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STELLER SEA LION (*Eumetopias jubatus*): Western U. S. Stock

STOCK DEFINITION AND GEOGRAPHIC RANGE

Steller sea lions range along the North Pacific Rim from northern Japan to California (Loughlin et al. 1984), with centers of abundance and distribution in the Gulf of Alaska and Aleutian Islands, respectively. The species is not known to migrate, but individuals disperse widely outside of the breeding season (late May-early July), thus potentially intermixing with animals from other areas. Despite the wide-ranging movements of juveniles and adult males in particular, exchange between rookeries by breeding adult females and males (other than between adjoining rookeries) appears low (NMFS 1995).

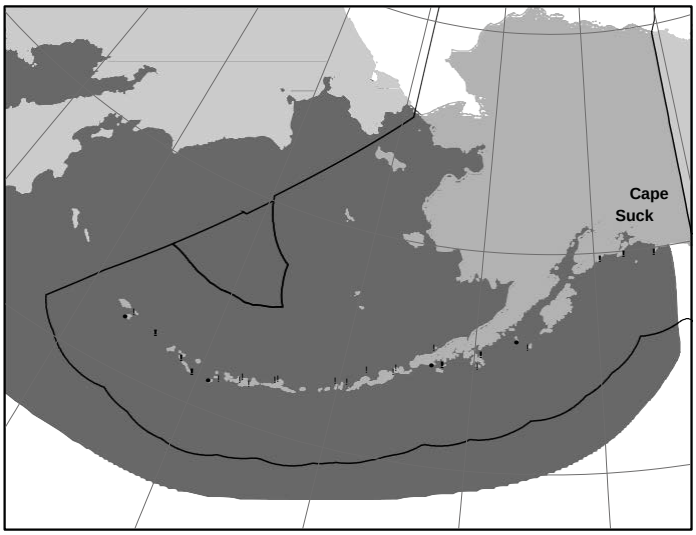

Figure 1. Approximate distribution of Steller sea lions in the eastern North Pacific (shaded area). Major haulouts and rookeries are also depicted (points).

Loughlin (1997) considered the following information when classifying stock structure based on the phylogeographic approach of Dizon et al. (1992): 1) Distributional data: geographic distribution continuous, yet a high degree of natal site fidelity and low (<10%) exchange rate of breeding animals between rookeries; 2) Population response data: substantial differences in population dynamics (York et al. 1996); 3) Phenotypic data: unknown; and 4) Genotypic data: substantial differences in mitochondrial DNA (Bickham et al. 1996). Based on this information, two separate stocks of Steller sea lions are now recognized within U. S. waters: an eastern U. S. stock, which includes animals east of Cape Suckling, Alaska (144(W), and a western U. S. stock, which includes animals at and west of Cape Suckling (Loughlin 1997, Fig. 1).

POPULATION SIZE

The most recent comprehensive estimate (pups and non-pups) of abundance of the western stock of Steller sea lions in Alaska is based on aerial surveys of non-pups in June 2004 and ground-based pup counts in June and July of 2001-2004 (NMML unpublished data). Data from these surveys represent actual counts of pups and non-pups at all rookeries and major haul-out sites. During the 2004 aerial survey, a total of 29,037 non-pups were counted at 262 rookeries and haul-out sites; 13,892 in the Gulf of Alaska and 15,145 in the Bering Sea/Aleutian Islands (NMML, unpublished data). A composite pup count for 2001-2004 includes counts from 2 sites in 2001, 14 sites in 2002, 16 sites in 2003, and 18 sites in 2004. There were 4,192 pups counted in the Gulf of Alaska and 5,284 pups counted in the Bering Sea/Aleutian Islands for a total of 9,476 for the stock. Combining the pup count data from 2001-2004 (9,476) and non-pup count data from 2004 (29,037) results in a minimum abundance estimate of 38,513 Steller sea lions in the western U.S. stock in 2001-2004.

Steller sea lions in Russia are, at this time, part of the western stock. However, estimates of the abundance are not provided for the Russian portion of the stock because preliminary results of genetics data indicates that the Russian animals may constitute a separate stock and because the counting methods are not consistently employed in both Alaska and Russia.

The 4.5 multiplier (4.5 times the best estimate of pup production) used for estimating the size of the eastern stock of Steller sea lions is not appropriate for use in estimating the abundance of the western stock. The 4.5 multiplier is based on a life history table using age-specific fecundity and survival for a stable population. Clearly, because the western stock has declined drastically, the assumption of a stable population is not valid. In addition, the use of the 4.5 multiplier assumes that pup counts are readily available; however, pup counts are only conducted in the Central and Western Aleutians every 4-5 years.

Minimum Population Estimate

The 2004 count of non-pups (29,037) plus the number of pups in 2001-2004 (9,476) is 38,513, which will be used as the minimum population estimate (N_{MIN}) for the western U. S. stock of Steller sea lion (Wade and Angliss 1997). This is considered a minimum estimate because it has not been corrected to account for animals that were at sea during the surveys.

Current Population Trend

The first reported trend counts (an index to examine population trends) of Steller sea lions in Alaska were made in 1956-60. Those counts indicated that there were at least 140,000 (no correction factors applied) sea lions in the Gulf of Alaska and Aleutian Islands (Merrick et al. 1987). Subsequent surveys indicated a major population decrease, first detected in the eastern Aleutian Islands in the mid-1970s (Braham et al. 1980). Counts from 1976 to 1979 indicated about 110,000 sea lions (no correction factors applied, Table 1). The decline appears to have spread eastward to the Kodiak Island area during the late 1970s and early 1980s, and then westward to the central and western Aleutian Islands during the early and mid-1980s (Merrick et al. 1987, Byrd 1989). The greatest declines since the 1970s occurred in the eastern Aleutian Islands and western Gulf of Alaska, but declines also occurred in the central Gulf of Alaska and central Aleutian Islands. Counts of Steller sea lions at trend sites for the western U. S. stock decreased 40% from 1991 to 2000 (Table 1), an average annual decline of 5.4% (Loughlin and York 2000).

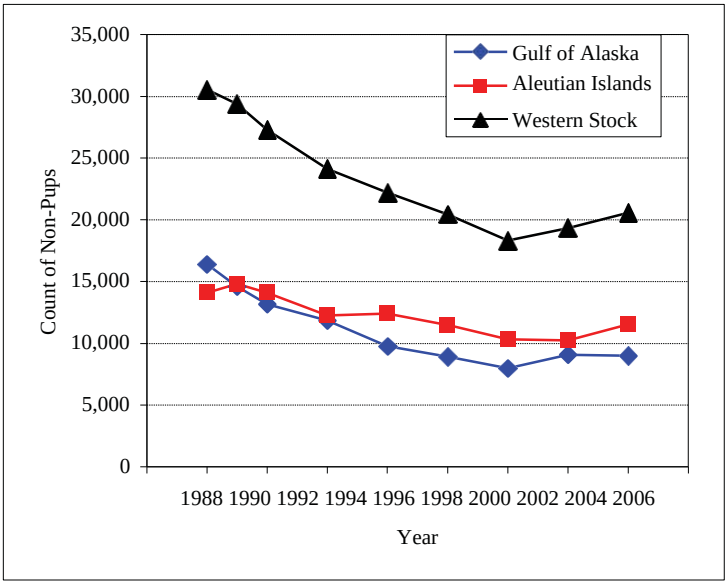

Figure 2. Counts of adult and juvenile Steller sea lions at rookery and haulout trend sites throughout the range of the western U.S. stock, 1990-2004. Correction factor applied to 2004 count for film format differences (Fritz and Stinchcomb 2005).

Recently, counts of non-pup Steller sea lions at trend sites for the western U.S. stock increased 5.5% from 2000 to 2002, and at a similar rate between 2002 and 2004 (Table 1, Fig. 2). These were the first region-wide increases for the western stock since standardized surveys began in the 1970s. However, the 2004 count was still 7.4% below the 1996 count and 32.6% below the 1990 count. The long-term, average decline for 1991-04 is 3.1% per year (NMML unpublished data).

Table 1. Counts of adult and juvenile Steller sea lions observed at rookery and haulout trend sites by year and geographical area for the western U. S. stock from the late 1970s through 2004 (NMFS 1995, Sease et al. 2001, NMML unpublished data). Counts from 1976 to 1979 (NMFS 1995) were combined to produce complete regional counts that are comparable to the 1990-04 data. The asterisk identifies 637 non-pups counted at six trend sites in 1999 in the eastern Gulf of Alaska which were not surveyed in 1998. 2004 data reflect a 3.5% reduction from actual counts to account for differences in survey protocol in 2004 relative to previous years. Actual 2004 trend site counts were: Gulf of Alaska – 9,332; Bering Sea/Aleutian Islands – 11,977; Total – 21,309.

Area	late 1970s	1990	1991	1992	1994	1996	1998	2000	2002	2004
Gulf of Alaska	65,296	16,409	14,598	13,193	11,862	9,784	8,937*	7,995	9,087	9,005
Bering Sea/Aleutians	44,584	14,116	14,807	14,106	12,274	12.426	11,501	10,330	10,25	11,558
Total	109,880	30,525	29,405	27,299	24,136	22,210	20,438*	18,325	19,340	20,563

CURRENT AND MAXIMUM NET PRODUCTIVITY RATES

There are no estimates of maximum net productivity rate for Steller sea lions. Hence, until additional data become available, it is recommended that the theoretical maximum net productivity rate (R_{MAX}) for pinnipeds of 12% be employed for this stock (Wade and Angliss 1997).

POTENTIAL BIOLOGICAL REMOVAL

Under the 1994 reauthorized Marine Mammal Protection Act (MMPA), the potential biological removal (PBR) is defined as the product of the minimum population estimate, one-half the maximum theoretical net productivity rate, and a recovery factor: $PBR = N_{MIN} + 0.5R_{MAX} + F_R$. However, it should be noted that the PBR management approach was developed with the understanding that direct human-related mortalities would be the primary reason for observed declines in abundance for marine mammal stocks in U. S. waters. For at least this stock, this assumption seems unwarranted. The recovery factor (F_R) for this stock is 0.1, the default value for stocks listed as "endangered" under the Endangered Species Act (Wade and Angliss 1997). Thus, for the western U. S. stock of Steller sea lions, PBR = 231 animals (38,513 + 0.06 + 0.1).

ANNUAL HUMAN-CAUSED MORTALITY AND SERIOUS INJURY

Fisheries Information

Until 2003, there were six different federally regulated commercial fisheries in Alaska that could have interacted with Steller sea lions. These fisheries were monitored for incidental mortality by fishery observers. As of 2003, changes in fishery definitions in the List of Fisheries have resulted in separating these six fisheries into 22 fisheries (69 FR 70094, 2 December 2004). This change does not represent a change in fishing effort, but provides managers with better information on the component of each fishery that is responsible for the incidental serious injury or mortality of marine mammal stocks in Alaska. Between 1999-2003, there were incidental serious injuries and mortalities of western Steller sea lions in the following fisheries: Bering Sea/Aleutian Islands Atka mackerel trawl, Bering Sea/Aleutian Islands flatfish trawl, Bering Sea/Aleutian Islands Pacific cod trawl, Bering Sea/Aleutian Islands pollock trawl, Gulf of Alaska Pacific cod trawl, Gulf of Alaska pollock trawl, and Bering Sea/Aleutian Islands Pacific cod longline (Table 2). Estimates of marine mammal serious injury/mortality in each of these observed fisheries are provided in Perez (in review).

Observers also monitored the Prince William Sound salmon drift gillnet fishery in 1990 and 1991, recording 2 mortalities in 1991, extrapolated to 29 (95% CI 1-108) kills for the entire fishery (Wynne et al. 1992). No mortalities were observed during 1990 for this fishery (Wynne et al. 1991), resulting in a mean kill rate of 14.5 (CV = 1.0) animals per year for 1990 and 1991. In 1990, observers boarded 300 (57.3%) of the 524 vessels that fished in the Prince William Sound salmon drift gillnet fishery, monitoring a total of 3,166 sets, or roughly 4% of the estimated number of sets made by the fleet. In 1991, observers boarded 531 (86.9%) of the 611 registered vessels and monitored a total of 5,875 sets, or roughly 5% of the estimated sets made by the fleet (Wynne et al. 1992). The Alaska Peninsula and Aleutian Islands salmon drift gillnet fishery was also monitored during 1990 (roughly 4% observer coverage) and no Steller sea lion mortalities were observed. It is not known whether these incidental mortality levels are representative of the current incidental mortality levels in these fisheries.

An observer program for the Cook Inlet salmon set and drift gillnet fisheries was implemented in 1999 and 2000 in response to the concern that there may be significant numbers of marine mammal injuries and mortalities that occur incidental to these fisheries. Observer coverage in the Cook Inlet drift gillnet fishery was 1.75% and 3.73% in 1999 and 2000, respectively. The observer coverage in the Cook Inlet set gillnet fishery was 7.3% and 8.3% in 1999 and 2000, respectively (Manly in review). There were no mortalities of Steller sea lions observed in the set or drift gillnet fisheries in either 1999 or 2000 (Manly in review). Because information from observer programs is substantially more reliable than information from self-reported data, NMFS has removed the reference to self-reported data for these fisheries from Table 3 and will rely on the 1999-2000 observer program data as an accurate reflection of the level of Steller sea lion mortality in this fishery. An observer program conducted for a portion of the Kodiak drift gillnet fishery in 2002 did not observe any serious injuries or mortalities of Steller sea lions, although Steller sea lions were frequently observed in the vicinity of the gear (Manly et al. in review).

Combining the mortality estimates from the Bering Sea and Gulf of Alaska groundfish trawl and Gulf of Alaska longline fisheries presented above (10.6) with the mortality estimate from the Prince William Sound salmon drift gillnet fishery (14.5) results in an estimated mean annual mortality rate in the observed fisheries of 25.1 (CV = 0.58) sea lions per year from this stock.

Table 2. Summary of incidental mortality of Steller sea lions (western U. S. stock) due to commercial fisheries from 1990 through 2003 and calculation of the mean annual mortality rate. Mean annual mortality in brackets represents a minimum estimate from self-reported fisheries information. Data from 1999 to 2003 (or the most recent 5 years of available data) are used in the mortality calculation when more than 5 years of data are provided for a particular fishery. N/A indicates that data are not available. Details of how percent observer coverage is measured is included in Appendix 6. * Data from the 1999 Cook Inlet observer program are preliminary.

Fishery name	Years	Data type	Range of observer coverage	Observed mortality (in given yrs.)	Estimated mortality (in given yrs.)	Mean annual mortality
Bering Sea/Aleutian Is. Atka mackerel trawl	1999 2000 2001 2002 2003	obs data	77.2 86.3 82.4 98.3 95.3	3 1 1 0 1	4 1 1 0 1	1.51 (CV = 0.19)
Bering Sea/Aleutian Is. flatfish trawl	1999 2000 2001 2002 2003	obs data	66.3 64.5 57.6 58.4 64.1	1 3 4 1 1	1 4 6 2 1	3.35 (CV = 0.17)
Bering Sea/Aleutian Is. Pacific cod trawl	1999 2000 2001 2002 2003	obs data	50.6 51.7 57.8 47.4 49.9	1 0 0 0 2	1 0 0 0 4	1.09 (CV = 0.58)
Bering Sea/Aleutian Is. pollock trawl	1999 2000 2001 2002 2003	obs data	75.2 76.2 79.0 80.0 82.2	2 2 2 3 0	3 4 3 3 0	2.72 (CV = 0.12)
Gulf of Alaska Pacific cod trawl	1999 2000 2001 2002 2003	obs data	16.4 13.5 20.3 23.2 27.2	0 0 1 0 0	0 0 5 0 0	0.94 (CV = 0.83)
Gulf of Alaska pollock trawl	1999 2000 2001 2002 2003	obs data	31.7 27.5 17.6 26.0 31.2	0 0 0 0 1	0 0 0 0 2	0.48 (CV = 0.96)
Bering Sea/Aleutian Is. Pacific cod longline	1999 2000 2001 2002 2003	obs data	31.8 35.2 29.5 29.6 29.9	0 0 0 1 0	0 0 0 4 0	0.74 (CV = 0.86)
Prince William Sound salmon drift gillnet	90-91	obs data	4-5%	0, 2	0, 29	14.5 (CV = 1.0)
Prince William Sound salmon set gillnet	90	obs data	3%	0	0	0
Alaska Peninsula/Aleutian Islands salmon drift gillnet	90	obs data	4%	0	0	0
Cook Inlet salmon set gillnet*	99-00	obs data	2-5%	0, 0	0, 0	0

Fishery name	Years	Data type	Range of observer coverage	Observed mortality (in given yrs.)	Estimated mortality (in given yrs.)	Mean annual mortality
Cook Inlet salmon drift gillnet*	99-00	obs data	2-5%	0, 0	0, 0	0
Observer program total						25.3 (CV = 0.58)
				Reported mortalities		
Alaska Peninsula/Aleutian Islands salmon set gillnet	90-03	self reports	N/A	0, 1, 1, 1 1994-03: N/A	N/A	[Ķ0.75]
Bristol Bay salmon drift gillnet	90-03	self reports	N/A	0, 4, 2, 8 1994-03: N/A	N/A	[Ķ3.5]
Prince William Sound set gillnet	90-03	self reports	N/A	0, 0, 2, 0 1994-03: N/A	N/A	[Ķ0.5]
Alaska miscellaneous finfish set gillnet	90-03	self reports	N/A	0, 1, 0, 0 1994-03: N/A	N/A	[Ķ0.25]
Alaska halibut longline (state and federal waters)	90-03	self reports	N/A	0, 0, 0, 0, 1 1995-03: N/A	N/A	[Ķ0.2]
Alaska sport salmon troll (non-commercial)	93-03	strand	N/A	0, 0, 0, 0, 1, 0, N/A, N/A, N/A, 1, N/A	N/A	[Ķ0.2]
Miscellaneous fishing gear	99-03	strand	N/A	N/A, N/A, N/A, N/A, 1	N/A	[Ķ0.2]
Minimum total annual mortality						30.9 (CV = 0.58)

An additional source of information on the number of Steller sea lions killed or injured incidental to commercial fishing operations is the self-reported fisheries information required of vessel operators by the MMPA. Some incidental takes of sea lions reported in the Gulf of Alaska fisheries were listed as "unknown species", indicating the animals could have been either Steller or California sea lions. Based on all logbook reports for both species within the Gulf of Alaska, California sea lions represented only 2.2% of all interactions. Thus, the reports of injured and killed "unknown" sea lions were considered to be Steller sea lions. During the period between 1990 and 2003, fisher self-reports from 6 unobserved fisheries (see Table 2) resulted in an annual mean of 5.4 mortalities from interactions with commercial fishing gear. However, because logbook records (fisher self-reports required during 1990-94) are most likely negatively biased (Credle et al. 1994), these are considered to be minimum estimates. These totals are based on all available self-reports for Alaska fisheries, except the groundfish trawl and longline fisheries in the Bering Sea, Aleutian Islands, and Gulf of Alaska, and the Prince William Sound salmon drift gillnet fishery for which observer data were presented above. The Bristol Bay salmon drift gillnet and set gillnet fisheries accounted for the majority of the reported incidental takes in unobserved fisheries. Logbook data are available for part of 1989-1994, after which incidental mortality reporting requirements were modified. Under the new system, logbooks are no longer required; instead, fishers provide self-reports. Data for the 1994-95 phase-in period are fragmentary. After 1995, the level of reporting dropped dramatically, such that the records are considered incomplete and estimates of mortality based on them represent minimums (see Appendix 7 for details).

Reports from the NMFS stranding database of Steller sea lions entangled in fishing gear or with injuries caused by interactions with gear are another source of mortality data. During the 5-year period from 1999 to 2003, there was only one confirmed fishery-related Steller sea lion stranding in the range of the western stock. This sighting involved an animal at Round Island with netting or rope around its neck; no more specific information is available on the type of fishing gear involved. In addition to this incident, a Steller sea lion was entangled in a large flasher/spoon in 1998. It is likely that this injury occurred as a result of a sport fishery, not a commercial fishery (Table 2). There are sport fisheries for both salmon and shark in this area; there is no way to distinguish between them since both fisheries use a similar type of gear (J. Gauvin, Groundfish Forum, Inc., pers. comm.). Fishery-related strandings during 1999-03 result in an estimated annual mortality of 0.2 animals from this stock. This estimate is considered a minimum because not all entangled animals strand and not all stranded animals are found or

reported. Steller sea lions reported in the stranding database as shot are not included in this estimate, as they may result from animals struck and lost in the Alaska Native subsistence harvest.

NMFS studies using satellite tracking devices attached to Steller sea lions suggest that they rarely go beyond the U.S. Exclusive Economic Zone into international waters. Given that the high-seas gillnet fisheries have been prohibited and other net fisheries in international waters are minimal, the probability that Steller sea lions are taken incidentally in commercial fisheries in international waters is very low. NMFS concludes that the number of Steller sea lions taken incidental to commercial fisheries in international waters is insignificant.

The minimum estimated mortality rate incidental to commercial fisheries is 30.9 sea lions per year, based on observer data (25.3) and self-reported fisheries information (5.6) or stranding data (0.2) where observer data were not available. No observers have been assigned to several fisheries that are known to interact with this stock (self reported data from these fisheries are provided in Table 2), making the estimated mortality a minimum estimate.

Subsistence/Native Harvest Information

The 2000-03 subsistence harvest of Steller sea lions in Alaska was estimated by the Alaska Department of Fish and Game, under contract with the NMFS (Table 3a: Wolfe et al. 2002; J. Fall, ADF&G, pers. comm.). In each year, data were collected through systematic interviews with hunters and users of marine mammals in approximately 2,100 households in about 60 coastal communities within the geographic range of the Steller sea lion in Alaska. The great majority (approximately 99%) of the statewide subsistence take was from the western U. S. stock and the majority (79%) of this take was by Aleut hunters in the Aleutian and Pribilof Islands. Real-time monitoring of Steller sea lion harvest involves monitoring of harvest information directly after the harvest, and occurs on one of the Pribilof Islands, St. Paul Island. Results are summarized and reported annually (Lestenkof et al. 2003, Zavadil et al. 2003, Zavadil et al. 2004), and are used as the source of the Steller sea lion subsistence harvest estimates in the annual ADF&G report (e.g., Wolfe et al. 2004), and are reported separately here because of the different methods of data collection (Table 3b). The mean annual subsistence take from this stock over the 4 year period from 2000-03, excluding the harvest on St. Paul Island, was 162 sea lions, and the mean annual subsistence take from this stock on St. Paul Island during this period was 25.3 sea lions per year (Zavadil et al. 2004), for a total mean subsistence harvest of 187.3 Steller sea lions/year.

Table 3a. Summary of the subsistence harvest data for the western U. S. stock of Steller sea lions for all areas except St. Paul Island, 2000-03, using the hunter interview method (Wolfe et al. 2002, Wolfe et al. 2004). Subsistence harvest data for 2002 data are preliminary.

Year	Estimated total number taken	Number harvested	Number struck and lost
2000	145.3	127	18.3
2001	174.3	144.1	30.2
2002	141.8	118.9	22.9
2003	186.6	149.7	36.9
Mean annual take 2000-03	162		

Table 3b. Summary of the subsistence harvest data for St. Paul Island using real-time monitoring (Zavadil et al. 2004).

Year	Estimated total number taken	Number harvested	Number struck and lost
2000	23	N/A	N/A
2001	24	12	12
2002	36	18	18
2003	18	13	5
Mean annual take 2000-03	25.3		

Other Mortality

Illegal shooting of sea lions was thought to be a potentially significant source of mortality prior to the listing of sea lions as "threatened" under the U.S. Endangered Species Act (ESA) in 1990. Such shooting has been illegal since the species was listed as threatened. (Note: the 1994 Amendments to the MMPA made intentional lethal take of any marine mammal illegal except for subsistence take by Alaska Natives or where imminently necessary to protect human life). Records from NMFS enforcement indicate that there were 2 cases of illegal shootings of Steller sea lions in the Kodiak area in 1998, both of which were successfully prosecuted (NMFS, Alaska Enforcement Division). There have been no cases of successfully prosecuted illegal shootings between 1999 and 2003 (NMFS, Alaska Enforcement Division).

STATUS OF STOCK

The current annual level of incidental mortality (30.9) exceeds 10% of the PBR (23) and, therefore, cannot be considered insignificant and approaching a zero mortality and serious injury rate. Based on available data, the estimated annual level of total human-caused mortality and serious injury (30.9 + 187 = 217.9) is below the PBR level (231) for this stock. The western U. S. stock of Steller sea lion is also currently listed as "endangered" under the ESA, and therefore designated as "depleted" under the MMPA. As a result, the stock is classified as a strategic stock. However, given that the population is declining for unknown reasons that are not explained by the level of direct human-caused mortality, there is no guarantee that limiting those mortalities to the level of the PBR will reverse the decline.

A number of management actions were implemented between 1990 and 1998 to promote the recovery of the western U. S. stock of Steller sea lions, including 3 nautical mile (nmi) no-entry zones around rookeries, prohibition of groundfish trawling within 10-20 nmi of certain rookeries, and spatial and temporal allocation of Gulf of Alaska pollock and Aleutian Island Atka mackerel total allowable catch. Recent modifications finalized in 2002 involve a complex set of regulations that changed the temporal and spatial distribution of the pollock, Pacific cod and Atka mackerel fisheries throughout the range of the western stock in U.S waters. These measures were reviewed by NMFS (2003).

Habitat Concerns

The unprecedented decline in the western U. S. stock of Steller sea lion caused a change in the listing status of the stock from "threatened" to" endangered" under the U. S. Endangered Species Act of 1973. Survey data collected since 2000 suggest that the decline has slowed or stopped in most of the range of the western U. S. stock. Many factors have been suggested as causes of the decline, (e.g., overfishing, environmental change, disease, killer whale predation.) but it is not clear which single or combination of factors are most important in causing the decline. However, nutritional stress related to competition with commercial fisheries is a hypothesis currently receiving serious attention.

NMFS developed a Biological Opinion (BO) on the groundfish fisheries in the Bering Sea/Aleutian Islands and Gulf of Alaska regions in 2000. In this BO, NMFS determined that the continued prosecution of the groundfish fisheries as described in the Fishery Management Plan for Bering Sea/Aleutian Islands Groundfish and in the Fishery Management Plan for Gulf of Alaska Groundfish is likely to jeopardize the continued existence of the western population of Steller sea lion and to adversely modify critical habitat. NMFS also identified several other factors that could contribute to the decline of the population, including a shift in a large-scale weather regime and predation. To avoid jeopardy, NMFS identified a Reasonable and Prudent Alternative that included components such as 1) adoption of a more precautionary rule for setting "global" harvest limits, 2) extension of 3 nmi protective zones around rookeries and haulouts not currently protected, 3) closures of many areas around rookeries and haulouts to 20 nmi, 4) establishment of 4 seasonal catch limits inside critical habitat and two seasonal releases outside of critical habitat, and 5) establishment of a procedure for setting limits on removal levels in critical habitat based on the biomass of target species in critical habitat.

NMFS completed a draft Supplemental Environmental Impact Statement (SEIS) in September 2000 for the groundfish fisheries in the Bering Sea Aleutian Islands and the Gulf of Alaska. Based on the potential for indirect interactions between the groundfish fisheries and Steller sea lions, northern fur seals, and harbor seals, NMFS determined that the current practices involved in the management of the groundfish fishery in Alaska "may have adverse impacts on the western U. S. stock of Steller sea lions, northern fur seals in the Bering Sea, and both the GOA and western stocks of harbor seals". However, the SEIS was determined to be incomplete in a Federal District Court ruling and remanded back to NMFS for further development.

In 2001, NMFS developed another SEIS to consider the impacts on Steller sea lions of different management regimes for the Alaska groundfish fisheries. A committee composed of 21 members from fishing groups, processor groups, Alaska communities, environmental advocacy groups, and NMFS representatives met to recommend conservation measures for Steller sea lions and to develop a "preferred alternative" for the SEIS. Although consensus was not reached, a "preferred alternative" was identified and included in the SEIS. The preferred alternative included complicated, area-specific management measures (e.g., area restrictions and closures) designed to reduce direct and indirect interactions between the groundfish fisheries and Steller sea lions, particularly in waters within 10 nmi of haulouts and rookeries. The suite of conservation measures actually implemented in 2002 were developed after working with the: 1) State of Alaska to explore whether there are potential adverse effects of state fisheries on Steller sea lions, and 2) the North Pacific Fishery Management Council to further minimize overcapitalization of fisheries and concentration of fisheries in time and space. In addition, NMFS has agreed to revise the existing recovery plan for Steller sea lions, and is working towards the development of a co management agreement with Alaska Native organizations for subsistence harvest of the western stock of Steller sea lions.

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