

**Steller Sea Lion
Population Status Review Under
the Endangered Species Act**

On November 1, 1993, NMFS initiated a formal review of available information on the Steller sea lion population to determine if listing status should be changed to endangered. In the Federal Register notice, NMFS indicated that a status determination would not be made until the 1994 sea lion population surveys were complete. Survey data are now available and indicate a continuing population decline in much of Alaska (results attached). The following provides an outline of the remaining steps NMFS will take to complete the status review, and an approximate time line for these actions.

1) The NMFS Alaska Fisheries Science Center is summarizing available information on the Steller sea lion population, and is preparing a revised population viability analysis that incorporates 1994 data. Draft reports should be completed in November; these analyses are critical components of the listing status determination.

2) NMFS plans to seek an independent peer review of questions regarding stock definition, population models, and supporting biological and ecological information for the listing status determination. NMFS will query uninvolved recognized experts, will summarize their responses in the final Federal Register notice on the listing status, and will make responses available to interested members of the public.

3) NMFS will conduct a Steller sea lion research and management program review to determine the need for changes in research direction and/or existing regulations to protect Steller sea lions. This program review will occur at three levels - within NMFS, between NMFS and the Alaska Department of Fish and Game, and by the Steller Sea Lion Recovery Team - over the next few months.

4) The Steller Sea Lion Recovery Team will meet late this fall to consider both listing status and necessary changes in the Recovery Program/Plan.

5) NMFS intends to issue a proposed status determination in late December 1994 or early January 1995. The proposed determination will summarize the supporting biological information, proposed decisions relative to research and management programs, and respond to public comments received during the comment period on the November 1, 1993 notice.

Questions regarding the status review should be addressed to Susan Mello, NMFS Alaska Region, (907) 586-7235.



UNITED STATES DEPARTMENT OF COMMERCE
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September 27, 1994

F/AKC3:RLM

MEMORANDUM FOR: Record
FROM: Richard L. Merrick
SUBJECT: 1994 Steller sea lion counts

Attached are four summary tables and a figure produced from the 1994 and preceding year's ADF&G/NMFS surveys of Steller sea lion adults, juveniles, and pups. Important points are as follows:

Adult and juvenile numbers - Tables 1-4

1. Declines were observed in overall (haul-out and rookery) trend site numbers in all Alaskan regions except SE Alaska (for which there presently are no data available) and the western GOA (numbers were stable or increasing at almost all sites in the area from the Shumagin Islands through Ugamak Island). Kenai-Kiska (K-K) area overall trend site sea lion numbers declined by 9.6% (from 20,679 to 18,702) during 1992-94 (-4.9%/year). This is a continuation of the trend observed during 1989-92 (-4%/year; Fig. 1).
2. Declines were observed in rookery numbers in all Alaskan regions except SE Alaska. Rookery numbers in the K-K area declined 12.6% (from 16,589 to 14,500) during 1992-94 (-6.5%/yr). This decline was greater than observed during 1989-92 (-4%/yr).

Pups - Table 5

1. Pup numbers decreased in all regions from 1991/92 to 1993/94 (including SE Alaska. Excluding the central AI, pup numbers in the K-K area decreased 19.5% from 1991/92 to 1993/94.
2. These declines reverse apparent stability in pup numbers observed in 4 regions (SE Alaska, eastern GOA, western GOA, and eastern AI) from 1989/90 to 1991/92. Since the last range-wide survey (1989/90) there has been a 29.2% decrease in K-K pup numbers, and a 20.7% decrease in the area from SE Alaska to the central AI.



Steller Sea Lion Trends for Alaska and the Kenai-Kiska Index Area

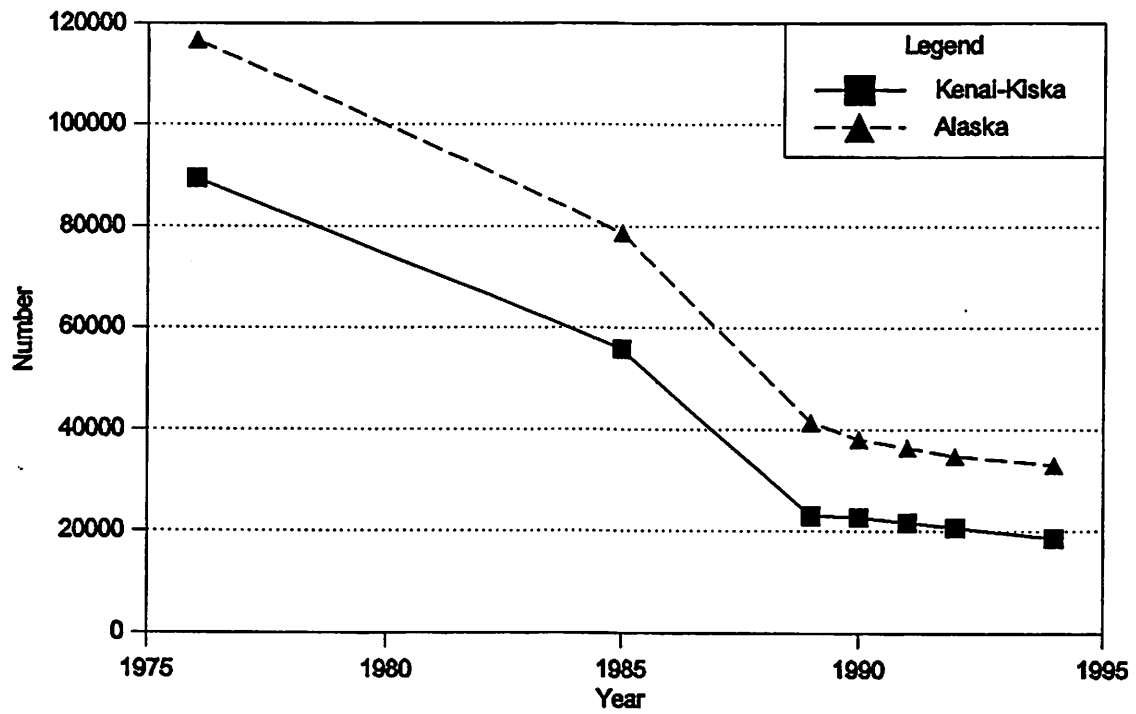


Table 1.--Percentage change in Steller sea lion adult, juvenile, and pup numbers from summer surveys conducted during 1991-94.

Area	Pups 1991/92 to 1993/94	Nonpups: 1992 to 1994: trend sites only	
		Haul-outs and rookeries	Rookeries only
Southeast Alaska	-11.1	19.1	9.3
Eastern GOA	-11.4	-10.0	-28.2
Central GOA	-27.4	-21.0	-28.1
Western GOA	-8.0	7.0	-4.8
Eastern AI	-14.9	-8.7	-5.4
Central AI	nd	-9.6	-10.0
Western AI	nd	-29.1	-28.3
All Alaska	-16.4	-5.0	-10.2
Kenai-Kiska	-19.5 ¹	-9.6	-12.6

¹ Excludes central Aleutian Islands

Table 2.--Summary of nonpup Steller sea lion numbers from Alaskan trend sites.

Year	Kenai-Kiska		Alaska	
	Rookeries	All trend	Rookeries	All trend
1976	71455	89364		
1979			91699	116804
1985	39634	55824		
1989	18647	23064	31721	
1990	18694	22754	28795	38154
1991	17080	21737	27555	36459
1992	16589	20679	26854	34844
1994	14500	18702	24092	33109

Table 3.--Counts of adult and juvenile Steller sea lions observed at rookery and haul-out trend sites in seven geographic subareas of Alaska during June and July aerial surveys from 1975-1994.

Year	Southeast	Gulf of Alaska			Aleutian Islands		
	Alaska	Eastern	Central	Western	Eastern	Central	Western
1975					19,769		
1976		7,053	24,678	8,311	19,743		
1977					19,195		
1979	6,376					36,632	14,011
1982	6,898						
1985			19,002	6,275	7,505	23,042	
1989	8,471	7,241	8,552	3,908	3,032	7,572	
1990	7,629	5,444	7,050	3,915	3,801	7,988	2,327
1991	7,715	4,596	6,273	3,734	4,231	7,499	2,411
1992	7,558	3,738	5,721	3,720	4,839	6,399	2,869
1994	9,005	3,366	4,518	3,981	4,418	5,785	2,036

Table 4.--Counts of adult and juvenile Steller sea lions observed at rookery trend sites in seven geographic subareas of Alaska during June and July aerial surveys from 1975-1994.

Year	Southeast	Gulf of Alaska			Aleutian Islands		
	Alaska	Eastern	Central	Western	Eastern	Central	Western
1975							
1976		2,587	19,479	7,125	16,871		11,536
1977					17,068		
1979	4,775		22,464	10,397		27,376	
1982	5,979						
1985			12,379	4,888	6,534	15,717	
1989	6,844		6,207	3,521	2,813	6,106	2,738
1990	5,491	2,723	5,043	3,496	3,417	6,738	1,907
1991	5,786	2,570	4,337	3,235	3,519	6,095	2,013
1992	5,945	1,789	4,306	3,313	3,712	5,258	2,531
1994	6,495	1,284	3,099	3,155	3,513	4,733	1,814

Table 5.-- Mean counts of Steller sea lion pups at rookery sites in eight geographic subareas of Alaska during June and July surveys from 1979-1994.

Area	n	1979	1984-85	1989-90	1991-92	1993-94
Southeast Alaska	3	2,218	2,568	3,412	4,164	3,701
Eastern Gulf of Alaska ^a	1	545	799	562	657	582
Central Gulf of Alaska	5	19,886	14,918	5,772	4,083	2,963
Western Gulf of Alaska	4	8,616	6,435	1,857 ^b	1,923	1,770
Eastern Aleutian Islands ^c	5	nc	4,778	2,178	2,157 ^d	1,836
Central Aleutian Islands ^e	11	nc	9,170 ^f	3,699 ^g	nc	2,995
Western Aleutian Islands ^h	3	nc	nc	1,508	nc	nc
Bering Sea ⁱ	1	292	114	nc	63	61

^a Excludes Wooded Island

^b Uses Clubbing Rocks 1992 count and Pinnacle 1991 count

^c Excludes Ogchul

^d Uses average of 1990 and 1994 Adugak count, and 1990 Akutan count adjusted for survey method (skiff)

^e Excludes Semisopchnoi, Amchitka, and Agligadak

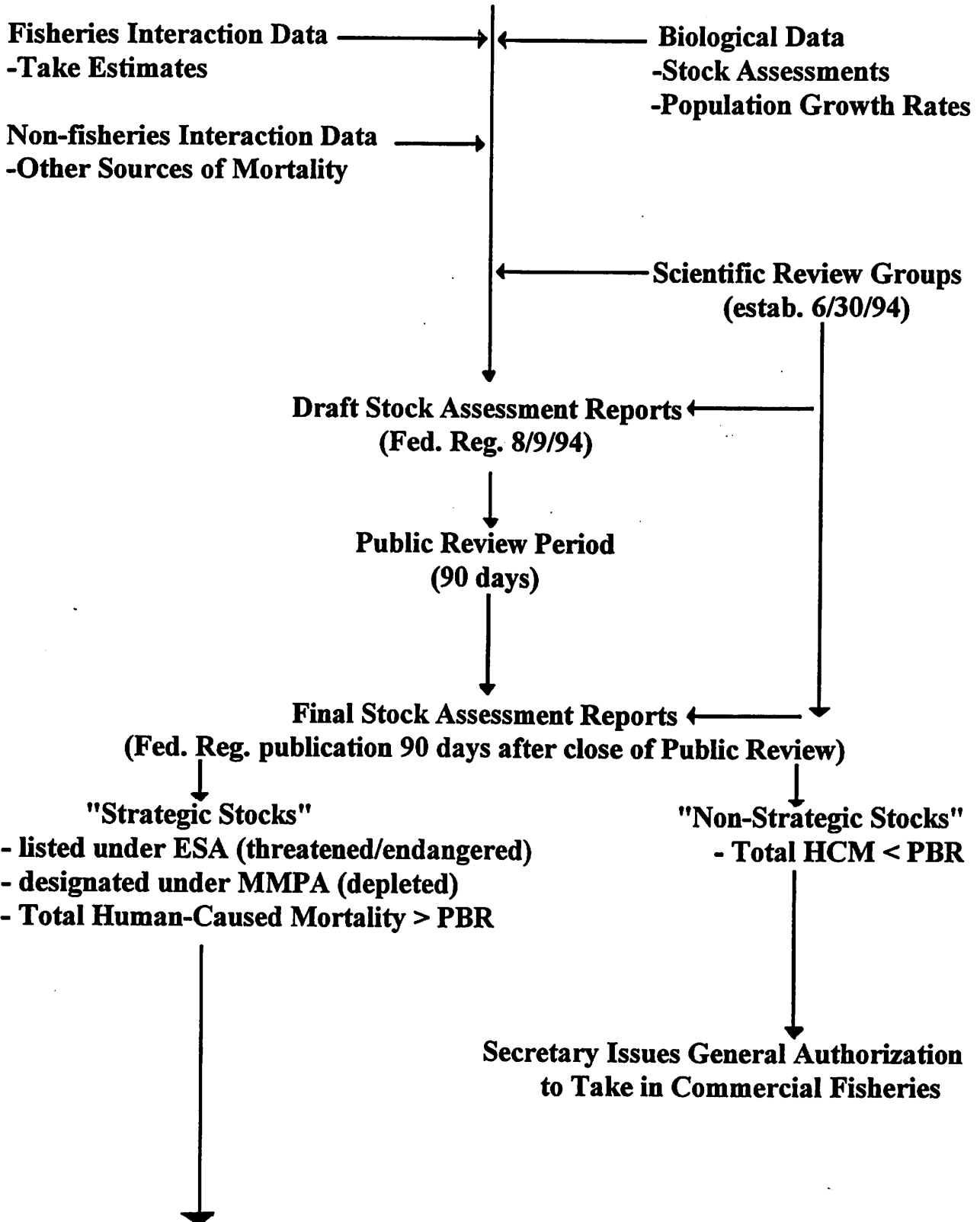
^f Excludes Cape St. Stephens.

^g Kasatochi and Adak adjusted for survey method (skiff)

^h Excludes Attu

ⁱ 1981 count used for 1979 and 1987 count used for 1984-85

**Marine Mammal Protection Act Amended
(April 30, 1994)**



"Strategic Stocks" (cont.)

**Revised List of Fisheries
-by Categories I, II and III
-identifies marine mammal
stocks taken**

**Take Reduction Teams Formed
(30 days after publication of Final Stock Assessment Reports)**

- to address takes of strategic stocks interacting with Category I or II fisheries), or
- any stock interacting with a Category I fishery

Draft Take Reduction Plans

- 180 days to submit plans for "strategic" stocks,
- 11 months for non-strategic stocks
- If zero mortality goal is met, then no take reduction plan is drafted

Public Comment Period

Final Take Reduction Plans

Goals:


- Reduce take below PBR in 6 months
- Meet the Zero mortality Goal by approaching the zero mortality rate in 7 yrs
- Where commercial fisheries are not the primary source of mortality, then reduce the level of take "to the maximum extent practicable" in 6 mos.

Take of Threatened or Endangered marine mammals allowed if:

- Impact of take will be negligible (Section 7 consultation)
- Recovery Plan is in place or in progress
- Vessels are registered in MMPA program
- Take Reduction Plan is in place or in progress

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: September 20, 1994

SUBJECT: Marine Mammals

ESTIMATED TIME

5 HOURS (all A+B)

ACTION REQUIRED

- (a) Comment on draft marine mammal stock assessments and Potential Biological Removal (PBR) workshop reports.
- (b) Receive status report on Steller sea lions.

BACKGROUND

Marine Mammal Protection Act

The 1994 Marine Mammal Protection Act Amendments required NMFS and USFWS to draft stock assessments for all marine mammal stocks that occur in U.S. waters. A workshop was convened to develop an initial approach at a consistent national interpretation of parameters used in stock assessments, including the calculation of Potential Biological Removal (PBR). PBR is defined in the amendments as "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population". NMFS is requesting comments and guidance on the preliminary methodologies proposed in the PBR workshop report. The comment period closes November 7, 1994. Information on the assessment reports and PBR workshop is provided in the attached Federal Register notice. The Council may wish to provide comments at this meeting.

Steller Sea Lions

Staff from the NMFS Marine Mammal Laboratory will report on the current status of Steller sea lions. The Steller sea lion was listed as threatened under the Endangered Species Act in 1990.

terminal and use your appropriate baud rate up to 19,200. Instructions to download files are available on screen.

FOR FURTHER INFORMATION CONTACT: Thomas C. Eagle with the Office of Protected Resources at (301) 713-2319. Or, contact James A. Balsiger at (206) 526-4000, Alaska Fisheries Science Center (F/AKC), National Marine Fisheries Service, 7600 Sand Point Way, N.E. BIN 15700, Seattle, WA 98115-0070 regarding Alaska regional stock assessments; Irma Lagomarsino at (310) 980-4020, Southwest Regional Office (F/SWO3), National Marine Fisheries Service, 501 West Ocean Boulevard, Long Beach, CA 90802-4213, regarding Pacific regional stock assessments; or Robert A. Blaylock at (305) 361-5761, Southeast Fisheries Science Center (F/SEC4), National Marine Fisheries Service, 75 Virginia Beach Drive, Miami, FL 33149-1003, or Gordon Waring at (508) 548-5123, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543-1097 for Atlantic regional stock assessments.

SUPPLEMENTARY INFORMATION:

Draft Stock Assessment Reports

On April 30, 1994 the Marine Mammal Protection Act Amendments of 1994 were enacted into law (P.L. 103-238). Under the new section 117 of the MMPA, NMFS and FWS are required to prepare, and periodically revise, stock assessments for marine mammal stocks that occur in waters under the jurisdiction of the United States. Drafts of these stock assessments were to be completed by August 1, 1994, for public review and comment.

In addition, NMFS was required to establish, by June 30, 1994, three regional, independent, Scientific Review Groups representing Alaska, the Pacific Coast (including Hawaii) and the Atlantic Coast (including the Gulf of Mexico). The Scientific Review Groups are to advise NMFS on marine mammal population dynamics and quantitative methodologies (such as those required for assessing stocks), research priorities, impacts of habitat degradation, and any other issue NMFS or the groups consider appropriate for pursuing the goals of the MMPA.

On June 30, 1994, NMFS established the three Scientific Review Groups. Each consists of ten to eleven individuals with a range of expertise in marine mammal biology and ecology, population dynamics and modeling, and commercial fishing technology and practices, and represents, to the extent feasible, a balance of viewpoints.

The draft stock assessment reports have been divided into three regions,

Alaska, Pacific and Atlantic, to correspond with the appropriate Scientific Review Group. As specified by the Amendments each report must, based on the best scientific information available:

(1) Describe the geographic range of the affected stock, including any seasonal or temporal variations in such range;

(2) Provide minimum population estimates, current and maximum net productivity rates, and the current population trend, including a description of the information upon which these are based;

(3) Estimate human-caused mortality and serious injury of the stock by source and, for strategic stocks, other factors that may be impeding recovery of the stock or causing a decline, including effects on marine habitat and prey;

(4) Contain a description of the commercial fisheries that interact with the stock including:

(A) The approximate number of vessels participating in each such fishery;

(B) The estimated annual level of incidental mortality and serious injury of the stock by each such fishery;

(C) Any seasonal or area differences in such incidental mortality or serious injury; and

(D) The rate, based on the appropriate standard unit of fishing effort, of such incidental mortality and serious injury, and an analysis stating whether such level is insignificant and approaching a zero mortality and serious injury rate.

(5) Categorize the status of the stock as one that either:

(A) Has a level of human-caused mortality and serious injury that is not likely to cause the stock to be reduced below its optimum sustainable population (OSP); or

(B) Is a strategic stock, with a description of the reasons therefore.

(6) Estimate the PBR level for the stock (e.g., the number of animals that may be removed from the stock while allowing the stock to reach or maintain its OSP and a description of the information used to calculate PBR, including the recovery factor.

Congress defined strategic stocks as those for which:

(1) The level of direct, human-caused mortality exceeds the level of PBR;

(2) Based on the best available scientific information, are declining and are stocks likely to be listed as threatened under the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 et seq.) in the foreseeable future; or

(3) Are listed as threatened or endangered under the ESA or

[I.D. 072894C]

Marine Mammals

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Availability of draft stock assessment and Potential Biological Removal (PBR) workshop reports; request for comments.

SUMMARY: The Marine Mammal Protection Act (MMPA) Amendments of 1994 (Amendments) require NMFS and the Fish and Wildlife Service (FWS) to prepare for public comment by August 1, 1994, draft stock assessments for all marine mammal stocks that occur in waters under the jurisdiction of the United States. NMFS convened a workshop to develop an initial approach for promoting a consistent national interpretation of parameters used in draft stock assessment reports. In addition to seeking comments on the draft stock assessment reports, NMFS requests comments and guidance on the preliminary methodologies proposed in the Potential Biological Removal (PBR) workshop report.

DATES: Comments on the draft stock assessment reports and the report of the PBR workshop must be received by November 7, 1994.

ADDRESSES: Send comments to Patricia Montanio, Chief, Marine Mammal Division, Office of Protected Resources, National Marine Fisheries Service, 1335 East-West Highway, Silver Spring, MD 20910-3226. Copies of the draft stock assessments and Report of the PBR Workshop are available from one of the contacts below.

NMFS has established a bulletin board for electronic retrieval of stock assessment reports. The reports are stored as Wordperfect® 5.1 files and may be downloaded by a modem link to the following telephone number: (703) 218-2595. Within your communications software, specify 8 data bits, no parity, and 1 stop bit. Set up as an ANSI

designated as depleted under the MMPA.

The Amendments require NMFS to provide, through a notice of availability, a summary of each draft stock assessment report and a list of sources of information or published documentation on which each draft assessment is based. To satisfy this requirement and minimize unnecessary duplication, a table that summarizes draft stock assessment reports appears at the end of this document, listing each stock, its regional designation, geographical range, minimum abundance estimate, PBR, estimated human-caused mortality, and whether or not the stock would be regarded as strategic or nonstrategic.

To maximize the opportunity for full consultation with the Scientific Review Groups, Alaskan native organizations and the public, NMFS is pursuing parallel tracks of review. In addition to the comment period initiated by this notice, NMFS began consultation with the Scientific Review Groups by forwarding draft stock assessment reports to the appropriate Scientific Review Groups on July 20, 1994, for their review and comment. NMFS recognizes the need for full and equal participation by Alaskan natives in the decisions that affect the management of marine mammals upon which much of the native culture depends; therefore, NMFS is seeking direct input from Alaska natives, particularly with regard to stocks taken for subsistence.

At the close of the public comment period, NMFS intends to continue consultation with the Scientific Review Groups by forwarding the public comments for each draft stock assessment to the appropriate Scientific Review Group for consideration in framing its recommendations to NMFS.

PBR Workshop

Recognizing the need to provide consistent parameters in calculating stock assessments and meet the August 1 deadline, NMFS convened a workshop, composed of NMFS and FWS scientists, to develop an initial approach for promoting consistent national interpretation of parameters to be used in draft stock assessment reports, including the calculation of PBR. PBR is defined in the Amendments as "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population". PBR is calculated as the product of three elements: The minimum population estimate (N_{MIN}); half the maximum net productivity rate

($0.5R_{MAX}$); and a recovery factor (F_R) that ranges from 0.1 to 1.0, ($N_{MIN} \times 0.5R_{MAX} \times F_R$).

The NMFS convened the workshop to agree on an initial approach for calculating PBR, defining stock structure, and analyzing whether fishery-related incidental mortality and serious injury have reached insignificant levels approaching zero mortality and serious injury rates for use in preparing draft stock assessment reports. It was the workshop participants' principal objective to identify quantitative criteria for defining input values that could serve as a nationwide standard for calculating PBR.

Advantages of the PBR approach include that it was not based on any particular population model, it allows conservative management to proceed when lacking detailed information, it provides an incentive to improve information on stock size (e.g., to increase precision by lowering coefficients of variation, CV), it is based on readily measurable quantities, and it focuses on achievable goals.

The workshop participants concluded that the three PBR parameters must be evaluated together, rather than independently, in the context of meeting the goals of the MMPA. In this regard, they concluded that F_R should serve to weight the PBR so as to take into account uncertainty in estimates of N_{MIN} , and serve as a "safety factor" that would allow the taking of individuals from stocks below OSP while continuing to promote their recovery and that would provide a safety margin to account for unknown bias in stock status information (e.g., estimation of abundance, productivity, mortality) for stocks of unknown status or trends.

Values of 0.5 (pinnipeds) and 0.65 (cetaceans) were adopted as starting points for calculating initial PBR for stocks of unknown status, and participants noted that values of F_R could be "tuned" or increased (thereby increasing the PBR) provided reasonable assurance in the form of scientific justification is provided to ensure that the estimates of abundance, mortality, and R_{MAX} are not severely biased, and that the coefficients of variation of the abundance and mortality estimates are within accepted ranges.

NMFS is seeking comments on the methodologies for calculating PBR and other parameters that were agreed to by the workshop participants and employed in the preparation of the draft stock assessment reports, as well as seeking comments on the individual stock assessment reports.

The workshop was held in Lajolla, CA, June 27-29, 1994. A copy of the Report of the PBR Workshop is available (see ADDRESSES).

In examining the methodologies proposed by workshop participants, the following points should be noted by reviewers:

(1) Estimates of mortality and serious injury incidental to commercial fisheries presented in the Fisheries Information section often included both NMFS observer and logbook data from the exemption program. However, only observer recorded mortalities were used in estimating the kill rate, with logbook data provided to "qualitatively" indicate that additional information exists on incidental mortality; and

(2) When a reliable population estimate was not available, the resulting PBR was zero. Although this often resulted in a stock being classified as "strategic", it was noted that due to the lack of a reliable abundance estimate, it was not currently possible to predict the impact of human-caused mortality on the stock.

Preliminary Comments

Stock Assessment Reports and copies of the PBR workshop were sent to Scientific Review Groups on July 20, 1994, with a request to send preliminary comments to NMFS so that these comments could be considered before stock assessment reports were released for public review and comment. NMFS received several comments on the approach described in the PBR workshop, the process for preparing reports, and on individual stock assessments. Many of the stock-specific comments have been incorporated in the draft stock assessment reports. The general, rather than stock-specific, comments are discussed below.

1. Delay Release of Draft Stock Assessment Reports to Satisfy the Requirement to Consult Fully With Scientific Review Groups.

The Amendments direct NMFS and FWS to prepare draft stock assessment reports in consultation with Scientific Review Groups by August 1, 1994, and to make the reports available for public review and comment. The Amendments also included a period of 60 days in order to establish Scientific Review Groups, in consultation with many agencies and interest groups. Thus, draft assessment reports were due for completion approximately 30 days after review groups were established. Clearly, in-depth consultation with review groups could not occur within a 30-day period.

Throughout the reauthorization process, interested entities reiterated that rapid preparation of stock assessment reports was vital to the timely implementation of a permanent regime to replace the Interim Exemption for Commercial Fisheries under MMPA section 114. Therefore, NMFS believes that the August 1, 1994, deadline for preparing draft stock assessment reports was of critical importance. Consultation with Scientific Review Groups is also of critical importance, and the two concerns are not mutually exclusive. NMFS intends to consult closely with Scientific Review Groups and, for stocks affected by subsistence harvest, Alaska Native organizations throughout the stock assessment process. Such an approach allows NMFS to meet the statutory mandates of consultation and the August 1, 1994, deadline.

2. PBR Calculations Are Not Consistent With Other Management Regimes—Bowhead Whale Example.

Concerns have been raised about the lack of consistency between the take limit for bowhead whales obtained under the PBR process and the subsistence catch limits for bowheads adopted by the International Whaling Commission (IWC) at its 1994 meeting. The two management systems have entirely different purposes and they each consider different criteria in formulating allowable removal levels.

The subsistence hunt for bowhead whales is managed through an international regime which differs from U.S. domestic management of marine mammals under the MMPA. The bowhead whale subsistence quota, determined under the IWC's policy, assumes additional levels of risk to accommodate the cultural needs of special peoples (e.g., Native communities) than it assumes for commercial harvests. This is justified, in part, by an extensive scientific assessment of the status of the bowhead stock (conducted every three years), which evaluates relative levels of risk based on the precision of the information available on the status of the stock and its life history characteristics.

In contrast, the PBR process was established primarily to address the specific problem of incidental takes of marine mammals by commercial fisheries. Although bowhead whales are not subject to an incidental take in a commercial fishery, a PBR was calculated for this stock because the Amendments to the MMPA require that PBR be calculated for all marine mammal stocks in U.S. waters.

Furthermore, NMFS noted that values for parameters in PBR calculations may be "tuned" as additional information is included. The draft stock assessment contains a straight-forward interpretation of the PBR workshop results. NMFS fully expects that the F_R for bowhead whales may be tuned based upon the extensive scientific information available for this stock. This tuning should occur in consultation with Scientific Review Groups and after consideration of public comments. NMFS will reconsider the approach described in the report of the PBR workshop.

3. Consider an Alternative Classification (Strategic Versus Non-Strategic) When Populations Estimates Are Unreliable and Fishery-Related Mortality Is Low

Section 117(a)(5) of the MMPA, as amended, specifies that each stock assessment report categorize the status of each marine mammal stock as one that either: (a) Has a level of human-caused mortality and serious injury that is not likely to cause the stock to be reduced below its optimum sustainable population, or (b) Is a strategic stock, with a description of the reasons therefor.

Section 3(19) of the MMPA, as amended, defines the term "strategic stock" as a stock for which the level of direct human-caused mortality exceeds the potential biological removal level, or which is designated as depleted under the MMPA, is listed as threatened or endangered under the ESA, or is declining and likely to be listed under the ESA.

A problem exists in categorizing stocks for which there are no reliable estimates of abundance. In these cases, the PBR would default to zero, and any human-caused mortality would exceed the PBR. The level of mortality may be so low that it is not likely to cause the stock to be reduced below its OSP, but the stock would still meet the criteria in section 3(19) that the level of mortality exceeds the PBR. These stocks have been considered "strategic" in the draft stock assessment reports. This highlights the need to obtain reliable abundance estimates for all stocks that have human-caused mortality, and will be used by NMFS in guiding and prioritizing its stock assessment program. In addition, NMFS expects that the Scientific Review Groups may recommend additional research into the status of the affected stock to determine if human-caused mortality or serious injury poses a significant adverse impact to the stock. In the interim, until reliable estimates are available, NMFS will be examining the options and best

way to classify these stocks consistent with the MMPA requirements. This will be done in consultation with the Scientific Review Groups, and in consideration of comments received.

Further, it should be noted that the identification of marine mammal stock as "strategic" does not necessitate restrictions on human-caused mortality and serious injury. Rather, such a designation means that the affected stock is, or may be reduced, below its optimum sustainable population. As such, the stock should be identified as having the potential for significant adverse impact if human-caused mortality is high.

Take Reduction Teams would be established for strategic stocks that interact with Category I or II fisheries to develop Take Reduction Plans. Take Reduction Plans are designed to reduce mortality and serious injury of marine mammals incidental to commercial fishing. If such incidental mortality and serious injury is not biologically significant for the affected stock, then no restrictions would necessarily be required.

4. The Age and Sex Structure of Individuals Removed From a Population of Marine Mammals May Have a Major Effect on the Impact of Those Removals

PBR calculations assume that removals are random with respect to the age and sex of individuals removed from the population. However, these factors could have a major effect on the impact of such removals from the population. Participants in the PBR workshop identified alternative population models as one area for future research needs. Incorporating the sex and age structure within marine mammal stocks and of the human-caused mortality of that stock are components of this area of research.

5. Use Alternate Methods To Evaluate Stock Status When Certain Data Are Not Available

For several stocks of marine mammals, NMFS has no reliable estimate of abundance, and a survey to obtain such information, if possible, would be exceedingly expensive. If an estimate of total human-caused mortality and serious injury was known, or could be estimated, then the PBR equation could be used to estimate the minimum number of individuals in the stock that could safely sustain the estimated level of removal. For example the estimated human-caused mortality of a given pinniped stock was 3,000. Using the default values for R_{MAX} (0.12) and the recovery factor (0.5) recommended at the PBR workshop, one

could calculate that a population of at least 100,000 individuals could support the human-caused mortality, and such mortality would be less than the PBR.

Such an approach appears to have merit. NMFS will consider this comment in revising stock assessment

reports during the review, comment, and revision process.

Dated: August 2, 1994.

William W. Fox, Jr.,

Director, Office of Protected Resources,
National Marine Fisheries Service.

TABLE 1.—SUMMARY OF MARINE MAMMAL DRAFT STOCK ASSESSMENT REPORTS FOR SPECIES OF MARINE MAMMALS UNDER NMFS MANAGEMENT AUTHORITY

[N/A means that data were more than 10 years old and, therefore, not used or were otherwise not available for an estimate]

Species	Stock area	Region	NMFS center	Nmin	Rmax	Fr	PBR	Total mort.	Fish. mort.	Strategic status
Beaked Whales	Pacific N.W. and Alaska	AKA	AKC	N/A	0.04	0.65	0	0	0	N
Bearded Seal	Alaska	AKA	AKC	N/A	0.12	0.50	0	1000	1	Y
Beluga	Bristol Bay	AKA	AKC	1800	0.04	1.00	36	8	N/A	N
Beluga	Eastern Chukchi Sea	AKA	AKC	2500	0.04	1.00	50	92	0	Y
Beluga	Beaufort Sea	AKA	AKC	21000	0.04	1.00	420	0	0	N
Beluga	Cook Inlet	AKA	AKC	332	0.04	1.00	4	13	0	Y
Beluga	Norton Sound and Yukon Delta	AKA	AKC	4000	0.04	0.65	52	168	0	Y
Bowhead Whale	Western Arctic Stock	AKA	AKC	7524	0.04	0.10	15	42	0	Y
Dall's Porpoise	North Pacific	AKA	AKC	311353	0.04	1.00	6227	29	29	N
Dall's Porpoise	Bering Sea	AKA	AKC	55777	0.04	1.00	1116	4	4	N
Fin Whale	N. Pacific	AKA	AKC	N/A	0.04	1.00	0	0	0	Y
Gray Whale	Eastern North Pacific	AKA	AKC	20110	0.04	1.00	402	159	0	N
Harbor Porpoise	Alaska	AKA	AKC	10652	0.04	0.65	138	0	0	N
Harbor Seal	Gulf of AK/ Bering Sea	AKA	AKC	25183	0.12	0.50	755	1221	25	Y
Harbor Seal	Southeast Alaska	AKA	AKC	22447	0.12	1.00	1347	1671	0	Y
Humpback Whale	Central Pacific	AKA	AKC	1286	0.04	0.10	3	0	0	Y
Killer Whale	Oregon/Washington/Alaska	AKA	AKC	1046	0.04	0.65	14	1	1	N
Northern Fur Seal	North Pacific	AKA	AKC	885322	0.12	0.50	26560	22	22	Y
Northern Right Whale Dolphin	Central North Pacific	AKA	AKC	39733	0.04	0.65	517	0	0	N
Ribbon Seal	Alaska	AKA	AKC	N/A	0.12	0.50	0	100	0	Y
Right Whale	North Pacific	AKA	AKC	N/A	0.04	0.10	0	0	0	Y
Ringed Seal	Alaska	AKA	AKC	44340	0.12	0.50	1330	3001	1	Y
Sperm Whale	Eastern N. Pacific	AKA	AKC	0	0.04	0.10	0	0	0	Y
Spotted Seal	Alaska	AKA	AKC	4145	0.12	0.50	124	1000	N/A	Y
Steller Sea Lion	U.S. EEZ	AKA	AKC	71547	0.12	0.50	2146	592	44	Y
Atlantic White-sided Dolphin	Western North Atlantic	ATL	NEC	N/A	0.04	0.65	0	4	4	Y
Beaked Whale, Blainville's	Northern GulfMex	ATL	SEC	5	0.04	0.65	0	0	0	N
Beaked Whale, Cuvier's	Western North Atlantic	ATL	NEC	N/A	0.04	0.65	0	0	0	Y
Beaked Whale, Cuvier's	Northern GulfMex	ATL	SEC	19	0.04	1.00	0	0	0	N
Beaked Whale, Mesoplodon spp.	Western North Atlantic	ATL	NEC	N/A	0.04	0.65	0	5	5	Y
Beaked Whale, Ziphiidae	Northern GulfMex	ATL	SEC	44	0.04	1.00	1	0	0	N
Blue Whale	Western North Atlantic	ATL	NEC	N/A	0.04	0.65	0	0	0	Y
Bottlenose Dolphin	Mid-Atlantic, Coastal	ATL	SEC	1349	0.04	0.65	18	20	20	Y
Bottlenose Dolphin	Western GulfMex, Coastal	ATL	SEC	2897	0.04	0.65	38	N/A	N/A	N
Bottlenose Dolphin	Gulf of Mexico Bays	ATL	SEC	3131	0.04	0.65	41	N/A	N/A	Y
Bottlenose Dolphin	Eastern GulfMex, Coastal	ATL	SEC	4436	0.04	0.65	58	N/A	N/A	N
Bottlenose Dolphin	Northern GulfMex, Coastal	ATL	SEC	3472	0.04	0.65	45	N/A	N/A	N
Bottlenose Dolphin	Eastern GulfMex, Off-shore	ATL	SEC	13738	0.04	0.65	179	N/A	N/A	N
Bottlenose Dolphin	Mid-Atlantic, Offshore	ATL	SEC	N/A	0.04	0.65	0	120	120	Y
Bottlenose Dolphin	No. & W. GulfMex, Offshore	ATL	SEC	20177	0.04	0.65	262	N/A	N/A	N
Bryde's Whale	Northern GulfMex	ATL	SEC	25	0.04	0.65	0	N/A	N/A	N
Clymene Dolphin	Northern GulfMex	ATL	SEC	3119	0.04	1.00	62	0	0	N

TABLE 1.—SUMMARY OF MARINE MAMMAL DRAFT STOCK ASSESSMENT REPORTS FOR SPECIES OF MARINE MAMMALS UNDER NMFS MANAGEMENT AUTHORITY—Continued

[N/A means that data were more than 10 years old and, therefore, not used or were otherwise not available for an estimate]

Species	Stock area	Region	NMFS center	Nmin	Rmax	Fr	PBR	Total mort.	Fish. mort.	Strategic status
Common Dolphin	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	78	78	Y
Dwarf Sperm Whale ..	Northern GulfMex	ATL	SEC	211	0.04	1.00	4	0	0	N
False Killer Whale	Northern GulfMex	ATL	SEC	148	0.04	1.00	3	0	0	N
Fin Whale	Western North Atlantic.	ATL	NEC	N/A	0.04	0.10	0	1	1	Y
Fraser's Dolphin	Northern GulfMex	ATL	SEC	75	0.04	0.65	1	0	0	N
Gray Seal	Northwest North Atlantic.	ATL	NEC	500	0.12	0.50	15	1	1	N
Harbor Porpoise	Gulf of Maine/Bay of Fundy.	ATL	NEC	39670	0.04	0.65	516	1875	1875	Y
Harbor Seal	Western North Atlantic.	ATL	NEC	28810	0.12	0.50	864	18	18	N
Harp Seal	Northwestern North Atlantic.	ATL	NEC	N/A	0.12	0.00	0	0	0	N
Hooded Seal	Northwestern North Atlantic.	ATL	NEC	N/A	0.12	0.00	0	0	0	N
Humpback Whale	Western North Atlantic.	ATL	NEC	720	0.04	0.10	1	5	4	Y
Killer Whale	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	0	0	N
Killer Whale	Northern GulfMex	ATL	SEC	192	0.04	1.00	4	0	0	N
Melon-headed Whale	Northern GulfMex	ATL	SEC	908	0.04	1.00	18	0	0	N
Minke Whale	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	3	2	Y
Pilot Whale, Long-Finned.	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	9	9	Y
Pilot Whale, Short-Finned.	Atlantic EEZ	ATL	SEC	456	0.04	0.65	6	N/A	N/A	N
Pilot Whale, Short-Finned.	Northern GulfMex	ATL	SEC	84	0.04	1.00	2	0	0	N
Pygmy Killer Whale ..	Atlantic EEZ	ATL	SEC	6	0.04	1.00	0	0	0	N
Pygmy Killer Whale ..	Northern GulfMex	ATL	SEC	111	0.04	1.00	2	0	0	N
Pygmy Sperm Whale ..	Northern GulfMex	ATL	SEC	41	0.04	1.00	1	0	0	N
Pygmy and Dwarf Sperm Whale.	Atlantic EEZ	ATL	SEC	264	0.04	1.00	5	0	0	N
Right Whale	Western North Atlantic.	ATL	NEC	295	0.04	0.10	1	2	1	Y
Risso's Dolphin	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	9	9	Y
Risso's Dolphin	Northern GulfMex	ATL	SEC	1155	0.04	0.65	15	N/A	N/A	N
Rough-toothed Dolphin.	Northern GulfMex	ATL	SEC	351	0.04	1.00	7	0	0	N
Sei Whale	Western North Atlantic.	ATL	NEC	N/A	0.04	0.10	0	0	0	Y
Sperm Whale	Western North Atlantic.	ATL	NEC	N/A	0.04	0.10	0	0	0	Y
Sperm Whale	Northern GulfMex	ATL	SEC	162	0.04	0.10	0	0	0	Y
Spinner Dolphin	Southwestern North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	0	0	Y
Spinner Dolphin	Northern GulfMex	ATL	SEC	1055	0.04	1.00	21	0	0	N
Spotted Dolphin, Atlantic.	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	4	4	Y
Spotted Dolphin, Atlantic.	Northern GulfMex	ATL	SEC	1768	0.04	1.00	35	N/A	N/A	N
Spotted Dolphin, Pantropical.	Northern GulfMex	ATL	SEC	13911	0.04	1.00	278	N/A	N/A	N
Striped Dolphin	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	4	4	Y
Striped Dolphin	Northern GulfMex	ATL	SEC	2160	0.04	1.00	43	0	0	N
Whitebeaked Dolphin	Western North Atlantic.	ATL	NEC	N/A	0.04	0.65	0	0	0	Y
Beaked Whale, Baird's.	California to Washington.	PAC	SWC	19	0.04	0.65	0	0	0	N
Beaked Whale, Blainville's.	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Beaked Whale, Cuvier's.	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N

TABLE 1.—SUMMARY OF MARINE MAMMAL DRAFT STOCK ASSESSMENT REPORTS FOR SPECIES OF MARINE MAMMALS UNDER NMFS MANAGEMENT AUTHORITY—Continued

[N/A means that data were more than 10 years old and, therefore, not used or were otherwise not available for an estimate]

Species	Stock area	Region	NMFS center	Nmin	Rmax	Fr	PBR	Total mort.	Fish. mort.	Strategic status
Beaked Whale, Cuvier's.	California to Washington.	PAC	SWC	886	0.04	0.65	12	18	18	Y
Beaked Whales, Mesoplodont.	California to Washington.	PAC	SWC	136	0.04	0.65	2	12	12	Y
Blue Whale	Hawaii	PAC	SWC	N/A	0.04	0.10	0	0	0	Y
Blue Whale	California/Mexico	PAC	SWC	1650	0.04	0.10	2	1	0	Y
Bottlenose Dolphin	California, Coastal	PAC	SWC	245	0.04	0.65	3	0	0	N
Bottlenose Dolphin	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Bottlenose Dolphin	California, Offshore	PAC	SWC	1775	0.04	0.65	23	8	8	N
Brydes Whale	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Brydes Whale	Eastern Tropical Pacific.	PAC	SWC	11145	0.04	1.00	223	0	0	N
California Sea Lion	California to Washington.	PAC	SWC	67399	0.12	1.00	4044	2093	2093	N
Common Dolphin, Long-Beaked.	California	PAC	SWC	5636	0.04	0.65	73	11	11	N
Common Dolphin, Short-Beaked.	California	PAC	SWC	185181	0.04	0.65	2407	197	197	N
Dall's Porpoise	California to Washington.	PAC	SWC	58902	0.04	0.65	766	33	33	N
Dwarf Sperm Whale ..	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
False Killer Whale	Hawaii	PAC	SWC	470	0.04	0.65	6	0	0	N
Fin Whale	Hawaii	PAC	SWC	N/A	0.04	0.10	0	0	0	Y
Fin Whale	California to Washington.	PAC	SWC	573	0.04	0.10	1	0	0	Y
Guadalupe Fur Seal ..	Mexico to California ..	PAC	SWC	3259	0.12	0.50	98	0	0	Y
Harbor Porpoise	Central California	PAC	SWC	3430	0.04	0.65	45	31	31	N
Harbor Porpoise	Washington/Oregon ..	PAC	SWC	24992	0.04	0.65	325	16	16	N
Harbor Porpoise	North California	PAC	SWC	7649	0.04	1.00	150	0	0	N
Harbor Seal	Washington, Inland Waters.	PAC	AKC	13053	0.12	0.50	392	14	14	N
Harbor Seal	Oregon/Washington Coast.	PAC	AKC	28322	0.12	0.50	850	231	231	N
Harbor Seal	California	PAC	SWC	18099	0.12	1.00	1086	725	725	N
Hawaiian Monk Seal ..	Hawaii	PAC	SWC	1300	0.07	0.10	5	0	0	Y
Humpback Whale	California/Mexico	PAC	SWC	482	0.04	0.10	1	1	0	Y
Killer Whale	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Killer Whale	California	PAC	SWC	139	0.04	0.65	2	0	0	N
Melon-headed Whale ..	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Minke Whale	California to Washington.	PAC	SWC	265	0.04	0.65	3	0	0	N
Northern Elephant Seal.	California, Breeding ..	PAC	SWC	42000	0.12	1.00	2520	158	158	N
Northern Fur Seal	San Miguel Island	PAC	AKC	7112	0.12	0.50	213	0	0	Y
Northern Right Whale Dolphin.	California to Washington.	PAC	SWC	15080	0.04	0.65	196	34	34	N
Pacific White Sided Dolphin.	California to Washington.	PAC	SWC	82939	0.04	0.65	1078	18	18	N
Pilot Whale, Short-Finned.	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Pilot-Whale, Short-Finned.	California	PAC	SWC	N/A	0.04	0.65	0	33	33	Y
Pygmy Killer Whale ...	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Pygmy Sperm Whale ..	California to Washington.	PAC	SWC	481	0.04	0.65	6	2	2	N
Pygmy Sperm Whale ..	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Risso's Dolphin	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Risso's Dolphin	California to Washington.	PAC	SWC	22388	0.04	0.65	291	29	0	N
Rough-Toothed Dolphin.	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Sei Whale	North Pacific	PAC	SWC	N/A	0.04	0.10	0	0	0	Y
Sperm Whale	Hawaii	PAC	SWC	N/A	0.04	0.10	0	0	0	N
Sperm Whale	California to Washington.	PAC	SWC	511	0.04	0.10	1	22	22	Y
Spinner Dolphin	Hawaii	PAC	SWC	677	0.04	0.65	9	0	0	N
Spotted Dolphin, Pan Tropical.	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N

TABLE 1.—SUMMARY OF MARINE MAMMAL DRAFT STOCK ASSESSMENT REPORTS FOR SPECIES OF MARINE MAMMALS UNDER NMFS MANAGEMENT AUTHORITY—Continued

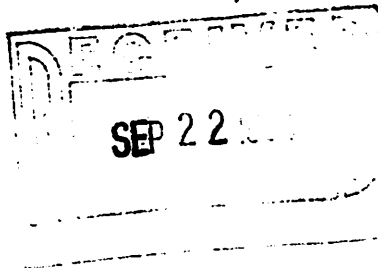
[N/A means that data were more than 10 years old and, therefore, not used or were otherwise not available for an estimate]

Species	Stock area	Region	NMFS center	Nmin	Rmax	Fr	PBR	Total mort.	Fish. mort.	Strategic status
Striped Dolphin	Hawaii	PAC	SWC	N/A	0.04	0.65	0	0	0	N
Striped Dolphin	California	PAC	SWC	13639	0.04	0.65	177	0	0	N

AGENDA B-5
SEPTEMBER 1994



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, Maryland 20910



September 13, 1993

Dear Reviewer:

Enclosed is the FEDERAL REGISTER notice on the Proposed Changes to the List of Fisheries, under the new section 118 of the Marine Mammal Protection Act.

The Office of Protected Resources has proposed four changes to the current List of Fisheries, based on the new prohibition against intentional lethal takes by commercial fishers. We are also reviewing the criteria for categorizing fisheries, and would like to receive any comments or suggestions you may have to assist us in applying appropriate criteria.

Please forward you comments to the National Marine Fisheries Service, Office of Protected Resources, F/PR2, 1335 East-West Highway, Silver Spring, Maryland 20910-3226. Comments need to be received no later than November 30, 1994.

For more information, please contact myself or Patricia Montanio at 301-713-2322. Thank you for you continued interest in this program.

Sincerely,

A handwritten signature in black ink, appearing to read "V. R. Credle". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Victoria R. Credle

Enclosure



[Docket No. 940832-4232; I.D. 080394B]

RIN 0648-AG77

Taking of Marine Mammals Incidental to Commercial Fishing Operations; Changes to the List of Fisheries Under Section 118 of the Marine Mammal Protection Act

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed changes to the List of Fisheries.

SUMMARY: On April 30, 1994, the Marine Mammal Protection Act (MMPA) was amended and a new section 118 was created to govern the taking of marine mammals incidental to commercial fishing operations. As required by section 118, this notice proposes changes to the list of fisheries, classified by frequency of incidental serious injury or mortality of marine mammals, and requests comments on the proposed list. Some suggestions for revising the criteria under which fisheries are classified are also included, with a request for further comments on other criteria which should be considered. NMFS intends to publish revised classification criteria, based on comments received, and to publish another proposed list of fisheries, using the revised criteria.

DATES: Comments on the proposed changes to the list of fisheries and suggested revisions to the classification criteria must be received by November 30, 1994.

ADDRESSES: Send comments to Patricia Montanio, Chief, Marine Mammal Division, Office of Protected Resources, F/PR2, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910 (Attn: Comments on Proposed Changes to the List of Fisheries).

FOR FURTHER INFORMATION CONTACT: Victoria R. Credle, Office of Protected Resources, 301-713-2322; Steven Zimmerman, Alaska Region, 907-586-7233; Joe Scordino, Northwest Region, 206-526-6143; James Lecky, Southwest Region, 310-980-4020; Doug Beach, Northeast Region, 508-281-9254; or Jeff Brown, Southeast Region, 813-893-3366.

SUPPLEMENTARY INFORMATION:

On April 30, 1994, the MMPA was amended and a new section 118 was created to govern the taking of marine mammals incidental to commercial fishing operations. The provisions of this section will replace the current interim exemption system (section 114), when regulations are put into effect no later than September 1, 1995.

The interim exemption system currently requires the owners/operators of vessels in Category I and II fisheries to register their vessels and maintain daily logs of their fishing activities, including interactions with marine mammals. Vessels in Category I fisheries are also required to carry an observer if requested by NMFS. Owners/operators of vessels in Category III fisheries are required to report all lethal takes of marine mammals within 10 days of return from the fishing trip during which the take occurred.

Category I fisheries, under section 114, are those fisheries that have a "frequent" take of marine mammals, defined as "highly likely that more than one marine mammal will be incidentally taken by a randomly selected vessel in the fishery during a 20-day period" (50 CFR 229.3(b)(1)). Category II fisheries are those fisheries that have an "occasional" take of marine mammals, defined as "some likelihood that one marine mammal will be incidentally taken by a randomly selected vessel in the fishery during a 20-day period, but that there is little likelihood that more than one marine mammal will be incidentally taken" (50 CFR 229.3(b)(2)). Category III fisheries are those fisheries that have no more than a "remote" likelihood of a take of marine mammals, defined as "highly unlikely that any marine mammal will be incidentally taken by a randomly selected vessel in the fishery in a 20-day period" (50 CFR 229.3(b)(3)).

Section 118(c)(1) of the MMPA requires that the Secretary of Commerce publish within 90 days of the enactment of the amendments, any necessary changes to the list of commercial fisheries that were published under section 114 and which was in existence on March 31, 1994. These proposed changes must be published in the *Federal Register* for public comment for a period of not less than 90 days. On March 31, 1994, a proposed list of fisheries for 1994 had just been published (59 FR 10372, March 4, 1994) and there was a 30-day public comment period in effect. The final list of fisheries for 1994 has subsequently been published (59 FR 43818, August 25, 1994), and will remain in effect until it is replaced by a revised list developed

under the provisions of section 118, which is to occur no later than September 1, 1995.

Under section 118(c)(1), fisheries will be categorized with respect to a fishery's frequency of incidental marine mammal mortalities or serious injuries due to commercial fishing operations. This differs from section 114 in that non-injurious takes, such as entanglements and harassments, will not be included in the revised classification criteria.

For the purpose of meeting the statutory deadline specified by the amendments to the MMPA, NMFS is using the current list of fisheries, developed under section 114 of the MMPA, as the basis for proposed changes to the list of fisheries under section 118. Realizing, however, that certain elements of the existing criteria may be inconsistent with section 118, these criteria are being considered for revision in the Criteria section of this document. Revisions to the criteria suggested by this document should not be considered final or exhaustive, as NMFS is using this opportunity to solicit alternative classification schemes through the public comment process. NMFS expects to publish proposed changes to the classification criteria along with a proposed list of fisheries based on those revised criteria, and request for comments by early 1995.

Proposed Changes to the 1994/1995 List of Fisheries

One change to the current criteria required by section 118 of the MMPA is the type of interaction used to calculate the take rate of marine mammals. Under section 114, takes included harassments, entanglements, injuries, and mortalities. Under the new section 118, only incidental serious injuries and mortalities are considered, and intentional serious injuries and mortalities are prohibited. The proposed changes to the current list are based on the assumption that the prohibition on intentional serious injuries or mortalities will result in a reduced take rate.

Other changes to the current criteria being considered by NMFS, as outlined in the next section, may affect the future reclassification of fisheries. Therefore, changes proposed here should be considered preliminary and subject to further revision.

1. *Reclassify* the Alaska Prince William Sound (NMFS Statistical Area 649) sablefish longline/set line fishery from Category II (Table 2) to Category III (Table 3).

Dahlheim (1988) and Matkin (1986, 1987) indicate losses of three killer whales from the AB pod during 1985,

three in 1986, and one each in 1987 and 1988. Hall and Cornell (1986) documented that several killer whales in the AB pod in Prince William Sound showed evidence of bullet wounds. Missing animals were presumed dead and the mortalities were believed to have been the result of intentional takes by certain participants in the sablefish longline fishery, as this fishery lost an estimated 25 percent of its potential blackcod catch due to killer whale predation.

The exclusion of intentional serious injuries and mortalities under section 118 will result in only a remote likelihood of an incidental serious injury or mortality in this fishery (i.e., it is highly unlikely that any marine mammal will be taken by incidental serious injury or mortality by a randomly selected vessel in the fishery during a 20-day period). Therefore NMFS proposes to reclassify this fishery from Category II to Category III, based on the assumption that the intentional use of firearms in this fishery will be halted.

2. *Reclassify* the Alaska Southern Bering Sea, Aleutian Islands (NMFS Statistical Reporting Areas 517, 518, 519, 540), and Western Gulf of Alaska (NMFS Statistical Reporting Area 610 West of 165° W. sablefish longline/set line fishery from Category II (Table 2) to Category III (Table 3).

Dahlheim (1988) indicated fishery interactions with killer whales in 20 percent of sablefish sets in 1988 in the area of Unimak Pass west to Seguam Pass and north to the Pribilof Islands. Some mortalities were believed to occur as a result of intentional takes by participants in the sablefish longline fishery.

The exclusion of intentional serious injuries and mortalities under section 118 will result in only a remote likelihood of an incidental serious injury or mortality in this fishery (i.e., it is highly unlikely that any marine mammal will be taken by incidental serious injury or mortality by a randomly selected vessel in the fishery during a 20-day period). Therefore NMFS proposes to reclassify this fishery from Category II to Category III, based on the assumption that the intentional use of firearms in this fishery will be halted.

3. *Reclassify* the Oregon and California south of 45°46'00" (Cape Falcon, OR) salmon troll fishery from Category II (Table 2) to Category III (Table 3).

Previous take rate estimates included serious injuries and mortalities resulting from intentional deterrence actions using firearms. Intentional serious

injuries and mortalities will be prohibited under section 118. The only take rates of current intentional take levels available for this fishery are from fishers' logbooks. Logbook reports indicate that there were 14,897 harassments, 275 injuries, and 182 mortalities due to deterrence actions in 1990, and 9,134 harassments, 74 injuries, and 83 mortalities due to deterrence actions in 1991. The prohibition on intentional serious injuries and mortalities under section 118 will result in a remote likelihood of an incidental serious injury or mortality in this fishery (i.e., it is highly unlikely that any marine mammal will be taken by incidental serious injury or mortality by a randomly selected vessel in the fishery during a 20-day period). Therefore, NMFS proposes to reclassify this fishery from Category II to Category III, based on the assumption that the intentional use of firearms in this fishery will be halted.

4. *Reclassify the Gulf of Maine salmon aquaculture (net pen) fishery from Category II (Table 5) to Category III (Table 6).*

Previous take rate estimates included serious injuries and mortalities resulting from intentional deterrence actions using firearms. Intentional serious injuries and mortalities will be prohibited under section 118. The prohibition on intentional serious injuries and mortalities under section 118 will result in a remote likelihood of an incidental serious injury or mortality in this fishery (i.e., it is highly unlikely that any marine mammal will be taken by incidental serious injury or mortality by a randomly selected vessel in the fishery during a 20-day period).

Therefore, NMFS proposes to reclassify this fishery from Category II to Category III, based on the assumption that the intentional use of firearms in this fishery will be halted.

Suggested Revisions to the Classification Criteria

The provisions of section 118 of the MMPA differ in many respects from the Interim Exemption for Commercial Fisheries (section 114). Therefore, NMFS believes that the criteria used to determine whether a fishery has a "frequent", "occasional", or "remote likelihood" of an incidental serious injury or mortality due to commercial fishing operations should be reviewed and revised. The following is a discussion of possible areas that should be considered for revision, yet this is by no means an exhaustive list of possible changes. The rationale for suggesting changes to the criteria is based, in part, on the intent of Congress to improve

efforts to identify and address the most significant problems involving incidental mortality and serious injury of marine mammals in commercial fishing operations.

This document represents the first step in revising the current criteria used to classify fisheries in order to be consistent with section 118. Comments received on this document will be used to revise and refine criteria, which are expected to be published in early 1995. Final criteria for classifying fisheries will be published prior to the September 1, 1995 statutory deadline, in conjunction with regulations to implement other parts of section 118. For the purposes of beginning discussion on this matter, the following are provided for consideration:

1. *Definition of a "Fishery"*. Under section 114, NMFS defined fisheries by gear type, geographical area, and target species, in accordance with existing state or Federal management designations. However, for many fisheries, it is difficult to obtain information about the use of specific gear types, geographical areas, or seasons when fishery management plans or state fishery permits do not consistently identify fisheries using these parameters. Also, in order to concentrate management actions on fishery hot spots or hot seasons, criteria could be made flexible to address the significantly different take rates of marine mammals in certain areas or at certain seasons. NMFS is considering partitioning fisheries as necessary to reflect concentrations of marine mammals in certain areas within a fishery or at certain times of the year.

Also, classifying fisheries according to the target species of the catch may not be appropriate in multi-species fisheries which use an opportunistic fishing method (i.e., fishers will adapt gear depending on the availability of different species at different times). Therefore, NMFS is also considering defining fisheries by the mesh size of the gear or some other gear characteristic which is not related to target species.

2. *Take Estimates*. The classification criteria developed to implement section 114 were based on an interaction rate (frequent, occasional, or remote likelihood) of marine mammals with a randomly selected vessel in a fishery during a 20-day period. This "by-vessel" take rate criteria works well in fisheries that have well defined, consistent daily effort by all of the fishing vessels within a fishery. However, for many fisheries, fishing effort may vary daily and from vessel to vessel. In addition, it may be difficult to

compare one vessel's fishing effort with another vessel in the same fishery. Therefore, NMFS is considering classifying fisheries using alternative methods.

One possible method is to classify fisheries by the total number of serious injuries and mortalities in a fishery per year, in order to assess the impact of a fishery on a particular stock or stocks of marine mammals. For example, the annual incidental take of a stock could be considered in terms of its take relative to the Potential Biological Removal (PBR) of the stock. Fisheries that have a "frequent" take of marine mammals could be defined as having an incidental serious injury and mortality of equal to or greater than 50 percent of the PBR for the stock; fisheries that have an "occasional" take of marine mammals could be defined as having an incidental serious injury and mortality of between 1 and 49 percent of the PBR for the stock; fisheries that have only a "remote likelihood" of a take of marine mammals could be defined as having an incidental serious injury and mortality of less than 1 percent of the PBR for the stock. This method should reference the total fishing effort in each fishery, so that the number of incidental serious injuries and mortalities can be considered relative to that total effort. The variation in fishing effort between vessels in a fishery must also be considered, as well as the variation between fisheries. This measure of effort should be based on common parameters that can be applied across a fishery, such as the duration of a trawl or set; the number of trawls or sets per day, season, or year; the size of the gear being deployed; the number of nets used per vessel; the number of net pens per owner and the size of each pen; etc. Separate classification criteria may have to be developed for fisheries with different gear types or fishing techniques if the most appropriate measures of effort cannot be applied to all fisheries.

NMFS will also consider public comments which propose alternative methods of determining take rates based on the "frequent", "occasional", and "remote likelihood" of incidental serious injuries and mortalities of marine mammals due to commercial fishing operations. These could address both the short term biological significance of fishery impacts on marine mammal stocks, and/or the applicability of a method towards assessing the long-term goal of reducing serious injuries and mortalities to levels approaching zero (Zero Mortality Rate Goal).

3. Intentional Takes. Under section 118(a)(5), intentional serious injuries and mortalities of marine mammals in the course of commercial fishing operations are prohibited. Although certain intentional takes are currently authorized for some pinniped species under section 114 (after other non-lethal methods have been tried and found to be ineffective), all intentional lethal takes will be illegal when the section 118 regime is implemented. Any such takes by fishers will be subject to the penalties of the MMPA. NMFS is launching a public outreach and education campaign to inform fishers of changes in the MMPA. The NMFS is requesting comments on how to factor in intentional serious injuries and mortalities if they continue to occur after the section 118 regime is implemented.

4. Treaty Indian Fisheries. NMFS is considering exclusion of the Pacific Northwest treaty Indian tribal fisheries from the list of fisheries. The Category I and II fisheries that have treaty Indian tribe involvement are the northern Washington coastal (area 4 and 4A) salmon set-net fishery, the Washington Puget Sound Region and inland waters south of the U.S.-Canada border set-net and drift gillnet salmon fishery, and the Washington coastal river set-net salmon fishery. The 1994 amendments to the MMPA state:

Nothing in this Act, including any amendments to the Marine Mammal Protection Act of 1972 made by this Act—alters or is intended to alter any treaty between the United States and one or more Indian tribes.

This provision suggests that existing treaty Indian fishing and hunting rights are not affected by the MMPA, and that tribal fisheries should be conducted under authority of the Indian treaties rather than the MMPA. Therefore, the MMPA's mandatory registration systems may not apply to treaty Indian fishers operating in their usual and accustomed fishing areas. Since inclusion of the treaty Indian fisheries in the list of fisheries establishes the obligation to obtain an MMPA registration under section 118, NMFS is considering the deletion of references to tribal fisheries in the list of fisheries, and the removal of the registration requirement for Category I or II treaty Indian tribe fisheries. The tribes have cooperated, and indicate that they will continue to cooperate, with NMFS in gathering and submitting data on interactions of their fisheries with marine mammals so that the health of the affected stocks can be monitored.

5. Applicability to Zero Mortality Rate Goal. One of the objectives of the 1994 amendments to the MMPA was to ensure:

...that the procedures for authorizing the incidental taking of marine mammals in commercial fisheries is consistent with the long term objective of reducing incidental mortality and serious injury from commercial fishing operations to insignificant rates approaching zero.

(Senate section-by-section analysis of S. 1636, March 25, 1994). NMFS is considering the development of criteria that could be used in the assessment of a fishery's progress in achieving the zero mortality rate goal, and whether the criteria used to classify fisheries may be used to make that assessment.

Other Suggested Changes to Improve the Classification System

The lack of availability of information on marine mammal takes and fishery effort in many fisheries continues to restrict efforts to calculate a take per unit effort, or take rate, in order to classify fisheries. Under the Interim Exemption for Commercial Fisheries (section 114), information was obtained on take rates using three methods. The first method involved the collection of information from vessel owners participating in Category I and II fisheries in the form of logbooks. The accuracy of this information varied from fishery to fishery and from vessel owner to vessel owner, and the time delay in receiving and processing this information limited its usefulness from a quantitative standpoint. The second method relied on the placement of observers on a sample of vessels in 15 different Category I fisheries, providing more accurate yet costly information on marine mammal take rates. The third method for collecting information was in the form of a handful of marine mammal mortality reports received from vessel owners in Category III fisheries. Unfortunately, no information was provided on fishing effort with these reports. Limitations associated with each of these methods have resulted in less than adequate information on take rates for a number of fisheries.

Under section 118, the reporting of serious injuries and mortalities by commercial fishers will be required, yet there is no consistent means by which to obtain information on fishing effort. NMFS is considering methods to increase the accuracy and timeliness of information on marine mammal takes and fishery effort. One possible method may be the development of working groups composed of Federal and state resource managers, marine mammal stranding network members,

commercial fishers, and others with a knowledge of marine mammal interaction rates with commercial fishing operations. The focus of these working groups would be the development of fishery profiles (gear used, seasons, etc.), identification and evaluation of existing sources of information (logbooks, landing receipts, stranding data, etc.), and the identification of fisheries for which little information exists, yet which are suspected of having occasional or frequent incidental serious injuries or mortalities of marine mammals. These fisheries will be given high priority when determining the placement of observers.

NMFS is soliciting comments on other possible methods by which the accuracy and timeliness of information on marine mammal incidental serious injuries and mortalities, and fishing effort, might be improved.

References

- Dahlheim, M.E. 1988. Killer whale (*Orcinus orca*) depredation on longline catches of sablefish (*Anoplopoma fimbria*) in Alaskan waters. NWAFC Processed Report 88-14. Northwest and Alaska Fisheries Center, NMFS U.S. Dep. of Comm.
- Hall, J.D., and L.H. Cornell. 1986. Killer whales of Prince William Sound, Alaska; results of 1985 field research. Sea World Tech. Contrib. 8611C, 15p.
- Matkin, C.O. 1986. Killer whale interactions with the sablefish longline fishery in Prince William Sound, Alaska, 1985, with comments on the Bering Sea. Unpubl. Rep. to the National Marine Fisheries Service, Juneau, AK; contract 40-HANF-6-00068, 10 p. Available from the National Marine Mammal Laboratory, 7600 Sand Point Way NE., Seattle, WA 98115.
- Matkin, C.O., G. Ellis, O. von Ziegesar, and R. Steiner. 1987. Killer whales and longline fisheries in Prince William Sound, Alaska, 1986. Unpubl. Rep. to the Northwest and Alaska Fisheries Center, contract 40ABNF6 2262, 19 p. Available from the National Marine Mammal Laboratory, 7600 Sand Point Way NE., Seattle, WA 98115.

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A PROPOSAL FOR ESTIMATING POTENTIAL BIOLOGICAL REMOVALS

$$= (0.5R_{\max}) \times (N_{\min}) \times RF$$

Sept 1994

PBR Definition

Public Law 103-238

The potential biological removal level is the product of

1. **minimum population estimate**
2. **0.5 maximum net productivity rate**
3. **a recovery factor between 0.1 and 1.0,**

where the minimum population estimate is based on best available scientific information and provides reasonable assurance that the stock size is equal to or greater than the estimate.

Simulation Model

Eq. 1 $PBR = N_{min} * 0.5 R_{max} * RF$

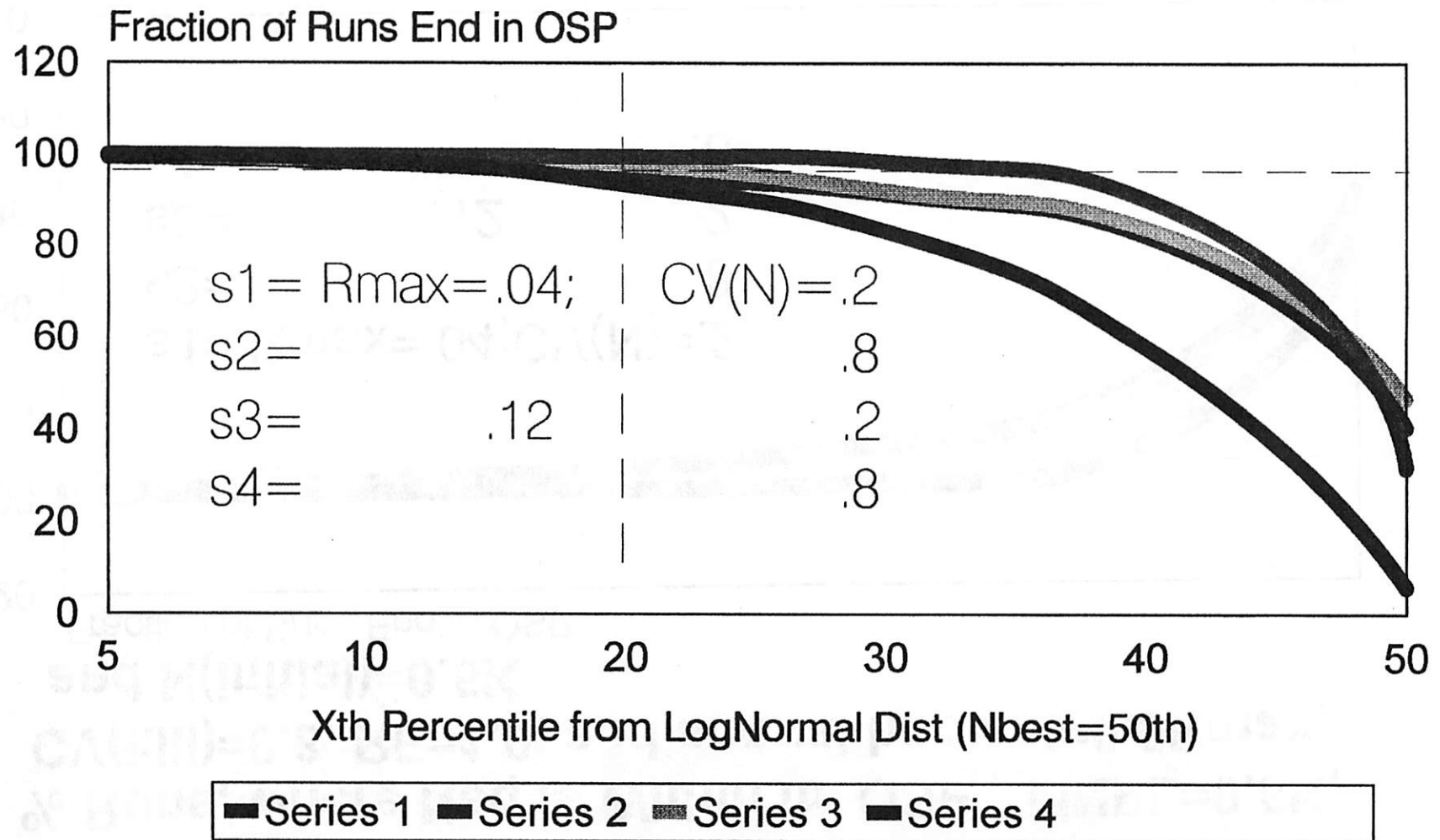
Eq. 2 $N_{t+1} = N_t + N_t * R_{max} [1 - (N_t / K)^z]$

1. Project population 1 year w/ Eq. 2
2. Random draw from distr. with mean=
Nbest and CV as specified
3. Calculate PBR w/ Eq 1
4. Random draw from distr. with mean=
PBR and CV as specified (est. kill)
5. Subtract est. kill from true population
6. Repeat sequence 100 times (100 yr)

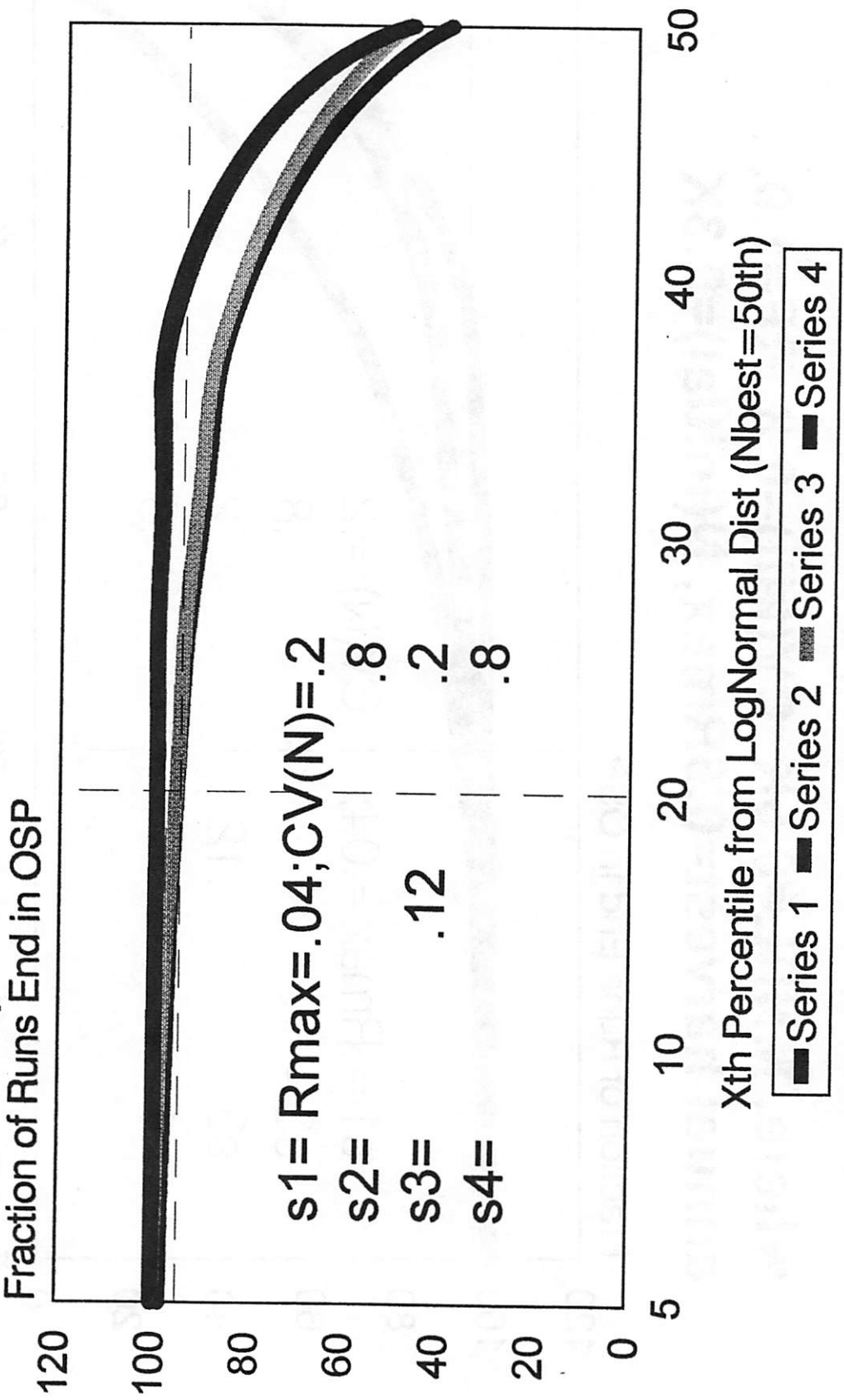
Policy Parameters for PBRs

1. den. dep. shape parameter
2. % of runs that meet certain criteria
3. $CV(N)$
4. $CV(kill)$
5. Initial starting population
6. Distribution of abundance estimate
7. Distribution of kill estimate
8. Maximum rate of increase
9. Rate at which abund. est. "ages"
10. Recovery Factors

% Runs, where Neq is Within its OSP
where, MNPL=0.5K, CV(kill)=0.3, RF=1.0, .
annual harvest=0.5Rmax, N(initial)=0.3K



**% Runs, where Neq is Within its OSP. MNPL=0.5K,
 CV(kill)=0.3, RF=1.0, and annual harvest=0.5Rmax,
 and N(initial)=0.5K**



Minimum Est. of Abundance

o *Features of recommended approach*

1. Incorporates uncertainty in estimates of abundance and kill
2. As $CV(N)$ decreases, N_{min} increases
3. As estimate of N "ages", PBR decreases
4. Assumes R_{max} for pinnipeds is 0.12 and for cetaceans is 0.04.
5. Assumes kill rates should not exceed $0.5R_{max}$
6. Assumes 1 survey every 5 years

o *Recommendation:*

1. Use lower 20th percentile of distribution of N
2. Reduce N_{min} by 20% year after 5 years

Recovery Factor

- o *Features of the proposed RF approach*
 1. Based on simulations that incorporate bias in N est, CV(N), kill est., CV(kill).
 2. Assumes Nmin based on 20th percentile
- o *Recommendation:*
 1. RF= 0.1 for all stocks listed as endangered
 2. RF=0.5* for all pinniped stocks that are not listed as endangered, but are not at OSP
 3. RF=0.65* for all cetacean stocks that are not listed as endangered, but are not at OSP

* stocks known to have been increasing while undergoing removals that are greater than the PBR could have RFs as large as 1.0.

Example: Northern fur seal

$$\text{PBR} = 0.5R_{\text{max}} * N_{\text{min}} * \text{RF}$$

$$0.5 R_{\text{max}} = 0.5 * 0.12 = 0.06$$

$$\begin{aligned} N_{\text{min}} &= 984,000 / \exp(0.842[\ln(1 + [\text{CV}(N)]^2)]^{.5}), \\ &\quad \text{where } \text{CV}(N) = 0.126; \\ &= 885,322 \end{aligned}$$

$$\text{RF} = 0.5 \text{ (depleted stock under MMPA)}$$

$$\text{PBR} = 885,322 * 0.06 * 0.5 = 26,560$$

Proposed PBR approach based on:

1. shape parameter: $1 < z < 2.4$
2. % of runs: 95% of runs within OSP
3. CV(N): 0.2-0.8
4. CV(kill): 0.3
5. Initial Abundance: 0.3K to 1.0K
6. Distr. of est. N: logNormal
7. Distr. of est. kill: normal
8. Rmax: 0.04 cetaceans/0.12 pinnipeds
9. Rate est N "ages": 20% per year after 5 years
10. Rec. Factors: .1 if listed as endangered (ESA)
.5* if not an end. pinniped or at OSP
.65* if not an end. cetacean or at OSP

*** based on simulation trials where bias in est. of N and kill are specified.**

Alaskan Strategic Stocks

stock	PBR	kill (CF)	ZRMG	kill (Subs)	Status
Steller sea lion	2146	44	yes	548	S/thr
N. fur seal	26560	3	yes	1837	S/dep
Harbor seal-SE	1347	Unk	Unk	1671	S/subs
Harbor seal-GOA	755	25	yes	1196	S/subs
spotted seal	124	Unk	Unk	1000+	S/subs
ringed seal	1331	1	yes	3000+	S/subs
bearded seal	Unk	1	Unk	1000+	Unk
ribbon seal	Unk	.2	Unk	100	Unk
beluga-Bristol	36	Unk	Unk	8	Unk
beluga-Cook	7	Unk	Unk	13	S/subs
killer whale	14	1	yes	0	NS
harbor porpoise	138	20	no	0	NS