



**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

January 22, 2010

Eric Olson  
Chair, North Pacific Fishery Management Council  
605 W 4<sup>th</sup> Ave Suite 306  
Anchorage, AK 99501-2252

Dear Mr. Olson:

Thank you for your letter requesting additional information from the National Marine Fisheries Service (NMFS) in regard to the upcoming groundfish status quo Biological Opinion (BiOp). We address below the points raised by your letter as you enumerated them (in italics, with responses in regular type).

1. *The Council requested input to the draft Terms of Reference (TOR) for the Center for Independent Experts (CIE) review of the BiOp.* NMFS is attaching the TOR for your review and comment. As you are aware, NMFS intends to have the CIE review the rationale and information used to support the conclusion in the BiOp, but not the conclusion itself.
2. *The Council requested that the BiOp schedule allow for public and Council review prior to the CIE review.* NMFS can accommodate this request by releasing the BiOp to the public and the Council prior to the CIE review. We can charge the CIE with review of the information contained in the BiOp and additional information, recognizing that this format may delay the finalization of the BiOp and implementation of any changes that may need to be made to the fisheries. NMFS is using all of the best available information in the analyses conducted in the BiOp.
3. *Will the Agency be using the downlisting criteria as guidance for the analysis in the consultation?* NMFS will use the Recovery Plan and the downlisting criteria contained within that plan as a general framework for assessing the capacity of the population, and the habitat that supports that population, recover.
4. *The Council asked the Agency to provide the years we will use to measure performance of the current SSL protection measures i.e., are we using the base year of 2000 to measure SSL trends.* The trend in abundance of SSL is based on data collected over approximately 30 years. It is this overall trend that provides indication as to the trajectory of the population. A subset of years may be informative for some purposes but will not be the sole basis by which the population is measured.



5. *With respect to trends in wSSL non-pup abundance, NMFS reported at the Council's February 2009 meeting that the trends across the range were an overall 14% increase over the period 2000 to 2008, or an annual increase of 1.7%. At that time, NMFS posed a hypothesis that the counts in the eastern portion of the wSSL range were inflated due to animals from the eSSL moving west to Kayak Island or other nearby areas. Partial counts were done in the summer 2009, and NMFS is now reporting that the overall increase in the wSSL population may be around 12% or a 1.4% annual rate of increase. NMFS further reported that genetics or tagging work is needed to confirm the hypothesis. Since the 1.4% number is linked to a hypothesis, will the 1.7% increase measured last year be used in the BiOp?*

The results of the summer 2009 non-pup survey in the northern Gulf of Alaska supported the hypothesis that there was an early summer movement of sea lions between SE Alaska (eastern stock) and the Prince William Sound area (western stock) in 2008 that affected trend analyses in both stocks. The analysis used in the new Biological Opinion will use the most up to date information available. The trend will be calculated through 2008, but will use the information obtained in 2009 on seasonal movements between stocks that resulted in the 12% overall increase between 2000 and 2008. However, it should be noted that both of the estimated annual rates of population change between 2000 and 2008 (1.4% per year using the 2009 information to adjust the 2008 counts, and 1.7% per year using the unadjusted 2008 data) are not significantly different from 0 and as such do not meet the recovery criteria noted in the 2008 Steller Sea Lion Recovery Plan.

*Also, how will the wSSL animals (as determined by genetics and brand/resight data) found in the eSSL region be accounted for in wSSL trends used in the BiOp? For example, there are two rookeries (Graves and White Sisters) in the eSSL range where genetic samples and observations of branded animals indicate that 60% and 40%, respectively, of these animals and their pups are of wSSL origin. Are these females and their pups accounted for in the 1.7% annual rate of increase for pups and non-pups in the wSSL population?*

NMFS will determine SSL stock trends based on counts of pups and non-pups on terrestrial sites during the breeding season within the designated ranges of the eastern and western stocks (E and W of 144°W, respectively), as modified by any information on seasonal movement across stock boundaries. The survey counts report the number of Steller sea lions (pups and non-pups) counted in aerial photos taken of particular rookeries and haulouts. The rookeries and haulouts are grouped by region and ultimately by stock. The genetic makeup of the animals at the time they are photographed is unknown and has never been included in these counts.

*6. The 2008 SSL Recovery Plan reported the total U.S. non-pup wSSL population at 42,500 animals. How was this calculated considering the issues described in No. 5 above? What would this total U.S. non-pup wSSL population number be today if calculated using this methodology.*

The number reported in the 2008 SSL Recovery Plan is 45,000. This is an estimate of the total western Steller sea lion population (pup and non-pup) in Alaska in 2005. It was based on the number of pups counted in aerial photographs in 2005 (9,950) multiplied by 4.5 (rounded to the nearest 1000). Using the 2009 pup production estimate (11,120) and the same methodology, the total western SSL population in Alaska is estimated to be 50,000 in 2009. The issues described in No. 5 do not affect these total population estimates because they are based on pup counts not non-pup counts, which are the subject of No. 5. The 4.5 multiplier on pup production comes from a life table of a stable equilibrium Steller sea lion population derived by Calkins and Pitcher (1982). It is the total number of sea lions (pups and non-pups) divided by the number of pups. Any pup multiplier based on a life table is only valid for use in estimating total population size if the underlying vital rates (survival and natality) that form the basis of the life table are known. In the case of the western SSL population in AK, the vital rates within each region are not known. It is for this reason that NMFS determines wSSL status by monitoring trends in pups and non-pups at key sites across the range rather than by estimating changes in total population size.

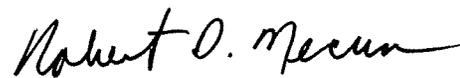
- 7. The Council requested the fishery catch data as used in the BiOp. Those tables are available and will be provided to the Council electronically with submission of this letter. NMFS began to look at these catch data in response to the Council's request to reinitiate consultation on the federal groundfish fisheries.*
- 8. NMFS reported on its plans for future SSL survey and other research. It appears that NMFS is planning to devote the majority of its resources to continued investigations in the Northern Gulf of Alaska including branding and genetics work. The Council requests that, instead of continuing to focus on this region, that emphasis be placed on filling the gaps in the western and central Aleutian Islands where surveys have not been completed in several years. In addition, SSL natality studies in areas such as the eastern Aleutian Islands would be useful; these data could be used to compare natality rates with other areas of the wSSL in an attempt to better understand the dynamics of pup production and survival.*

NMFS agrees that the Western and Central Aleutian Islands require the most attention as they are the areas showing the greatest and most rapid population declines. NMFS will continue to conduct annual aerial surveys of the entire western stock including the areas in question. The inability to complete these surveys in these areas in recent years has not been due to research focus. Rather, logistical difficulties such as weather delays, mechanical breakdowns,

and most recently the closure of the Shemya airstrip have limited the survey extent.

NMFS is continuing to study vital rates, including natality, of Steller sea lions in the eastern Aleutian Islands (as well as in the central and eastern Gulf of Alaska) as part of a brand-resighting program. Permanent marking of pups was reinitiated in the western stock in 2000 in the central Gulf of Alaska, and in 2001 in the eastern Aleutians and eastern Gulf. Therefore, the oldest marked sea lion currently alive in the eastern Aleutians is only 8 years old. Female Steller sea lions can become sexually mature at 3 years old (at the earliest) and first give birth at age 4, but only a small fraction (<10%) develop this quickly. Prime breeding ages for Steller sea lion females occur between 6 and 20 years old. Consequently, any study of sea lion natality rates in the western stock has just begun, since marked females are just now entering their prime breeding ages. NMFS has not had the opportunity to capture adult females for study over the last several years because of permitting issues, but is now actively developing new capture and analytic methods to directly measure female sea lion condition and reproductive status. NMFS hopes to test these techniques during the next several field seasons within the range of the wSSL. However, it is not expected that these new methods and capture techniques will provide significant new information for at least the next several years due to limited sample sizes. It is for this reason that continued study of the large number of permanently marked animals is critical.

Sincerely,



Robert D. Mecum  
Acting Administrator, Alaska Region

Attachments:  
TOR for CIE review  
Fishery Catch Tables- electronically

cc: Jim Balsiger  
Sam Rauch  
Jim Balsiger  
Kaja Brix  
Sue Salveson  
John Lepore