similar lines, the MMC made the following comment

It is not clear, for example, where, when, how, and how many fur seals are being taken in commercial fishing operations in the North Pacific Ocean. Therefore, we consider it desirable to expand research efforts so as to make those determinations and to identify appropriate changes in fishing gear and practices that would reduce or eliminate incidental take.

Research of this nature requires the cooperation and assistance of parties involved in commercial fishing operations. Consequently, it is desirable to include commercial fishing operations in the research program. This could be done by authorizing participating fishery operators to incidentally take fur seals as part of the Service's directed research program and pursuant to a Marine Mammal Protection Act scientific research permit. Such a program would provide authority to incidentally take small numbers

of fur seals while providing important information necessary to assess accurately the nature and possible significance of fur seal incidental take and to determine, if necessary, how fishing gear and practices could be modified to reduce or eliminate incidental take.

NMFS remains convinced that the incidental take of fur seals in the course of commercial fishing is probably insignificant, at least within the U.S. EEZ and territorial waters. We believe the number of fur seals incidentally killed in both foreign and domestic fisheries is less than 50 each year. At this time, based on observer reports, incidental take in active gear of foreign or domestic fisheries in the EEZ and territorial waters does not appear to be a significant cause of mortality and is not considered a likely factor in the population decline. In 1986, only one fur seal was observed taken by foreign fishing vessels off Alaska. It would hardly seem worthwhile to engage commercial vessels in research operations when the chances of encountering an entangled animal are so low. On the other hand, should new data indicate that incidental take is a significant or contributory cause in the decline, NMFS will reassess its research priorities to include work on gear and operational improvements to prevent significant taking of fur seals in commercial fisheries.

One commenter requested an assessment of the incidental take of fur seals in the squid driftnet fishery outside the U.S. EEZ. In 1986, a U.S. observer reported the taking of 14 North Pacific fur seals during 30 sets. There were no observers during 1987, but the United States continues to seek participation in a cooperative observer effort to estimate incidental take of marine mammals in this fishery. At this time, insufficient data exist on which to base any conclusions regarding the actual level or rate of incidental take in this fishery.

### (3) Effects on Oil and Gas Development

The Department of the Interior (DOI) is concerned that designating the Pribilof Island fur seal population as depleted could inhibit production of domestic oil and gas resources on the outer continental shelf (OCS) of Alaska and possibly California, Oregon and Washington. DOI stated that:

A depletion designation may inhibit OCS leasing and permitting activities. In addition, the requirements and procedures for obtaining permits under the MMPA for small incidental but unintentional taking of fur seals would presumably apply to OCS operators. We are concerned that designation of the population as depleted may have an effect on the ability of those operators to plan

their activities and obtain incidental take permits or meet permit requirements. For example, offshore Alaska, depletion designation may lend credence to a perceived need for a leasing-and/or activity-free buffer zone around the Pribilof Islands. This could complicate the use of the Pribilofs as a support base for Bering Sea OCS activities. Increased industry costs associated with any potential new restrictions or permit requirements cannot be accurately predicted at this time.

In areas offshore California, Oregon, and Washington, a depletion designation would probably not have a significant effect on the OCS oil and gas program. However, most female and young male fur seals spend winters and springs in these areas. In the extremely unlikely event that a large oil spill resulted from OCS activities, unintentional "take" of fur seals could occur under certain circumstances (e.g., oil moved offshore into areas inhabited by fur seals). If such a circumstance arose and taking of fur seals resulted, it would be difficult, if not impossible, to determine whether the animals "taken" were from the Pribilof population or the local, nondepleted, San Miguel population. Thus, a practical matter of identifying impacts to the Pribilof Island population complicates how incidental taking could be assessed in these areas during winter and spring.

As we pointed out in the preamble to the proposed rule, Pub. L. 99-659, signed November 14, 1986, amended the MMPA by extending the coverage of section 101(a)(5), 16 U.S.C. 1371(a)(5), to depleted species. Small incidental takes of depleted species or population stocks can be authorized for specified activities other than commercial fishing, including OCS oil and gas development. The findings needed to satisfy 101(a)(5) are the same whether the population is depleted or not. However, any significant taking from the population would require a waiver of the moratorium. A depleted species is not eligible for a waiver. Thus, if large numbers of fur seals are expected to be taken in the course of oil and gas development offshore Alaska, California, Oregon, or Washington the depletion designation will foreclose the possibility of a waiver of the MMPA's moratorium to accommodate any significant taking for this purpose.

In addition, the DOI wants to clarify that the FWS did not recommend that the North Pacific fur seal population be designated as depleted (as stated in the preamble to the proposed rule), but rather supported initiation of the formal designation process. DOI further recommends that additional analysis be done concerning the determination of carrying capacity for fur seals.

#### (4) Effect on Subsistence Taking

Three commenters addressed the possible effect of a depletion

designation on subsistence rights. One commenter stated that "it is imperative that should a finding of depletion be warranted, thorough discussion of the impacts of such a finding on the existing subsistence regulations be included in the final decision." As stated at length earlier during discussion of the public meeting, the NMFS does not intend to alter the subsistence rule as a consequence of the depletion finding. As another commenter put it "a depletion designation does not create any basis to reopen rulemaking or reexamine subsistence harvest regulation." A third commenter "supports the existing approach to regulation of the fur seal harvest, and does not advocate any further restrictions of this important subsistence right."

#### (5) Effect on Ratification of the Convention

Four commenters suggested that a depletion designation would have an adverse effect on ratification of the 1984 Protocol extending the Interim Convention. One commenter requested assurances that "if a depletion finding is made, that such a finding will not preclude a future commercial harvest of the North Pacific Fur Seal." Another stated that "the NMFS and the U.S. Senate can do more to help the North Pacific Fur Seal by working to ratify the Treaty as quickly as possible, then it has over the past three years while trying to appease animal protection groups." However, this commenter will "support a Treaty that suspends the commercial harvest until the North Pacific Fur Seals have reached sustainable numbers." Another commenter believes that depletion "will indubitably aid those who object to the renewal of the Interim Convention \* \* \*." The fourth commenter believes that "the depletion proposal is an ill-supported expedient to employ the Marine Mammal Protection Act in the absence of Treaty extension at the risk of reducing the present fur seal population." This commenter believes we have failed to discuss "the effects of the failure of the U.S. Senate to ratify the extension of the North Pacific Fur Seal Treaty and consequent commercial pelagic sealing."

As discussed above, the 1984 protocol to the Interim Convention has not been ratified. In 1985, in consultation with the Department of State (DOS), the Department of Justice, and the MMC, NOAA determined that no commercial harvest of fur seals could be conducted under existing domestic law (i.e., the MMPA and the FSA) without Senate ratification or provisional application of the protocol.

The protocol was submitted to the Senate for its advice and consent to ratification in March 1985. The DOS received a letter in April 1985 signed by 44 Senators stating their opposition to the protocol. This precluded any chance of achieving the two-thirds majority needed for ratification. The opposition to the protocol was based on objections to the commercial harvest provision of the Convention. Unlike domestic law, the treaty allowed the continuation of the commercial harvest despite the decline in the fur seal population.

In 1986, DOS renewed its request for favorable consideration of the protocol. The staff of the Senate Foreign Relations Committee recanvassed the opposition and found that it remained unchanged. The Senate will not give its advice and consent to ratification of the 1984 protocol, and, consequently, the Interim Convention is no longer in effect. Consultations are planned, however, with former parties to the Convention on the possibility of a new agreement that would extend the pelagic sealing ban and continue international research coordination on fur seals. No commercial harvests are possible on the Pribilof Islands while this population remains below OSP.

#### (6) Status under the ESA

One commenter that supports the depletion designation also encourages NMFS "to reconsider its decision and list the fur seal as a threatened species" under the ESA. As mentioned above, our decision not to list the Pribilof Island population as threatened was based on a number of factors, including the current size of the population. In our view this species' population of about 1 million is probably not at or near a critical level that could lead to extinction in the foreseeable future. In the early 1900s, the species reached levels as low as 300,000 and was still able to rebound to numbers as high as 2-3 million. As this commenter points out, one of the bases of our decision was the fact that this species was the subject of an international treaty that prohibited pelagic harvesting, encouraged international research cooperation, and placed limits on harvests of this species on land. We considered that a mechanism was already in place for the conservation and recovery of this species to higher levels.

Since our 1985 ESA decision, the treaty has lapsed and the species has come under the purview of the MMPA. The FSA and the MMPA are now the regulatory authority for a subsistence harvest on the Pribilof Islands. Further restrictions on taking from the Pribilof

Island stock will be imposed as a result of this depletion designation, i.e., no permits will be issued for incidental take or public display. The subsistence regime, and the depletion designation, should provide an adequate regulatory mechanism for the recovery of the Pribilof Island stock. The NMFS will, however, consider the fur seal for an ESA candidate species list that is currently under development. Continued declines in species populations will result in periodic reconsideration of an ESA listing.

#### (7) Conservation Planning and Other Issues

Four of the commenters who supported a depletion designation urged immediate action on recovery of the species. One commenter noted that:

Common sense and public policy demand that in the face of a 4 to 8% annual decline in a population already reduced to below 60% of its OSP, resource managers must act quickly to stop the decline and take measures to restore the population. In today's world of competing demands for marine resources, and increasing pressures for development in marine and coastal habitats, it is a given that man's activities will continue, inevitably, to alter the carrying capacity of our oceans for marine life. The argument that the agency use "diminished carrying capacity" as a method to avoid making a strictly numerical depletion finding begs the question of whether, faced with a significantly reduced and declining population, resource managers simply revise the "bottom line." Such an approach is counter to the intent and purpose of the Marine Mammal Protection Act.

Another commenter states that "we understand that the agency, as is customary in the scientific community feels compelled to accompany its references to research results and conclusions about the fur seal population with appropriate qualifiers. Nonetheless, neither the agency nor the public should harbor any doubts about the strength of the evidence that the North Pacific Fur Seal is in jeopardy and is suffering a severe decline in population, due especially to entanglement in ocean debris." This commenter further noted that "we support the agency's decision to formally designate this population as depleted. This step, long appropriate and too long delayed, we hope, signals NMFS' renewed commitment to take all regulatory and enforcement measures necessary to protect the North Pacific Fur Seal."

A third commenter believes "it is the responsibility of the NMFS to take immediate corrective measures to ensure the population will recover. After the final determination that the population is depleted, we look forward

to the timely receipt of proposals to replenish the population of the Pribilof Island stock of Northern fur seals, as the preliminary step to the NMFS fulfillment of their obligation under the law." The fourth commenter on this issue recommends that "the most sensible way to approach the declining fur seal population is to give it protection while seeking to ascertain the exact reasons for the decline. Designation as depleted will be a proper initial step." This commenter further suggests that "monitoring of the fur seal population continue through observation and nondisruptive censusing methods. In addition, we urge that all possible steps to minimize continuing entanglement of fur seal in netting and plastic debris be implemented."

NMFS is preparing a conservation plan for fur seals that will be available for public review later this year. The conservation plan will have as its goal the recovery of the Pribilof Island population to OSP. The plan's objectives will include (1) the identification and elimination or mitigation of the cause(s) of the population decline; (2) monitoring population trends to ensure that fur seals remain a significant functioning element in their ecosystem; and (3) actions needed to minimize adverse effects on fur seals and their habitats from man's activities. Research, public education, and industry assistance on the entanglement problem will be significant elements in our plan. The existing subsistence harvest regime, this depletion designation, and the development and implementation of a conservation plan for the Pribilof Island fur seals provide a coordinated program of conservation efforts that should lead to a recovery of this population to more productive and sustainable levels.

One commenter also recommended that we assess the status of other North Pacific fur seal populations and begin a review of the status of the Steller sea lion under the MMPA. We do not have sufficient data, at this time, on historic trends in populations of North Pacific fur seals under Soviet jurisdiction to provide accurate assessments of the current status of these populations. Historically, the Pribilof Island population, by number, has represented about three-fourths of the species. On April 24, 1987, NMFS announced its intention to prepare a report on the population status of Steller sea lions to determine abundance and trends (52 FR 13743). The resultant report, entitled "Status Review, Northern (Steller) Sea Lion (*Eumetopias jubatus*) in Alaska" (January 1988), concludes that the number of adult and juvenile sea lions observed on rookeries in southwest

Alaska declined about 52 percent from at least 140,000 in 1956-60 to about 68,000 in 1985. Copies of this report are available from the information contact noted above.

(c) *Reopening of the public comment period.* NMFS reopened the public comment period on the proposed rule for a 60-day period, ending February 29, 1988, to consider additional information on possible changes in the carrying capacity of the Bering Sea ecosystem (52 FR 49450, December 31, 1987). Biomass trends for red king crab and several species of groundfish in the Bering Sea were presented to demonstrate that changes have occurred in important components of this ecosystem during the 1970s and early 1980s (See 52 FR 49452-49456).

New information was presented that indicates that the carrying capacity of the central North Pacific has changed over the past 20 years. An article in *Science* magazine (E.L. Venrick, et al., 1987, Climate and chlorophyll a: Long-term trends in the Central North Pacific Ocean, *Science* 238:70-72) reported a significant increase in chlorophyll a, an index of phytoplankton biomass, in the central North Pacific. This increase was correlated with decreases in sea surface temperature and more active winter storminess. According to the **Federal Register** notice, this article and previous work by NMFS "suggest one plausible mechanism, a trend in storm activity, through which the carrying capacity for fur seals might be affected."

On December 17, 1987, in anticipation of the reopening of the comment period on the 1986 proposed rule. The Humane Society of the United States and Friends of Animals filed a complaint for declaratory and injunctive relief to compel NMFS to issue forthwith a final depletion rule. On January 11, 1988, Plaintiffs filed a motion for summary judgment and request for expedited consideration on their earlier claim (*The Humane Society of the United States et al., v. C. William Verity, et al.*, Civil Action No. 87-3433, D.D.C.) In association with these actions, on February 10, 1988, NMFS indicated that a review of the additional information provided in the **Federal Register** notice did not change the previous view that the Pribilof Island population of North Pacific fur seals is below OSP and is therefore depleted.

It is possible that a change in some physical factor in the fur seal's environment—such as storm activity—could have altered the carrying capacity of the Bering Sea and North Pacific Ocean. However, following a review of available scientific information, and



based on public comments on this issue, it appears that there is little or no evidence supporting this hypothesis. Accordingly, NMFS has concluded that no new information exists on this subject to warrant further delay on a depletion designation.

During this second public comment period, the following groups and individuals submitted written comments:

Alaska Native Brotherhood, Grand Camp  
 Senator Fred F. Zharoff, Alaska State Legislature  
 United States Department of the Interior  
 Aleutian/Pribilof Islands Association, Inc.  
 Greenpeace U.S.A.  
 Alaska Factory Trawler Association  
 Friends of the Sea Otter  
 Nana Regional Corporation, Inc.  
 Rural Alaska Community Action Program, Inc.  
 The Aleut Corporation  
 Eskimo Walrus Commission  
 E.L. Venrick, Scripps Institution of Oceanography  
 Committee for Humane Legislation  
 The Humane Society of the United States  
 Tribal Government of St. Paul  
 Center for Environmental Education  
 Indigenous Survival International  
 Rural Alaska Resources Association  
 Alaska Federation of Natives, Inc.  
 International Association of Fish and Wildlife Agencies  
 Alaska Department of Fish and Game  
 William N. Arterburn, Willow, Alaska

Eleven commenters representing Alaska Native subsistence groups strongly opposed the depletion designation because, as one commenter states, "[d]eclaring the Pribilof Island population depleted would have a significant adverse effect on the well-being of the Aleut people of the Pribilof Islands. And as a precedent, it could also have a significant adverse effect on all Alaska Natives who depend upon marine mammals for their sustenance." These groups urge closer cooperation between NMFS and user-groups on a conservation and management program for fur seals as an alternative to the depletion finding.

The effect of the depletion designation on subsistence users was the major subject of discussion during the public meeting on the proposed rule on January 21, 1987, in Anchorage, Alaska. These concerns are addressed in detail above. As discussed above in section (a)(1), in the preamble to the proposed rule, and during an opening address at the public meeting, once a species or population is designated as depleted, regulatory

restrictions under the MMPA may be imposed on taking by Alaska Natives. However, in the case of the Pribilof Island population of fur seals, subsistence regulations have already been issued under the authority of the Fur Seal Act. No further regulation is deemed necessary nor is it contemplated by NMFS as a consequence of this designation. A depletion designation for Pribilof Island fur seals does not mean that other Alaska pinnipeds are more likely to be designated as depleted. This action is not a "precedent" for future designations unless the biological status of other populations also warrants a depletion designation, i.e., they fall below OSP.

The 11 Native subsistence representatives also stated that "weak" or "unsupported" scientific evidence was used in making the depletion designation. Several commenters mentioned dissension within NMFS on the depletion question. Clearly there has been disagreement on this issue as evidenced by the reopening of the comment period. Additional scientific information was provided by NMFS's NWAF to counter the assumption in the proposed rule that the carrying capacity of the Bering Sea had probably not changed since the 1950s. There is, however, complete agreement on the fact that the population has declined by over 50 percent since the 1950s. The point of dissension concerned whether or not the peak number observed in the 1950s represents the current carrying capacity or maximum number of fur seals that the Bering Sea and North Pacific Ocean can accommodate today.

The Tribal Government of St. Paul observed that the notice reopening the comment period did not reference the information introduced during the public meeting in January 1987, concerning "the reduced carrying capacity of the Bering Sea indicated by population declines in other species, particularly birds and other marine mammals." As discussed above (in section (a)(2)), coincident declines in sea bird populations and in the Steller sea lion were presented during the public hearing by Native groups as evidence that the carrying capacity must have changed due to overfishing, especially of pollock. The evidence for a reduction in food availability as an explanation of the decline (or a reduction in carrying capacity) has been thoroughly evaluated (see sec. (a)(2) and (b)(1)). The robust nature of individual fur seals and the observed reduction in feeding time at sea has led to the conclusion that food is probably not a limiting factor for this population.

The Tribal Government stated that "[t]here are key gaps in NOAA's definition of OSP" and demanded the answers to certain questions.

These questions include: (a) whether the term carrying capacity comprehends maximum *sustainable*, as opposed to all-time high, population numbers; (b) whether factors such as entanglement, harvest of food species, environmental contaminants, or deliberate population reduction programs, are to be regarded as carrying capacity limiters, and if not, whether carrying capacity is a concept intended to recapture an unattainable state of nature, before man's appearance on the scene; (c) whether MNP for Pribilof Island fur seals can be set, in a peer-reviewed, scientifically accepted manner, as a population size sixty percent of the carrying capacity level. A failure to resolve definitional questions in any rule to designate the Pribilof Island fur seal population as "depleted" would render the proposal fatally defective.

Carrying capacity is the upper bound of a range of population numbers within OSP. It does not coincide with maximum sustainable yield, a concept similar to MNP which is the lower bound of the OSP range. Carrying capacity is not necessarily the "all-time high" population level. Carrying capacity means the maximum population level that the ecosystem can support at equilibrium, or the mean number of animals in a population undergoing natural fluctuations about the level supportable by the environment. In the case of the Pribilof Island fur seal, the number of pups born during the 1940s and early 1950s was averaged to determine the carrying capacity level (about 555,000 pups or 2.2 million total population). The definition of OSP provides a range of population numbers to accommodate the fact that numbers of animals may fluctuate between MNP and the carrying capacity (i.e., 1.3-2.2 million animals). Evidence for a reduction in food availability for fur seals could, if it existed, change NMFS's opinion on the level of the population representing the current carrying capacity. Major changes in physical factors, atmospheric or oceanographic, could be evidence for a change in carrying capacity. This was the subject of the reopening of the comment period. However, relatively short-term, man-induced mortality factors such as marine debris or other contaminants would not necessarily be of such a sustained or widespread occurrence as to constitute a change in the carrying capacity of this environment. The determination of MNP for this species has been the subject of several "peer-reviewed" scientific articles as discussed in the proposed rule and its

references (see 51 FR 47160). This subject is further discussed below.

The Tribal Government asked to incorporate by reference their September 1987 petition for a reopening of the record on the proposed rule and other matters. As mentioned above, this petition was denied by NMFS and copies of the petition and our denial are available from the information contact listed above. The Tribal Government renewed the following comments: (1) The carrying capacity of the environment of the Pribilof Island population of fur seals has declined since the early 1950s; (2) MNP is not sixty percent of the carrying capacity level or the 1950s high; (3) higher mean body weights and growth rates, and historically uniform pup mortality and length of feeding cycles, would not tend to prove that the Pribilof Island population of fur seals is not food-limited.

A response to these comments can be found above in sections (a)(2) and (b)(1) since these concerns were raised during the first public comment period. In addition, this commenter quotes a 1978 NMFS memorandum to demonstrate the change in NMFS' position regarding the cause or causes of the decline in Bering Sea marine mammals and other species. In the 1978 memorandum, the decline in fur seals was largely attributed to "the development of a tremendous commercial fishery." It concludes that the carrying capacity for fur seals "could be considerably less in 1978 than it was in 1956." It should be noted that the number of Pribilof Island fur seals has declined by one-third since the late 1970s, and this second, steeper, decline phase is inversely related to the level of commercial fishing effort, which has decreased considerably during this period.

The Tribal Government also repeated their comments concerning food-availability, which have been addressed in detail above (see section (a)(2)), and provided the following "new evidence": "greater abundance of Copepods since 1982 correlated with enhanced growth rates in Least Auklets. This indicates that primary predator on Copepods—pollock—are less abundant." They also mention studies of murrees and kittiwakes and their analysis of foreign shipping logs to demonstrate their strong belief that overfishing of pollock is the cause of these population declines.

The Tribal Government is concerned that the "NMFS staff and no rational basis in fact to support its assertion that the Pribilof Island population of fur seals can attain any given, higher level of abundance." This is an important misunderstanding of previously

published material. NMFS has not determined finally the cause or causes of this population decline; consequently, we cannot anticipate when, if ever, this population can return to previous high numbers. It is possible that this population may never return to 1950s levels despite all efforts available by law. This is not sufficient reason to fail to act on a depletion designation. The population is below its OSP and the goal of NMFS conservation efforts will continue to be to bring it up to OSP, i.e., 1.3 to 2.2 million fur seals.

Commenters further claim that the use of 60 percent of carrying capacity as an estimate of MNP "has not been accepted \* \* \* as applicable to the Pribilof Island fur seal population. It is based on species or environments not analogous to fur seals." In the preamble to the proposed rule (51 FR 47160) it is stated that "[b]ased on empirical information for fur seals (Smith 1973) and interspecific comparisons (Fowler 1984b), the population at which maximum productivity (maximum natural growth of the total population) would occur is about 60 percent of the carrying capacity."

An overview of the literature on population dynamics of large mammals shows that they tend to exhibit their greatest level of productivity (rate of population change) at population levels which are close to the mean naturally occurring levels (or the carrying capacity of their natural environments). So far, all such populations appear to grow most rapidly (in numbers per unit time) at levels greater than 50 percent of carrying capacity, some at 80 percent or higher. In addition to fur seals, this relationship has been shown for fin whales, gray whales, and *Stenella* dolphins.

The Tribal Government claims that the Marine Mammal Commission (MMC) did not "substantiate in the record a detailed scientific and factual basis for its recommendation of depleted status. At any event, its recommendation is at least three years' dated and obscures food abundance issues—in which it has little competence. Thus, a remand of that recommendation to the Commission and the NWAFC jointly is warranted." The MMC provided comments during the first comment period in March 1987 that repeated its advice on the depletion issue (see section (b)(1)). The legal representatives of the Tribal Government and of other Pribilof Aleut entities were provided copies of all comments received on the proposed rule and copies of the transcripts of the public meeting.

The commenter questions whether or not our OSP determination for the Pribilof Island fur seal population could be sustained in court and attempts to draw certain analogies with a separate proceeding involving an OSP determination for the Commander Island population (See a discussion on the Dall's Porpoise case in sec. (b)(2)). They also state that "a depletion finding would compound existing havoc for Pribilof Islander's subsistence, its ports, and for commercial Native take of fur seals."

The Alaska Department of Fish and Game (ADF&G) believes that the fur seal population decline in the late 1950s and early 1960s was caused primarily by a harvest of females and that the decline in pup production in the late 1970s can be partially attributed to entanglement of seals in net debris. ADF&G further concludes "informed scientists agree that they cannot determine the present carrying capacity of the Bering Sea and North Pacific Ocean for fur seals or directly evaluate whether it has changed in recent years." ADF&G present the following explanation for the recent changes in abundance of the Pribilof Island fur seal population.

The carrying capacity for fur seals in the early to mid 1950s was approximately 2.2 million animals (as indexed by pup production of about 555,000). At that time, some stocks of fishes (e.g., salmon and halibut) were greatly reduced, as were several species of large whale and pinnipeds (e.g., California sea lions and elephant seals). When the harvest of females reduced the fur seal population, other components of the ecosystem were changing concurrently so that carrying capacity for fur seals was reduced. The population size stabilized at or near carrying capacity in the late 1960s and early 1970s at about 1.3 million individuals (pup production about 328,000).

Entanglement in net debris, which began to increase in 1970 and peaked in 1975, caused a density independent mortality that reduced the population somewhat below carrying capacity. Using measures of average pup production on St. Paul Island for 1964-1976 (264,478) and 1980-1987 (180,715), we estimate that the present population is above 68 percent of the most recent (early 1970s) carrying capacity level. The population therefore is above the generally accepted level which produces MNPL, and does not qualify for classification as depleted under the terms of the NMPA.

NMFS has concluded, based on the same data, that the Pribilof Island population is a less than 60 percent of the carrying capacity observed during the 1940s-1950s. The commercial harvest of females during 1956-68 cannot be considered to have permanently reduced the carrying capacity of this environment. Using

ADF&G's logic, the current situation (800,00 population) could represent a second reduction in carrying capacity caused by debris entanglement and associated with coincident declines in Steller sea lions and seabirds. On the contrary, carrying capacity is not a sliding index of current population size.

ADF&G recommends against a depletion designation because "designating the population as depleted would needlessly limit the options available for managing fur seals, would affect management of other valuable marine resources, and could substantially impact the lives of Alaskans on the Pribilof Islands and elsewhere."

Another commenter questioned the assumption that the carrying capacity has probably not changed since the 1950s.

First and most obvious, the fishery resources—bottom fish, shellfish, finfish, and all species in between—have been the subject of all time high exploitation effort during the years since World War II. Fishermen have become more plentiful, more productive and more thorough about using the resources. Whole fisheries in the fur seal migratory area have come and gone during this period, such as king crab in the Pribilof area, and the shrimp fishery. Halibut in the Bering Sea have declined and returned in this period.

Based on his experience with the North Pacific Fishery Management Council, this commenter believes that reliable resource assessment in the Bering Sea is "a near impossibility" because of the existence of the unclaimed "donut hole" which raises doubts about the abundance of resources. He believes we must "address the Bering Sea as one ecosystem." He feels that the depletion designation "ought not to be made before the entire intent and purpose of NMPA is reexamined by the Congress this year."

The International Association of Fish and Wildlife Agencies (IAFWA) renewed its concern about the NMFS' "ill supported expedient to employ the Marine Mammal Protection Act in the absence of a Treaty extension for North Pacific Fur Seals." This subject was addressed in section (a)(5) above. IAFWA also endorsed ADF&G's comments and "embrace[s] the hypothesis that carrying capacity is dynamic and that the numbers and production of fur seals is a product of carrying capacity within the region."

The Alaska Factory Trawler Association is concerned about the impact of a depletion designation on commercial fishing. The Association renewed its previous comments in light of recent court decisions on Dall's

porpoise. This subject is discussed in section (b)(3) above. The Department of the Interior provided a list of publications on the Bering Sea ecosystem that were developed in association with outer continental shelf oil and gas development proposals.

Dr. Venrick, the senior author of the *Science* article, discussed above, commented that extrapolation of her results into the Bering Sea is "Completely unjustified." Regarding the possible effects of climate on fur seals, Dr. Venrick states:

The global connections between ocean and atmosphere are such that the changes observed in the Central Pacific may, in fact, be accompanied by climatological changes in the Bering Sea. However, the direction of this relationship and the relative timing of the changes in the two environments are totally unknown. It is quite possible that winter storminess in the Bering Sea decreased rather than increased, or that the change in the Bering Sea preceded or followed the changes in the Central Pacific by several years.

NMFS had postulated that increased storminess could have affected fur seals in the Bering Sea and also throughout their range in the North Pacific Ocean. Female seals and juveniles of both sexes migrate through the Aleutian passes and along the coasts of Alaska, Canada, Washington, Oregon and California. NMFS did not intend to confine the consideration of a possible correlation between fur seal mortality and storm activity to the Bering Sea only, as has been assumed by this commenter.

Four other commenters also challenged the use of Venrick et al. (1987) to justify a reconsideration of the depletion designation. Greenpeace believes that the results "cannot be extrapolated to the Gulf of Alaska, the Bering Sea and coastal NEP [North Eastern Pacific] regions, where most northern fur seals of the Pribilof stock live and migrate \* \* \* Venrick and colleagues' maps, as well as other studies show clearly that temperature and winter storm trends behaved differently in the CNP [Central North Pacific], NEP coastal waters and Bering Sea, respectively."

Greenpeace argues against the assumption that storminess may affect carrying capacity for fur seals. They provide references to support conclusions that coastal sea surface temperatures increased and storminess decreased in the North Pacific, "SST of Gulf of Alaska and NEP coastal waters increased during the past 10-15 years (Tabata, 1983; Xiang and Payer, 1983; Mysak, 1986) \* \* \* Winter storminess has decreased along the NEP shelf south of 58 degrees N. (see Figure 3 in Venrick

et al. 1987) \* \* \*." Greenpeace states that "the oceanographic and biological connections between the CNP and coastal NEP, Gulf of Alaska and Bering Sea do not exist in the way the Notice claims and therefore cannot be applied to northern fur sea population dynamics." Regarding the possible effect of winter storms on fur seal carrying capacity, Greenpeace argues "[w]inter storms, those shown by Venrick et al. (1987) to have increased in strength, do not affect most females and younger males, since they migrate south to areas where winter storminess has actually decreased in recent years \* \* \*." Greenpeace concludes that "no claim for a causal mechanism connecting abiotic factors to fur seal population dynamics can be made at this time."

Friends of Animals/Committee for Humane Legislation commented on this subject and concluded as follows:

The Venrick research focuses on an oligotrophic environment located above ocean areas of profound depth. The northern fur seals inhabit a highly productive environment in the relatively shallow waters above the continental shelf. These two ecosystems are very dissimilar and the findings made in one should not be applied to the ecological dynamics of another without very considerable caution and substantive scientific corroboration which, as yet, does not exist.

Friends of the Sea Otter commented that this "new" information "should simply confirm our inability to predict the future with any great measure of confidence and reaffirm our responsibility to manage as conservatively as possible." They further conclude:

We certainly hope this tortured analysis will be promptly put aside and the depletion designation finalized without further delay—not only for the sake of the fur seals themselves (as well as other species which could be jeopardized by such a dismal precedent), but also for the sake of maintaining the credibility of the United States' commitment to marine mammal protection at home and abroad.

The Humane Society of the United States (HSUS) submitted pleadings and exhibits previously filed in the civil action mentioned above. HSUS commented that this material supports HSUS's continuing position that "the Pribilof Island fur seal is a depleted population stock and that the decision to reopen the comment period was improper." Copies of all briefs filed in this case and exhibits are available for inspection during normal business hours in Room 803b, 1852 Connecticut Ave. NW., Washington, DC.

HSUS submitted as an exhibit the declaration of Dr. David M. Lavigne concerning the carrying capacity for North Pacific fur seals. Dr. Lavigne concluded that

Our knowledge of this species exceeds that of almost all other marine mammal populations. Nonetheless, the study of marine mammal populations is necessarily based on estimates, approximations and predictions, since the size and behavior of large wildlife populations, particularly those that spend a large part of their lives at sea, can never be determined with absolute precision. Within the limits of marine mammal biology, however, the conclusion that the Pribilof Island fur seal population is currently below 50 percent of its estimated carrying capacity and, thus, less than the population size necessary to produce maximum net productivity, is well supported by the available evidence.

And, finally, the Center for Environmental Education commented that

The supplementary information does not offer the kind of new evidence sufficient to justify the reversal of a long-standing scientific finding about how fur seals respond to their environment. Hypotheses, as stated in the Supplementary Information, that sea surface temperatures, and food resource reductions are responsible for the mortality of young fur seals at sea appear to be so speculative that they are not considered viable subjects of research by seal scientists or the agency in setting its funding priorities.

#### Classification

The NOAA Administrator determined that this rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. This rule will not result in (a) an annual effect on the economy of \$100 million or more; (b)

a major increase in costs or prices; or (c) a significant adverse effect on the U.S. economy. This rule will have no economic effects except those nondiscretionarily mandated by statute. Consequently, the General Counsel of the Department of Commerce certified to the Small Business Administration that this rule will not have a significant economic impact on a substantial number of small entities. Additionally, this rule does not contain a collection of information requirement subject to the Paperwork Reduction Act.

A designation of depletion in this instance, which is similar to a listing action under section 4(a) of the ESA, is categorically excluded from the requirement to prepare an environmental assessment (EA) or an environmental impact statement (EIS) (NOAA Directives Manual 02-10 Environmental Review Procedures, 49 FR 29647, para. 5.c.(3)(h), implementing the National Environmental Policy Act of 1969 (NEPA)). A decision on the status of this population relative to its OSP is a biological determination. Once the population is found to be below OSP, it is, by definition, depleted. Thus, NMFS has no discretion to deviate from this biological determination on the basis of potential impacts on the human environment. Any regulations or major actions resulting from the depletion designation, however, would be subject to the requirement to prepare an EA or EIS. A 1985 EIS was prepared on the fur seal Convention which includes a complete review of the environment of the Pribilof Islands, and EAs were published in July 1985 and May 1986 to assess impacts of the subsistence taking of fur seals on the Pribilof Islands.

Copies of these NEPA documents are available from the information contact listed above.

This final rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612.

#### List of Subjects in 50 CFR Part 216

Administrative practices and procedure, Marine mammals, Penalties, Reporting and recordkeeping requirement.

Dated: May 12, 1988.

James E. Douglas, Jr.,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

Accordingly, 50 CFR Part 216, Subpart A is amended as follows:

#### PART 216—[AMENDED]

1. The authority citation for Part 216 continues to read as follows:

Authority: 16 U.S.C. 1361 et seq.

2. Section 216.15 is revised to read as follows:

#### § 216.15 Depleted species.

The following species or population stocks have been designated by the Assistant Administrator as depleted under the provisions of the Act.

(a) Hawaiian monk seal (*Monachus schauinslandi*).

(b) Bowhead whale (*Balaena mysticetus*).

(c) North Pacific fur seal (*Callorhinus ursinus*), Pribilof Island population.

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