

**Marine Mammal Commission**  
4340 East-West Highway, Room 700  
Bethesda, MD 20814-4447

1 May 2008

The Honorable Carlos M. Gutierrez  
Secretary of Commerce  
U.S. Department of Commerce  
1401 Constitution Ave., NW  
Washington, DC 20230

Dear Secretary Gutierrez:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Department of Commerce's 22 April 2008 *Federal Register* notice announcing a six-month delay in determining whether to list the Cook Inlet beluga whale distinct population segment as endangered under the Endangered Species Act. We make the following recommendation.

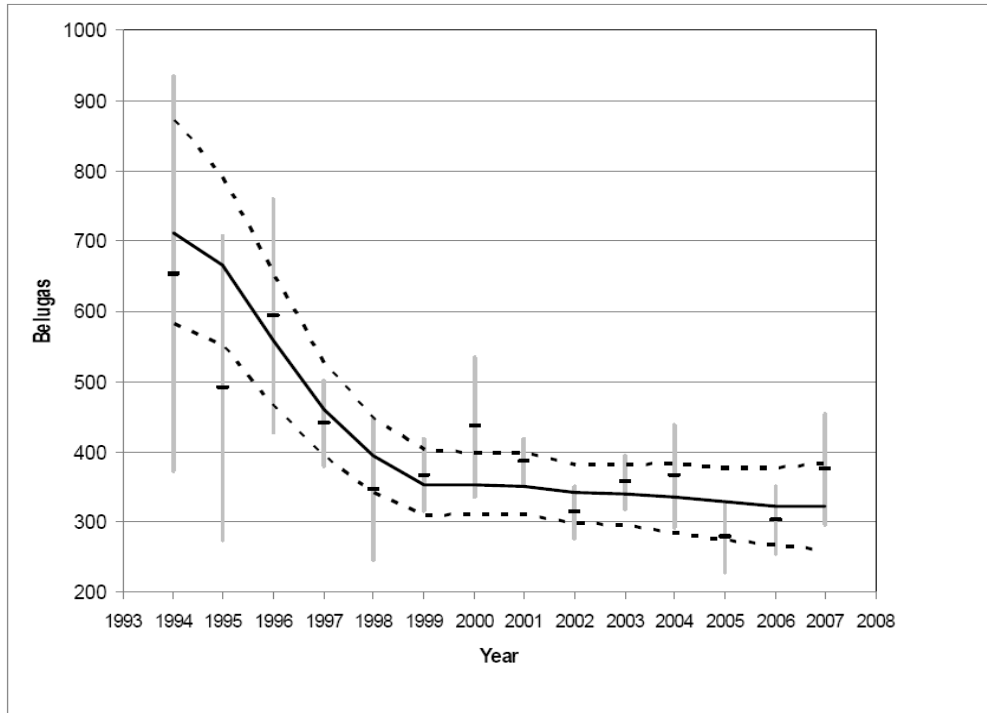
### **RECOMMENDATION**

The Marine Mammal Commission recommends that the Department of Commerce withdraw the six-month extension for determining whether to list the Cook Inlet beluga whale population, proceed immediately with an affirmative listing decision under the Endangered Species Act, and initiate all actions that flow from such a listing to conserve this population and promote its recovery.

### **RATIONALE**

The Department's *Federal Register* notice justified the six-month extension by suggesting that a substantial disagreement exists regarding the population trend of belugas in Cook Inlet and whether the population is now demonstrating a positive growth rate in response to the restrictions on subsistence harvest imposed in 1999. The Endangered Species Act (section 4(b)(6)(B)(i)) states that the Secretary may extend the deadline for a determination for not more than six months if the Secretary finds that "there is substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination...." The suggested disagreement over the population trend of the Cook Inlet beluga population is not scientifically credible.

The trend data at issue are illustrated in Figure 5.1.2-4 of the National Marine Fisheries Service's 2008 Status Review and Extinction Risk Assessment of Cook Inlet Belugas (*Delphinapterus leucas*) (Hobbs et al. 2008), which was released just days prior to publication of the extension notice and is reproduced on the following page. The disagreement highlighted by the Service is whether there is a positive trend in response to harvest control measures established in 1999. Between now and the end of the six-month extension, the only additional information on the trend will be a census estimate for 2008. For the reasons described below, we believe that the accumulation of one more data point is an insufficient and unreasonable basis for delaying a listing decision that withholds protective measures from a population that, as indicated by independent analysis and the most recent analysis by the Service's own scientists, is clearly at high risk of extinction and in need of the protection of the Endangered Species Act.



**Figure 5.1.2-4.** Posterior distributions of annual abundance for the years 1994-2007 from the Baseline model (a) The vertical gray bar is  $\pm 1$  standard error for each of the annual abundance estimates (black cross bar). The posterior distributions of the abundance from the population model are represented by the solid line connecting the median values and the dashed lines connecting the 2.5 percentile and 97.5 percentile values. The values between the dashed lines represent a 95% credibility interval.

The existing evidence strongly indicates that, not only is the population not recovering as expected but it is, in fact, likely declining. The declining trend was first revealed in an analysis conducted by Daniel Goodman and was presented in hearings regarding the beluga whale subsistence harvest. The analysis has been updated annually and the conclusion has not changed. The history of the analysis is available in Goodman (in press; copy enclosed).

The Service's notice provides neither an explicit, credible alternative hypothesis nor evidence that an alternative hypothesis is needed to explain the data. Although the explanation offered for the delay hinges on the 2008 estimate, the Service fails to explain how that single data point will be sufficient to alter the conclusion of the existing analysis. Given the clear pattern evident from the 14 data points and trend line in Figure 5.1.2-4, the 2008 data point would not provide a sufficient basis for concluding with any acceptable degree of confidence that the overall trend has reversed itself and is now increasing. More important, an apparent increase since 2005 would not provide a sufficient basis for concluding that the population is not endangered and therefore does not warrant listing.

Any conclusion that the population is now increasing would rest on selective use of data. The data in the beluga time series contain random variation from census error and actual variation in the growth rate. The random variation, which is reflected in deviations of the points around the model trend line (Figure 5.1.2-4), is taken into account in calculating the trend line. The most recent three points form a sequence with two consecutive increases that are larger than any apparent changes in the trend line. This type of pattern is not unusual, and similar patterns of apparent increase are evident in the data from 1998 to 2000 and from 2002 to 2004, whereas patterns of apparent decrease relative to the trend line are evident in the data from 1996 to 1998 and from 2000 to 2002. The apparent increases can be distinguished from actual changes in population abundance when they greatly exceed the population's maximum growth rate (thought to be 2 to 6 percent annually). In addition, on two previous occasions (1995 and 2000) the census estimate was outside the 95 percent confidence limits for the model trend. This is to be expected from time to time and does not provide a basis for rejecting the overall results of the analysis. Even if the 2008 census estimate is 10 percent larger than the 2007 estimate (with the same coefficient of variation; 0.21) the analysis would still indicate a 96 percent chance that the overall growth rate is less than 2 percent and a 67 percent probability that the growth is negative (i.e., the population is continuing its decline). Finally, in his analysis, Goodman assessed the trend from 1999 to 2006 only (i.e., subsequent to the imposition of harvest controls) and that trend actually suggests a higher probability of future decline than the full series beginning in 1994.

To assert that any single data point would provide a suitable basis for changing conclusions about the population trend (1) ignores the history of sustained decline, (2) imposes an unacceptable and unnecessary level of risk to the population, (3) seems decidedly non-precautionary, and (4) is contrary to appropriate practices for statistical analyses. Contrast this approach based on selective use of three or four data points with that used in the Service's recently revised Steller Sea Lion Recovery Plan, where 30 years of statistical increase at an average annual growth rate of 3 percent is required before delisting the western stock. In comparison, the approach being applied to the Cook Inlet beluga whale population seems beyond reason.

Importantly, the Service's rationale for the delay fails completely to address the question of whether the last three years of data—even if they unequivocally demonstrated an increasing trend—are sufficient to conclude that the population is not at risk of extinction. Here, again, we believe that such a conclusion is inconsistent with the existing analysis and therefore unwarranted, particularly when the status of the Cook Inlet beluga whale population is compared with that of three of the most endangered listed marine mammals in U.S. waters—all managed by the Service. The current size of the North Atlantic right whale population is approximately the same as that of the Cook Inlet beluga whale population; the model trend suggests an abundance of about 300 to 350. The right whale is rightly recognized as highly endangered and is the focus of about \$10 to \$12 million annually for conservation-related research alone. The Hawaiian monk seal population currently numbers about three times that of Cook Inlet beluga whales. It has been recognized as an endangered species for three decades, and its recently revised recovery plan indicates that it would not be considered for delisting until it reaches a population size of 2,900. And, as noted above, the western stock of Steller sea lions, which numbers about 45,000, is listed as endangered and the

Service has just determined that it will not consider the stock for delisting until it has experienced 30 years of growth. In view of the substantial body of evidence before it, the Service's delay in its listing determination for the Cook Inlet beluga whale population is entirely at odds with its actions involving these other species. Furthermore, by postponing a listing decision, the Service could be elevating the risk of extinction for this population by unreasonably and unnecessarily shirking its responsibilities to initiate necessary research and recovery actions.

The Service's failure to make a timely determination in this case also is contrary to the analyses of its own scientists. As noted above, only days prior to publication of the *Federal Register* notice announcing the extension, the Service released its status review for the Cook Inlet beluga whale. A population viability analysis by Service scientists, using data up to and including 2007 and applying the model that they considered the most realistic, resulted in a "1% probability of extinction in 50 years, 39% probability of extinction in 100 years and 79% probability of extinction in 300 years." (Note that the Service has determined that it would not delist the North Atlantic right whale unless its risk of extinction was less than 1 percent in 100 years.) We see no reasonable way to reconcile these results with a conclusion that the Cook Inlet beluga whale population will not be at risk of extinction, even if the next abundance estimate is consistent with an increasing trend. It remains clear that, over the period of record, the best available evidence indicates that the Cook Inlet beluga whale population has been experiencing some unexplained depression of its natural growth rate, which puts it at an elevated risk of extinction. To address that risk, the population needs the added protection provided by the Endangered Species Act.

We believe the Service's decision to delay its listing decision is unjustified and inconsistent with the intent of the Endangered Species Act. What is particularly troubling is that it is the latest in a series of decisions that have failed to bring the attention and resources needed to facilitate and encourage the recovery of this population. For two decades, the Service has repeatedly misjudged the plight of the Cook Inlet beluga whale population. It has assumed that alleviation of the primary factor that caused the decline (unmanaged subsistence harvests) would lead to recovery of the population. This assumption discounts the other factors that may now be contributing to the population's decline and impeding its recovery. Had the Service listed the population when it was first petitioned to do so, its high risk of extinction and the eventual cost of necessary recovery actions might have been reduced. Despite the declining trend of the population in the decade since subsistence hunting came under control, the Service has yet to mount a comprehensive, coordinated research effort to investigate the factors that may be preventing or inhibiting recovery. As noted above, the Service's actions regarding this population stand in stark contrast to those undertaken for many other endangered species and are inconsistent with the best available information, including that from its own scientists. We see no credible scientific evidence to justify postponing a listing decision; the existing evidence, which is substantial, indicates that this population faces a high risk of extinction.

At Congress' request, the Commission recently completed a report describing inconsistent treatment of endangered, threatened, and depleted marine mammal taxa, a copy of which is enclosed. In our view, the management of the Cook Inlet beluga whale population exemplifies such inconsistency. To fulfill its responsibilities under the Endangered Species Act, the National Marine

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Fisheries Service needs to stop equivocating over a listing determination that is clearly warranted and begin directing its time, energy, and resources toward research and recovery activities. For all these reasons, the Marine Mammal Commission recommends that the Department of Commerce withdraw the six-month extension for determining whether to list the Cook Inlet beluga whale population, proceed immediately with an affirmative listing decision under the Endangered Species Act, and initiate all actions that flow from such a listing to conserve this population and promote its recovery.

Please contact me if you have questions about our recommendation or wish to discuss this matter.

Sincerely,



Timothy J. Ragen, Ph.D.  
Executive Director

Enclosures

cc: Vice Admiral Conrad C. Lautenbacher, Jr., Ph.D., Undersecretary for Oceans and Atmosphere  
James Balsiger, Ph.D., Acting Assistant Administrator for Fisheries, NOAA  
Mr. James Lecky, NOAA Fisheries Office of Protected Resources  
Douglas DeMaster, Ph.D., Alaska Fisheries Science Center  
Ms. Kaja Brix, NOAA Fisheries Alaska Region

#### References

- Goodman, D. In press. The future of fisheries science: merging stock assessment with risk assessment, for better fisheries management. *In* R. Beamish and B. Rothschild (eds.), *The Future of Fisheries Science*.
- Hobbs, R. C., K. E. W. Sheldon, D. J. Rugh, and S. A. Norman. 2008. 2008 status review and extinction risk assessment of Cook Inlet belugas (*Delphinapterus leucas*). AFSC Processed Rep. 2008-02, 116 pp. Alaska Fisheries Science Center, NOAA, National Marine Fisheries Service, 7600 Sand Point Way NE, Seattle WA 98115.