Marine Conservation Alliance
promoting sustainable fisheries to feed the world

Adak Fisheries, LLC

Alyeska Seafoods

Alaska Crab Coalition

Alaska Draggers Association

Alaska Groundfish Data Bank

Alaska Pacific Seafoods

Alaska Scallop Association

Aleutian Pribilof Island
Community Development
Association
Akutan, Atka, False Pass, Nelson Lagoon, Nikolski, St. George

At-Sea Processors Association

Bristol Bay Economic
Development Corp.
Aleknagik, Clark's Point, Dillingham, Egegik, Ekuk, Ekwok, King Salmon, Levelock, Manokotak, Naknek, Pilot Point, Port Heiden, Portage Creek, South Naknek, Togiak, Twin Hills, Ugashik

Central Bering Sea Fishermen's
Association
St. Paul

City of Unalaska

Coastal Villages Region Fund
Chefornak, Chevak, Eek, Goodnews Bay, Hooper Bay, Kipnuk, Kongiganak, Kwigillingok, Mekoryuk, Napakiak, Napaskiak, Newtok, Nightmute, Oscarville, Platinum, Quinhagak, Scammon Bay, Toksook Bay, Tuntutuliak, Tununak

Groundfish Forum

High Seas Catchers
Cooperative

Icicle Seafoods

Mothership Group
PV Excellence
PV Ocean Phoenix
PV Golden Alaska

Norton Sound Economic
Development Corporation
Brevig Mission, Diomede, Elim, Gambell, Golovin, Koyuk, Nome, Saint Michael, Savoonga, Shaktoolik, Stebbins, Teller, Unalakleet, Wales, White Mountain

Pacific Seafood Processors
Association
Alaska General Seafoods
Alyeska Seafoods, Inc.
Golden Alaska Seafoods, Inc.
Peter Pan Seafoods, Inc.
Premier Pacific Seafoods, Inc.
Supreme Alaska Seafoods, Inc.
UniSea Inc.
Wards Cove Packing Company
Western Alaska Fisheries, Inc.
Westward Seafoods, Inc.

Prowler Fisheries

Trident Seafoods Corp.

United Catcher Boats
Akutan Catcher Vessel Assoc.
Arctic Enterprise Assoc.
Mothership Fleet Cooperative
Northern Victor Fleet
Peter Pan Fleet Cooperative
Unalaska Co-op
Unisea Fleet Cooperative
Westward Fleet Cooperative

U.S. Seafoods

Waterfront Associates

Western Alaska Fisheries, Inc.

Yukon Delta Fisheries
Development Association
Alakanuk, Emmonak, Grayling, Kotlik, Mountain Village, Nunam Iqua

August 10, 2009

Mr. Michael Payne
Chief, Marine Mammal Conservation Division
Office of Protective Resources
National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

Dear Mr. Payne:

These comments are submitted by the Marine Conservation Alliance ("MCA") in response to the request by the National Marine Fisheries Service ("NMFS") for comments on the proposed 2010 List of Fisheries ("LOF"), 74 Fed. Reg. 27739 (June 11, 2009).

MCA is a broad-based coalition of coastal communities, fixed and mobile gear fishermen, Community Development Quota groups, vessel owners, processors, support industries and consumers directly and indirectly involved in the Alaska groundfish and shellfish fisheries off Alaska. The coalition members have joined together to support science-based policy that protects the marine environment and promotes long-term sustainability of both fishery resources and the North Pacific fishing community that depends on those resources.

I. The Proposed List of Fisheries

NMFS' proposed 2010 classification of fisheries again incorrectly designates the Bering Sea Aleutian Islands ("BSAI") pollock trawl fishery and the BSAI flatfish trawl fishery as Category II fisheries. The BSAI flatfish trawl fishery is classified as a Category II fishery because of alleged interactions with the western stock of Steller sea lions. The BSAI pollock trawl fishery is classified into Category II because of alleged interactions with the western stock of Steller sea lions; eastern North Pacific, Gulf of Alaska, BSAI transient killer whales; central North Pacific humpback whales; and western North Pacific humpback whales. MCA's comments will focus on whether these two fisheries are properly designated as Category II fisheries.

A fishery is designated as a Category II fishery when the combined mortality and serious injury from all fisheries with respect to a marine mammal species equals or exceeds 10% of the Potential Biological Removal ("PBR") for that species. Thus, the proper classification of a fishery depends on the correct

calculation of PBR and of mortality/serious injury rates. Unfortunately, with respect to the two fisheries at issue, the data and analyses on which NMFS relied for each calculation are fatally flawed. Moreover, by utilizing this flawed data, despite continual concerns raised by the public, NMFS has seemingly made an arbitrary and capricious decision not to use the best scientific data available.

The PBR Calculation. PBR for a species is calculated using the formula that PBR equals the minimum population estimate ("N_{min}") multiplied by one half of the maximum net productivity rate ("$0.5\ R_{max}$") multiplied by a recovery factor ("F_R") that is 0.1 for stocks listed under the Endangered Species Act, 0.5 for stocks for which trend data is unknown and 1.0 for stocks for which trend data is known. Thus, $PBR = N_{min}\ x\ 0.5\ R_{max}\ x\ F_R$. A mistake in any one of the multipliers can have a major impact on PBR and on the proper classification of a fishery.

In the case of the 2010 proposed LOF, the PBR numbers which NMFS used to determine the category of each fishery are based on flawed data in the April 1, 2009 Stock Assessment Report ("SAR") for marine mammal species. Relying on the flawed SAR has caused NMFS to understate the PBR for marine mammal stocks.

For example, the PBR for the western stock of Steller sea lions of 234 animals fails to recognize that the calculation is based on a low estimate of the stock's minimum population size. The N_{min} estimate for the western stock of Steller sea lions improperly excludes the entire Russian portion of the stock. NMFS' decision to exclude the Russian stock is perplexing given that NMFS insisted that consideration be given to the status of the Russian stock in the recovery plan for the western stock of Steller sea lions. Until NMFS adopts a rule pursuant to the Administrative Procedure Act designating the Russian stock as a legally separate population, NMFS cannot elect to arbitrarily exclude members of the Russian stock from the total population count. Proper calculation of N_{min} changes the current PBR estimate and the fishery classifications.

The portion of the western Steller sea lion stock found in the U.S. is estimated at 38,988. This is the population estimate used in the PBR calculation. SAR at 2. However, the portion of the western Steller sea lion population in Russia includes 16,000 animals. *Id.* Thus, the entire stock has a population of 54,988. When that number is used for the population component of the PBR calculation, it leads to a PBR of 330, not 234. The result is that the combined fishery takes of 26.2 do not exceed 10% of the PBR. Thus, neither of the two fisheries that are the focus of this comment, nor any other fishery, should be placed into Category II because of Steller sea lion interactions.

Even if the Russian stock were properly excluded from the estimate of N_{min}, that number is artificially low. Indeed, the SAR admits that its estimate of N_{min} is incorrect. The SAR states that the N_{min} used to compute the Steller sea lion PBR "has not been corrected to account for animals that were at sea during the surveys." SAR at 2.

Additionally, Steller sea lion surveys conducted prior to 2004 used oblique 35 mm photography. Differences in resolution between oblique 35 mm photographs, and the vertical high resolution photographs used now, require an adjustment factor to account for the increased accuracy of the newer technique. NMFS employs an adjustment factor of -3.64% to be applied to all counts from vertical photographs. in order to analyze regional time series that include counts prior to 2004 (Fritz and Stonchcomb 2005). That means that the agency has determined to purposely reduce the more recent (and presumably more accurate) population counts by 3.64% so that they are consistent with the historical under-counts. The agency has never fully explained its rationale for this policy, except as an administrative convenience in that it is easier to make the adjustments to the new data than to correct the already-published historical data that the agency readily admits is inaccurate. There is a good rationale for correcting the inaccurate historical photographic data using the correction factor NMFS has identified, rather than reducing the more recent survey data. If that correction is made, as it should be, those fisheries now classified as Category II fisheries would likely become Category III fisheries because the threshold PBR number would be larger.[1]

Similarly, the data used to calculate the PBR for the eastern North Pacific resident stock of killer whales are fatally flawed. In calculating N_{min}, the SAR notes that NMFS is using photo-identification techniques to assign killer whales to the resident population. However, the SAR states that approximately 600 killer whale photographs were excluded from the population count because the photographs have not been matched for population grouping. SAR at 89. Simply ignoring these data and the potential increased number of whales is arbitrary and renders the N_{min} calculation invalid. Indeed, the SAR admits N_{min} has been "underestimated." *Id.* at 93.

NMFS is also using an incorrect recovery factor when calculating PBR for these killer whales. The SAR states the Prince William Sound and Kenai populations of the North Pacific resident stock of killer whales have been increasing by 3.3% annually for 15 years. SAR at 91. The SAR then notes that the entire population has increased from 507 in the last stock assessment to 1123 in the most recent assessment. *Id.* Nevertheless, NMFS states it lacks the data to determine if the population is increasing or decreasing and classifies the stock as status uncertain, assigning it a recovery factor of 0.5. *Id.* Fifteen years of annual population increases and a doubling of the population between stock assessments is sufficient evidence of a population trend. This species should be assigned a recovery factor of 1.0, not 0.5. These errors

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[1] Although not directly related to the PBR calculation, the SAR also incorrectly concludes that the Steller sea lion population "is declining." SAR at 7. That conclusory and unsupported statement is contradicted by the SAR itself.   The SAR admits (1) the counts for non-pup Steller sea lions at trend sites for the western U.S. stock increased by 5.5% between 2000-2004, and (2) the population of adult and juvenile Steller sea lions in the Gulf of Alaska and BSAI increased by 2238 animals between 2000 and 2004. *Id.* at 2, 3. More recent data suggests that the population is increasing in some subareas, stable in others, and declining in yet other subareas. The overall trend has been characterized as "stable or slightly declining" but data from the 2000-2008 period shows an approximate 14% increase. Surveys are currently ongoing that may result in adjustments to this estimate, but those data are unavailable for this LOF.

are not insignificant when NMFS calculates that 10% of PBR is 1.12 animals and the mean annual fisheries mortality is 1.48, a minimal difference of 0.36 animals – a difference which causes the BSAI flatfish trawl fishery to be designated as a Category II regulated fishery.

With respect to the eastern North Pacific, Gulf of Alaska, BSAI transient stock of killer whales, NMFS has failed to provide adequate scientific justification for distinguishing and separating transient stocks into different groups based on different mt DNA haplotypes, acoustic differences, and nuclear (microsatellite) DNA. Until such time as new data are published to support these separations, it is improper for NMFS to use this separation to make determinations for the LOF. Properly combining these allegedly separate stocks changes N_{min}, the associated PBR, and the classification of the BSAI pollock trawl fishery. These failures are significant given that the BSAI pollock trawl fishery is classified as a Category II fishery because over the last five years it has been taken 0.1 more transient killer whales than allowed by the flawed PBR calculation.

Similar flaws infect the PBR estimates for the central North Pacific stock of humpback whales. Photographs taken between 1991 and 1993 were used to estimate the population of this stock at 4,005. SAR at 170-171. NMFS bases its PBR calculation on this 17-19 year old data. *Id.* at 171. This violates NMFS' own policy. The 2005 revisions to the SAR Guidelines provide that abundance estimates older than eight years should not be used to calculate PBR.

Compounding this problem and illustrating one reason for the 2005 policy is the fact that NMFS admits the "best available estimate" is that this population has been growing at a rate of 7% annually. NMFS even admits this is "a conservative estimate" of the growth in the population. *Id.* In other words, NMFS is using a minimum population estimate that violates the agency's own policy and is substantively wrong. The PBR calculation is not based on the best available information. A proper population estimate would reveal that the BSAI pollock trawl fishery is not properly classified as a Category II fishery.

The PBR calculation for the western North Pacific stock of humpback whales suffers from the same weaknesses as for the central North Pacific stock. Again, NMFS bases its PBR calculation on 1991-1993 data. SAR at 164. Again, NMFS states that an annual population growth rate of 7% is "reasonable to assume." *Id.* And again, NMFS is violating its own policy and not using the best available data to calculate the minimum population size. Had NMFS done so, the BSAI pollock trawl would not be classified as a Category II fishery.

In considering the accuracy of NMFS' N_{min} calculations for these two stocks of humpback whales, it is also significant that the SAR admits there is "considerable overlap" between the two stocks and that NMFS is typically unable to determine to which stock a sighted animal should be assigned. SAR at 164. If NMFS is unable to determine to which stock a sighted animal should be assigned, how can NMFS arrive at any defensible population estimate for these allegedly separate stocks?

The numerous errors in the N_{min} and other calculations in the SAR require that these errors be corrected and PBR recalculated before NMFS proceeds with any final LOF designations.

The Mortality and Serious Injury Calculation. The proposed LOF is dependent not only on the correct computation of PBR but also on the correct computation of the marine mammal mortality and serious injury caused by fishery interactions. As is the case with the PBR calculations, the estimates of mortality and serious injury attributed to each fishery in the proposed LOF are flawed.

At the outset, it should be noted that there is a serious generic defect in NMFS' methodology for calculating incidental takes. That defect results in NMFS double counting marine mammal mortalities and serious injuries. This double counting inflates NMFS' mortality and serious injury numbers, often by 100%.

NMFS double counts mortalities and injuries because of the procedure NMFS uses to calculate marine mammal bycatch. NMFS calculates total bycatch in a fishery using a formula that begins by determining the ratio of marine mammals killed or seriously injured per ton of fish caught. That ratio is expressed as $R_{hat} = m/t$ where "m" is the number of marine mammals killed or seriously injured in NMFS' observed sets and "t" is the total amount of fish caught in the observed sets. Employing that ratio, NMFS estimates the total number of marine mammals killed or injured ("B") in the entire fishery by using the formula $B = R_{hat} \times T$ where "T" is the total harvest of fish from <u>all</u> observed and unobserved fishing sets.

By incorporating all observed and unobserved fishing sets, this formula accounts for marine mammal interactions associated with 100% of the fishery. But NMFS skews the mortality and injury estimate upward by adding to this total number the takes in unobserved sets, notwithstanding the fact they have already been counted. Thus, if a fishery takes 100,000 metric tons of fish in observed sets in which there were two marine mammal mortalities, $R_{hat} = 2/100,000$ or 0.00002. If the unobserved part of the fishery caught another 300,000 metric tons of fish, NMFS estimates the total marine mammal mortality and serious injury for the entire fishery of 400,000 metric tons as $B = 0.00002 \times 400,000$ or 8. However, if three marine mammals were reported killed in logbooks for unobserved sets, NMFS adds those three mortalities to the fishery-wide total of eight and declares the fishery has a bycatch of eleven marine mammals. This procedure double counts interactions -- artificially, incorrectly, and unfairly exaggerating the number of takes. Before NMFS can properly determine the LOF, NMFS must correct these errors in its estimate of marine mammal mortalities and serious injuries.

The second way in which NMFS is double counting marine mammal mortality and serious injury is that NMFS counts each mortality and injury twice for certain stocks. Thus, one mortality is counted as two mortalities, doubling the impact of the fishery. For example, when NMFS cannot determine to which stock a killer whale belongs, NMFS simply counts that one mortality as if it were two mortalities, one in the resident stock, and one in the transient stock.

NMFS utilizes this amazing procedure because NMFS admits that without genetic testing it is impossible to determine if a killer whale taken in a fishery belongs to the eastern North Pacific Alaska resident stock or to the transient stock. Rather than do the testing to be accurate, NMFS simply assigns each mortality to both stocks, thus inflating mortality estimates by 100%. NMFS commits the same error for the central and western North Pacific stocks of humpback whales. Significantly, with respect to humpback whales, NMFS admits it is counting one mortality as if it were two. SAR at 165, 173. Double counting mortalities and serious injuries is scientifically and statistically inappropriate. To arrive at a proper assessment of incidental marine mammal mortality and serious injury, NMFS needs to do one of two things. NMFS must either reduce the mortality and serious injury numbers by 50% or NMFS must combine the population estimates of the affected stocks so that the actual take levels are compared to the actual total population.

The double counting of humpback whale interactions in the North Pacific is exacerbated by another equally serious error. All mortalities and serious injuries occurring when humpback whales are wintering in Hawaii are assigned to the central and western North Pacific stocks. However, NMFS admits the animals in Hawaii come from several stocks, of which the central and western North Pacific stocks are but two. SAR at 163, 170. By arbitrarily assigning all mortalities and injuries to just two stocks, NMFS is, once again, artificially inflating the estimated incidental take.

Related, but similar methodological problems infect the mortality and injury estimates for Steller sea lions. The largest component of the total mean annual mortality of Steller sea lions for all fisheries is the Prince William Sound salmon drift gillnet fishery. This one fishery is assigned 14.5 mean annual mortalities, more than 50% of the total annual sea lion mortalities. SAR at 5. However, the 14.5 mean annual mortalities is based on data that are 19 years old. Such data are suspect because fishing practices have changed. Further, Prince William Sound is on the eastern edge of the Steller sea lion western stock and some part of these 14.5 assigned mortalities are probably from the eastern Steller sea lion stock, which has increased in size.

There is also a serious disconnect between the proposed LOF published in the Federal Register and the SAR. In the Federal Register notice, NMFS states the BSAI pollock trawl fishery is placed into Category II in part because of interactions with the central and western North Pacific stocks of humpback whales. 74 Fed. Reg. at 27752. However, the SAR assigns 100% of the fisheries related mortality for these two stocks of humpback whales to other fisheries. The SAR never mentions the BSAI pollock trawl fishery as causing humpback whale deaths or serious injury. SAR at 165, 173. Since the LOF is based on the SAR, the BSAI pollock trawl fishery cannot be placed in Category II based on alleged humpback whale interactions that are nowhere mentioned in the SAR.

Unless and until NMFS corrects the many errors in the SAR, the proposed LOF is indefensible. These errors constitute serious methodological and scientific flaws.

II.   The LOF Process

In addition to the flawed data and analyses used by NMFS, there is a significant legal and structural issue associated with the fishery categorization process which is completely ignored by NMFS. Section 118(c), 16 U.S.C. § 1387(c), of the Marine Mammal Protection Act ("MMPA") defines a Category I fishery as one with frequent individual mortality and serious injury of marine mammals. A Category II fishery is one which causes an occasional incidental and serious injury to marine mammals. A Category III fishery has a remote likelihood of, or no known, incidental mortality and serious injury of marine mammals. NMFS has developed a formula for placing fisheries into these categories. However, that formula is arbitrary and capricious and may well violate the equal protection and due process clauses of the U.S. Constitution.

NMFS' formula for categorizing fisheries is found at 50 C.F.R. § 229.2. There, NMFS defines a Category I fishery as one that is responsible for the annual removal of 50% or more of any stocks' PBR. A Category II fishery is one that, collectively with other fisheries, is responsible for the annual removal of more than 10% of any marine mammal stocks' PBR and that, by itself, is responsible for the annual removal of between 1% and 50% of any stocks' PBR. A fishery will fall into the Category III classification if it, together with other fisheries, is responsible for the annual removal of 10% or less of the marine mammal stocks' PBR or that fishery, by itself, is responsible for the annual removal of 1% or less of the marine mammal stocks' PBR.

In short, if a fishery is the only one interacting with a strategic marine mammal stock and it is responsible for the serious injury or death of 1% of the PBR, the fishery is placed into Category III and subject to no further regulation under this section of the MMPA. But, if a second and new fishery enters the scene and it is responsible for taking 10% or more of the PBR, then the first fishery, which a moment ago was determined to be having no impact on the marine mammal stock, is suddenly transformed into a fishery having a significant impact and a fishery that must be subject to additional regulation as a Category II fishery. Indeed, the regulations provide that if only one fishery is interacting with a strategic marine mammal stock, and it is responsible for 10% or less of the PBR, then it is a Category III fishery since it, together with all other fisheries interacting with that marine mammal stock, is responsible for the serious injury and mortality of 10% or less of the PBR. Classifying fisheries into Categories II or III based on such methodology is inconsistent and arbitrary.

MCA appreciates the opportunity to submit these comments and looks forward to working with NMFS to address these issues.

Sincerely,

David Benton