

Minutes: Eighth Meeting of the Alaska Scientific Review Group (18-20 November 1998)

I.1 Introduction

The eighth meeting of the Alaska Scientific Review Group (AKSRG) was held at the Rural CAP Office in Anchorage, Alaska, from 18 - 20 November 1998. The purposes of the meeting included: 1) initial review of revised 1999 Stock Assessment Reports for NMFS stocks in Alaska, 2) review of status of the Cook Inlet stock of beluga whale, 3) review of NMFS and FWS plans for marine mammal research and management, and 4) planning for joint SRG meeting in Spring 1999. Appendix 1 presents the list of AKSRG participants and invited participants. Charlie Johnson was introduced as a new member to the AKSRG, filling the vacancy created by the departure of Caleb Pungowiyi. Appendix 2 presents the adopted agenda. Appendix 3 lists the background papers that were distributed prior to the meeting or made available during the meeting. The meeting was chaired by Lloyd Lowry. Doug DeMaster and Brian Fadely agreed to be the rapporteurs.

I.2 Adoption of Agenda

The agenda was adopted as shown in Appendix 2.

1.3 Approve Draft Minutes from Previous Meeting

The draft minutes from the seventh meeting of the AKSRG were approved with no additional changes.

1.4 Election of a Chair for 1999

There was unanimous agreement to re-elect Lloyd Lowry. Lowry was thanked by the group for all of his hard work in directing AKSRG activities and in chairing its meetings. Lowry accepted.

1.5 Other Business

AKSRG members were asked to keep receipts for the hotel and airline tickets, as appropriate, and to submit these with a signed travel reimbursement form to Scott Hill immediately after the meeting. AKSRG members also thanked Carl Jack and the Rural-CAP staff for their willingness to again host the AKSRG at their facility in Anchorage.

2.1 Cook Inlet Beluga Whales

Lowry introduced the topic by noting that the Marine Mammal Protection Act, as amended in 1994, directed NMFS and the FWS to establish Scientific Review Groups to

comment on the status of marine mammal stocks in U.S. waters in three regions: Alaska, Pacific, and the Atlantic-Gulf of Mexico. Lowry added that at this meeting the AKSRG would develop specific recommendations to NMFS regarding the status of and needed management and research actions for Cook Inlet beluga whales. These comments would be considered by NMFS in revising the Stock Assessment Reports (SARs) for Alaskan marine mammals in 1999.

Lee Stephan, Cook Inlet Marine Mammal Council (CIMMC), summarized the position of the CIMMC regarding the status of this stock, as follows: 1) additional input from beluga specialists is needed to fully evaluate the status of this stock, 2) harvest numbers are not accurate, 3) Cook Inlet beluga whales should not be managed as a distinct stock, 4) additional information is needed regarding the life history of this stock (e.g., food habits, movement patterns, mortality, reproduction, etc.), and 5) more information is needed regarding the subsistence needs of Alaska Native families in the Cook Inlet Region and the extent to which beluga meat and muktuk is used to satisfy this need. He added that the hunters had cooperated with NMFS in 1997 regarding enumeration of harvest mortality, but that now this information was being used to adversely impact hunters. This situation has led to a lack of cooperation of the hunters with NMFS in subsequent years.

Matt Kookesh commented that management of Alaska Native harvests should not be based on PBR-type quotas because the PBR management approach had been designed to manage marine mammal mortality incidental to commercial fishing. Rather NMFS should use a comanagement-type infrastructure, as mandated in the MMPA, to manage this stock. Charlie Johnson added that the walrus hunters had similar concerns. To some extent, past comments of the AKSRG to FWS regarding walrus management in Alaska had helped resolve some of these conflicts. Joel Blatchford commented that from his perspective NMFS was overly focusing on Alaska Native subsistence hunters. Other human activities were likely having adverse effects on this stock, such as whale watching and eco-tourism programs.

DeMaster briefly summarized what was meant by a PBR approach to management. Rod Hobbs (NMFS) briefly summarized the way in which beluga whales in Cook Inlet were surveyed. Willie Goodwin responded that NMFS needed to develop a better way to count belugas in Cook Inlet and in other areas of the State. Dan Alex, CIMMC, noted the following: 1) there was a great deal of uncertainty in the estimates for abundance and harvest levels, 2) based on comments from long time hunters, Cook Inlet belugas were comprised of four separate types of belugas, 3) survey techniques needed to be improved to better estimate the number of gray and black (i.e., young whales) in the population, 4) additional information on movements was needed, and therefore, satellite tagging of beluga whales should be initiated as soon as possible, and 5) it was unlikely that Cook Inlet beluga whales represented a distinct stock in Alaska.

Ross Schaeffer, Alaska Beluga Whale Committee (ABWC), disagreed with the statement made by Alex that the Cook Inlet population of belugas should not be managed as a distinct stock. He added that based on his experience, when the hunters and the scientists cooperate, all

parties can benefit. Further, in his opinion the primary problem regarding the status of Cook Inlet beluga whales was related to the commercial hunting of these animals by a small number of hunters in the region. He noted that the ABWC had asked all of the hunters who live outside of the Cook Inlet area to stop hunting beluga whales in this area. Carl Jack (Rural Cap) responded that in 1998, 20 of the 40 landed beluga whales were taken by hunters who lived outside of the Cook Inlet Region. John James noted that he thought that the influx of sport fishers in the Kenai area has caused animals in that area to leave.

Johnson asked NMFS whether the \$1.5 million that Congress had authorized for comanagement of marine mammals in Alaska had ever been appropriated to NMFS. Tom Eagle, Office of Protected Resources (NMFS) responded that, while NMFS had requested that their budget be increased to include an appropriation of \$1.5 million, the request had never made it through the budget office in the Department of Commerce (note: NMFS is part of the Department of Commerce). Eagle added that NMFS would continue to request that these funds be added to its budget. He also noted that Congress "earmarked" several Native organizations in Alaska for funding, including the Alaska Eskimo Whaling Commission, Alaska Beluga Whale Committee, and the Alaska Native Harbor Seal Commission. Johnson commented that FWS was likely to get \$1.0 million in FY99 for the purpose of comanagement with Alaska Native Organizations.

Delice Calcote, CIMMC, commented that the CIMMC had changed to a Tribal Organization in June of 1998, where the CIMMC has tribal authority over its members. This should help with getting CIMMC members to restrict their hunting of Cook Inlet beluga whales, but unfortunately not all hunters belong to the CIMMC. She also added that the CIMMC had not received all of the reports from NMFS regarding this population of whales. Finally, she noted that it was unlikely that the CIMMC would be successful in managing beluga whales in Cook Inlet without additional support from the Federal government (note: current level of support is approximately \$15K).

Marie Adams, ABWC (and participant in meetings of the International Whaling Commission- IWC), commented that the Alaska Eskimo Whaling Commission had worked out similar problems with the hunters, the environmental community, and government scientists. She offered the assistance of the ABWC in helping the CIMMC and NMFS manage this population. She noted that the primary priority should be to maintain a healthy population of beluga whales in Cook Inlet, which would allow subsistence hunting by Alaska Native hunters in perpetuity. To achieve this goal, the hunters would have to cooperate with the CIMMC and NMFS in such things as reporting struck and lost whales, monitoring the harvest, collecting biological samples from harvested whales, etc. Finally, she added that there were likely many possible reasons for the apparent decline in abundance of this stock and that the hunters shouldn't believe they are necessarily the cause, but that they need to recognize what can be done to prevent this stock from becoming extinct.

2.2 Scientific Results

Dave Rugh, NMFS, summarized a report on changes in the distribution of beluga whales in Cook Inlet. He noted that, relative to 15-30 years ago, animals were no longer being sighted in the lower inlet or in the middle of the inlet. Lowry commented that beluga whales seem to like to hunt in muddy, shallow waters (areas where killer whales rarely venture). Blatchford noted that in the last 30 years there have been many oil rigs put up in the middle of the inlet and it was likely that the whales were avoiding them. Monica Reidel, Alaska Native Harbor Seal Commission, added that Cordova fishermen have reported seeing beluga whales in that area. Also, Alex noted that killer whales started coming into the Cook Inlet in 1989.

Greg O'Corry-Crowe, NMFS, summarized the results of his genetic studies on beluga whales in Alaska. He noted that he had over 70 samples from Cook Inlet beluga whales, which represents a very good database to work from. His results indicate that this stock is isolated from other stocks of beluga whales in Alaska. In fact, it is the most distinct stock of beluga whales in Alaska. That is, there were five different haplotypes found in the sample and the frequency of these five haplotypes relative to the corresponding frequency in other stocks was very distinctive. This means that there is virtually no movement of animals from other stocks to this stock. Lowry added that it was likely that these animals have been genetically isolated from the other stocks of whales in Alaska since the last ice age (approximately 10,000 years ago).

Rod Hobbs, NMFS, summarized his work on estimating abundance using aerial surveys. He noted that he had five estimates of abundance from 1994 through 1998 and that these estimates accounted for: 1) beluga whales not at the surface at the time the airplane flew over the group, 2) the difficulty in seeing small, gray animals relative to large, white animals, and 3) missed groups of beluga whales. Surveys were flown in June to improve consistency in counts between years, but also because early in the time series surveys had been flown in May, June, and July with the maximum number of animals counted in June. At this time the animals are concentrated in tight groups along the coast near the mouths of rivers. The five-year average was 505 animals. The largest estimate was from 1994 (653 animals); while the smallest estimate was from 1998 (347 animals). Johnson asked whether the apparent decline in abundance was consistent with available data on harvest levels. Hobbs responded that it was. Alex commented that it was impossible to know exactly any of the parameters used in the equation to estimate abundance and that the estimate of abundance included cumulative errors. Therefore, the abundance estimate proposed by Hobbs was not necessarily true. Hobbs responded that the confidence interval associated with each estimate reflected the cumulative level of uncertainty in each of the parameters used to estimate abundance and that it was very likely that the true number of beluga whales in Cook Inlet was within these bounds. Calcote commented that she had participated in one of the Cook Inlet surveys and that during that survey offshore waters had not been surveyed. Hobbs responded that the zigzag pattern used to survey the offshore area typically resulted in zero sightings of beluga whales. Therefore, the offshore surveys were only conducted once in a given year, while the coastal waters of the upper inlet were surveyed several times in a given year.

Several people commented that the available radio-telemetry data on time spent at the surface and time spent diving was inadequate. Hobbs responded that the abundance estimate was indeed quite sensitive to the estimate of time spent below the surface and that additional data would reduce the confidence interval around the abundance estimate. However, he added that the uncertainty associated with the estimate of time below the surface had been incorporated into the confidence interval for the abundance estimate. Kathy Frost, Alaska Department of Fish and Game (ADFG), added that she had radio-tagged beluga whale in Bristol Bay and Canada in the 1980s and that the data she had collected on surfacing times were very similar to those reported by Hobbs. She also added that in this case, even if the abundance estimate were twice as high as that estimated by Hobbs et al., the harvest level reported from the past few years was still not sustainable. DeMaster noted that for the current level of harvest to be sustainable, the current population would have to include roughly four to six times the estimated population.

Lowry asked whether small calves were seen in the video recordings of schools that had been surveyed. Hobbs responded that small calves were counted in the video images, but that the probability of missing a small calf was greater than the probability of missing an adult size animal because 1) the size of the image was smaller and 2) the calf could be underneath its mother. Lowry also asked whether small calves tended to spend more time at the surface. Hobbs responded that this had been investigated using the video tapes of schools surveyed and that in general this was not the case (at least during June, when the animals were generally in shallow water).

Barb Mahoney, NMFS, summarized her report on harvest levels since 1987. She noted that the ADFG had interviewed hunters regarding subsistence hunting between 1987 and 1993, but that not all hunters had been contacted. In 1994-1996 the CIMMC had developed a report on the beluga whale hunt, which included estimates of the number of whales struck and lost for 1995 and 1996. In 1997, no formal report was prepared by the CIMMC; however, information was summarized by one of the hunters and given to NMFS. Finally, the available data for the 1998 season had been summarized earlier by Carl Jack, but that these data were considered preliminary. It was noted that most of the hunting in Cook Inlet took place between April and October. In summary, a minimum of 70 whales per year were killed since 1995. Several participants commented that NMFS should fund a study on traditional harvest practices in Cook Inlet to try to get a better estimate of the number of animals harvested annually in the 1980s and earlier. Jack reiterated his earlier statement that there had been 20 confirmed kills by hunters who lived in the area and 20 unconfirmed kills by hunters from outside the area. No estimate for the number of whales struck and lost is available. Art Nuglene, who has hunted beluga whales in Cook Inlet for over 20 years, commented that the estimated harvest levels prior to 1996 were too low. He further commented that the only way to get an accurate estimate of hunting mortality was to hire an Alaska Native harvest monitor for the entire hunting season. Johnson added that this problem could not be resolved until the hunters, CIMMC, and NMFS started to cooperate. He added that Alaska Native hunters were used as harvest monitors for managing the hunting of polar bears and walrus and that this approach had proven very successful.

Brendan Kelly raised the issue of whether NMFS was willing to initiate a marking/tagging program for all harvested beluga whales in Cook Inlet. Lowry added that this recommendation had been forwarded to NMFS by the AKSRG at its last two meetings. As Lowry recalled, the position of the Regional Office was that it preferred a strategy of focusing on comanagement to resolve this issue rather than trying to go forward simultaneously with comanagement and marking/tagging regulations. Mahoney added that in her discussions with enforcement officers within NMFS there were several unresolved problems with how to enforce a marking/tagging program under the MMPA.

Several participants commented that the Federal government was allowing the overhunting of this stock rather than enforcing a strict quota. DeMaster noted that under the MMPA, NMFS had limited authority to restrict Alaska Native harvest of marine mammals for the purpose of subsistence. He added that the MMPA did allow NMFS to restrict hunting of non-listed stocks, but only in the case of wasteful taking or inhumane killing. However, were this stock listed as either depleted under the MMPA or endangered/threatened under the ESA, NMFS would have the authority to restrict Alaska Native harvest.

2.3 Status of Co-Management of Cook Inlet Beluga Whale

As noted previously, the CIMMC is in the process of negotiating a comanagement agreement with NMFS regarding the management of Cook Inlet beluga whales. Several members of the CIMMC commented that they supported an immediate one to three year moratorium on subsistence hunting of this stock and in general supported a ban on the commercial sale of muktuk. Jack mentioned plans to hold a meeting of hunters to discuss possible conservation actions including: 1) protection of the Suisitna River Delta calving area, 2) hunting in shallow water only, and 3) requiring beluga whales to be harpooned before shooting. Schaeffer, ABWC, added that the members of the ABWC had agreed not to hunt beluga whales in Cook Inlet when they were visiting Anchorage and that the ABWC was opposed to the commercial sale of muktuk in Alaska. It was recognized that NMFS and the CIMMC would continue their efforts to develop a comanagement agreement, but that this would not necessarily be binding for Alaska Native hunters who were not affiliated with the tribes represented by the CIMMC.

3. Review of Draft 1999 Stock Assessment Report for Cook Inlet Beluga Whales

Regarding the issue of what value should be used in the PBR equation for the minimum estimate of abundance (N_{min}), Kelly proposed that the most recent population estimate (i.e., for 1998) and the associated N_{min} be used rather than the 5-year average using data from 1994-1998. Denby Lloyd commented that the AKSRG has highlighted its concerns regarding the status of this stock to NMFS over the last several years. He, therefore, agreed with Kelly that the estimate from 1998 should be used to estimate PBR for this stock. There was general agreement among AKSRG members with this proposal. It was also agreed that a reference to Rugh et al. (In

review) regarding changes in the distribution of beluga whales in Cook Inlet be added to the section on population size.

Regarding the issue of what value should be used for the Recovery Factor (RF) for this stock, Sue Hills recommended that the current value of 1.0 should be reduced to 0.5, as the status of this stock was uncertain. She further proposed that the AKSRG prepare another letter to the Regional Director regarding the status of this stock. There was general agreement among AKSRG members with this proposal.

Regarding the issue of trends in abundance, Milo Adkison noted that the statement that there was not a statistically significant decline in the abundance estimates was likely due to the small time period over which estimates were available and the relatively high CV of the estimates. From a management perspective, he recommended including a figure in the stock assessment report showing the five abundance estimates (and associated 95% confidence intervals), and noting in the text that the population had apparently declined 47% over a four-year period. There was general agreement among AKSRG members with this recommendation.

Regarding the issue of other human-related mortality, Scott Hill (NMFS) commented that the available information on fishery interactions indicated that very few whales were incidentally caught and drowned in gillnets or other fishing gear in Cook Inlet. Brad Smith, NMFS, added that in 1999 NMFS was planning to initiate an observer program for several of the category II fisheries in this area. There was general agreement that a statement about this program should be added to the stock assessment report. Lowry noted that many people who live in the Cook Inlet area are very concerned about the impact of 1) oil and gas development, 2) sewage outfall from the city of Anchorage, 3) noise pollution associated with shipping and ecotourism (e.g., whale watching), etc. Gary Harrison, Native hunter from Chickaloon, added that he thought the fishermen in Cook Inlet were taking too many salmon, which was also hurting this stock of beluga whale. Members of the AKSRG agreed that NMFS should expand the section in the Stock Assessment Report on "Habitat Concerns" for this stock and that in the letter to NMFS regarding the status of this stock, issues of habitat concerns should also be raised.

4. Review of Other Stocks of Beluga Whales

Lowry reported that the ABWC was in the process of finalizing several reports regarding the abundance of the Bering Sea stocks of beluga whales in Alaska, as well as a summary of Alaska Native subsistence harvest mortality. These reports would be the focus of an ABWC sponsored workshop in late March 1999, and would be presented at the 1999 meeting of the Scientific Committee of the International Whaling Commission (IWC) in May. During this meeting, a world-wide review of the status of beluga whale and narwhal populations would be undertaken by the IWC's subcommittee on small cetaceans. A similar review was held by the IWC in 1991. Lowry added that new information presented in these reports should be incorporated into the final SARs for 1999.

4.1 Bristol Bay Beluga Whale

Lowry summarized the available information on this stock of beluga whale. He noted that there were no substantive changes from the status of the stock in the mid-1980s. He noted that the abundance estimate was likely conservative because 1) there was no correction for groups of animals that were at the surface but missed, 2) the entire area was not surveyed (e.g., Kuskokwim Delta), and 3) a conservative correction factor was used for 2-4 year old animals, which are more difficult to see than adult-sized animals. He noted that the ABWC had scheduled a survey of this stock to take place in 1999.

Lowry summarized the harvest data for 1995-1997. Molly Chythlook (ABWC) added that there were eight villages in the Bristol Bay area where beluga whales were harvested. She noted that beluga whales have coexisted with the salmon fishery in this area for many years. Several participants asked about the fishery interactions, especially in years of relatively low salmon returns. Chythlook responded that only one whale had been reported becoming entangled in a salmon net in recent years in this area. Several participants asked why the harvest data for this stock were averaged over a five-year period. Lowry responded that because the harvest data were highly variable from year to year, it was believed that a five-year average was more indicative of "normal" harvest practices than averages based on fewer years (e.g., 3 years). Also, a 5-year period for averaging harvests had been recommended by the ABWC. There was general agreement among AKSRG members that this practice should be continued in the beluga whale stock assessment reports.

4.2 Eastern Bering Sea Beluga Whale

Lowry summarized the status of several papers that the ABWC was pulling together for a workshop on the status of beluga whales in Alaska, which will take place in March/April 1999. He noted that an aerial survey of the Norton Sound/Yukon Delta region is currently scheduled to take place in 1999. Regarding the conservative nature of the existing estimate, Lowry commented that the estimate of 7,986 beluga should be considered a minimum mostly because 1) only part of the area occupied by beluga was included in the estimate of abundance, and 2) the effects of sea state on sighting rates were not incorporated into the estimate (note: a paper by DeMaster et al. (In review: Fishery Bulletin) on the effects of sea state on sightings rates of beluga whales in this area indicates that sightings rates in Beaufort sea state 1 (calm seas) are significantly higher by a factor of 3 than sightings rates in Beaufort 2 and higher). After some discussion, the AKSRG concluded that the estimate of 7,986 animals could be considered a minimum estimate of abundance.

Regarding subsistence harvest, several people questioned the extent to which animals were being killed in commercial or subsistence fishing nets and, if so, whether these mortalities were being reported to the ABWC. Hill responded that he would check on this with Kathy Frost (ADFG). There was general agreement that the issue of personal use nets should be revisited by

the AKSRG at some time in the future. Further, Hill noted that the ABWC had provided harvest mortality data for 1997, including estimates of struck and lost whales.

4.3 Eastern Chukchi Sea Beluga Whale

Lowry noted that all of the available survey data for this stock had recently been summarized in a report for the upcoming ABWC Science workshop (Lowry et al. 1999). As reported in this document, the current abundance estimate is based on counts of animals made between 1989-1991, where the maximum count was 1,200 animals. Based on this count, a minimum abundance estimate of 3,710 was made. Surveys were also conducted in 1996, 1997, and 1998, where maximum counts were approximately 1,035, 130, and 1,172, respectively. However, Lowry and his coauthors noted that the count from 1998 was from one small area, where only one of five recently satellite tagged animals was located. In addition, surveys done to the north of this area indicated a sizeable number of animals were also located along the southern extent of the pack ice. Therefore, because of the comparability of the maximum counts from the 1989-1991 and 1996-1998 periods and because of the negative bias associated with the manner in which these counts were extrapolated to abundance estimates, Lowry recommended, and the AKSRG agreed, that the estimate of 3,710 animals continue to serve as the best estimate of minimum abundance for this stock.

Regarding harvest information, Hill reported that the ABWC had provided the 1997 harvest data, including estimates of whales that were struck and lost.

4.4 Eastern Beaufort Sea Beluga Whale

Lowry summarized the available information for this stock. He noted that the last survey to determine abundance was completed in 1992. He added that there were no known fishery interactions with this stock and that the harvest information for 1997 were provided by the ABWC for animals harvested in Alaska and by the Fisheries Joint Management Committee for animals harvested in Canada. The current level of harvest (including struck and lost animals) was well below the PBR. Finally, Lowry noted that an agreement between the North Slope Borough (Alaska) and the Inuvialuit (Canada) had recently been signed regarding the management of this stock of beluga whale. The AKSRG agreed that no changes should be made to the stock assessment report, other than updating of subsistence harvest information.

5. Review of ESA-listed Stocks

5.1 Stocks of Steller Sea Lion

5.1.1 Western Stock of Steller Sea Lion

Hill summarized the proposed changes in the 1999 stock assessment report. He noted that there was no report to reference regarding counts of animals used to estimate abundance or a reference for the abundance estimate. The AKSRG agreed with Hill that this was a problem and

recommended that NMML develop a report that details the methods and results of the surveys used to enumerate Steller sea lions. Lowry questioned the approach used by NMFS in estimating total abundance in that the count data from only trend sites, and not all sites, were used in the extrapolation. After some discussion, the AKSRG recommended that because there were no data on proportion hauled for many of the sites to allow the reliable extrapolation to total abundance a new approach should be used in the SARs. Hill recommended that an approach similar to that used for the eastern stock be used, where minimum abundance was estimated as the sum of all of the counts of non-pups and pups. There was general agreement among AKSRG members that this approach be adopted.

A discussion of the appropriate value for the maximum net productivity rate (R_{max}) followed. There was concern among AKSRG members that in using the PBR approach the assumption was being made that if human-related annual removals were below the PBR, it could be expected that a population would either recover or would remain healthy, with a high likelihood. After some discussion, it was agreed that the following words by Paul Wade (NMFS) be incorporated into the section on PBR:

“However, it should be noted that the PBR management approach was developed with the understanding that human-related mortalities would be the primary reason for observed declines in abundance for marine mammal stocks in U.S. waters. For at least this stock, this assumption seems unwarranted.”

Regarding the value to be used for the recovery factor (RF) for this stock, several members noted that the recent census information indicated that the observed decline in abundance was continuing unabated. Therefore, there was general agreement that the RF should be reduced to 0.1 from 0.15.

Several participants in the meeting commented that the apparent decline in both the number of animals harvested and the number of animals struck and lost by Alaska Native subsistence hunters may be an artifact of the manner in which these data were collected. In particular, it appears that for the Pribilof Islands there are discrepancies between estimates produced by ADFG and observations made by NMFS personnel. Kookesh commented that retrospective surveys, like the one reported for this stock by Wolfe and Mischler (ADFG report), have worked in other areas in Alaska and there was no reason to believe they were not producing reliable results here. He noted that one probable cause of the decline in the number of animals harvested was the decline in the number of sea lions in the area. He added that an expansion of comanagement-type activities was needed to get the best possible data on the harvest. Lowry suggested that at a future meeting, the AKSRG should ask Wolfe and Mischler to attend. Johnson added that regarding discussions of Alaska Native harvests of Steller sea lions, Larry Mercurief (St. Paul, AK), should also be invited. Several AKSRG members expressed their frustration with the NMFS Regional Office's inability to resolve this issue in a timely manner. After some discussion, AKSRG members recommended that NMFS should resolve any remaining

issues involving the 1996 and 1997 reports concerning Alaska Native harvests of Steller sea lions. It was further recommended that the 1996 and 1997 harvest data should not be used in the stock assessment report until any such issues are resolved satisfactorily.

5.1.2 Eastern Stock of Steller Sea Lion

Hill led the discussion regarding the revised stock assessment report for this stock. He noted that the survey data for the range wide census for Southeast Alaska were incomplete and that, therefore, in the stock assessment report, he proposed to hold off on updating the sections on abundance and trends in abundance until the missed haulouts and rookeries were counted in 1999. Hill also commented that the Pacific SRG had recommended the inclusion of a table in the stock assessment report summarizing counts of pups in recent years. Lowry responded that due to the recent lack in life history data for this species and the interannual variability in pup counts, it was likely that such a table would be misinterpreted. After some discussion, it was agreed that such a table should not be included in the stock assessment report. Finally, it was agreed that a value of 0.75 for the RF was still appropriate.

5.2 Stocks of Humpback Whale

Hill summarized the revisions to this stock assessment report. There was considerable discussion at the SRG meeting concerning labeling the animals found in Mexico's offshore islands as a stock. Straley commented that there were several recent publications on genetic differences among stocks of humpback whales. Straley agreed to work with Hill in revising the text of the stock structure section of the stock assessment reports for both the Central and Western North Pacific stocks. She noted that there was general agreement within the humpback whale research community that there were at least three stocks in the North Pacific.

There was considerable discussion regarding the appropriate value of R_{max} to use in the stock assessment report. It was noted that a rate of increase of 6.5% per year had been estimated for the western North Atlantic stock of humpback whales. Hill added that John Calambokidas was currently working on an analysis of photo-identification information with the goal of estimating the current rate of change for the California-Mexico stock of humpback whales. A number of AKSRG members were uncomfortable with the assumption that the maximum rate of net production in North Atlantic stocks of humpback whales would necessarily be similar to that of humpback whales in the North Pacific. There was general agreement among AKSRG members that the value of R_{max} should remain at 4% for the time being, but that this was an important issue to be addressed at the next joint-SRG meeting in the spring of 1999.

DeMaster raised the issue that one of the public comments on the stock assessment report for the central stock was that the RF should be increased from 0.1. Straley and others argued against this proposal because of the lack of information on 1) the rate of change for this stock, and 2) its status relative to carrying capacity. It was further noted that even if this stock were

known to be increasing at the expected rate, the RF of 0.1 was designed to allow the stock to recover in a timely manner. It was agreed that the RF for this stock should remain at 0.1.

Straley also noted that the section on abundance needed to be changed to reflect the occurrence of animals from the central stock in northern British Columbia and agreed to provide Hill with some text. Finally, it was agreed that the text on habitat issues would be revised to reflect current concerns about the effects of the Navy's program to develop low frequency active sonar (referred to as LFA) in degrading the quality of the critical habitat.

5.3 Other Stocks, Not Revised in 1999

There were no substantive comments on the revised stock assessment reports for beaked whales, other than Kate Wynne's comment that a Cuvier's beaked whale was recently reported to have been hit by a vessel and that this should be added to the section on human-related mortality.

Hill noted that Congress had mandated that NMFS review all stocks categorized as strategic annually. However, for several of these stocks there was not substantive new information (e.g., bowhead, fin, and sperm whale). Therefore, as discussed at the previous AKSRG meeting, Hill had prepared a table which reviewed the new information available for these stocks. The AKSRG suggested that including this table as an appendix to the 1999 SAR might lead to confusion and that it would be better to include it as an Appendix to these meeting minutes (Appendix 4).

6. Status of West Coast Stocks of Killer Whales and Harbor Porpoise

6.1 Killer Whale Stocks

Matkin summarized the discussion of killer whale stock structure at the recent Pacific SRG meeting. It had been agreed among the killer whale specialists and the Pacific SRG members at this meeting that the California/Oregon/Washington stock found in the Pacific Region document should be replaced by the offshore stock of killer whales and the Eastern North Pacific transients, including those found as far south as central California (Note: current southern boundary for this stock is Cape Flattery, Washington). Matkin informed the AKSRG that he was in agreement with the recommendations of the Pacific SRG regarding killer whales. There was no disagreement with the proposal to change the stock structure of killer whales in the North Pacific.

6.2 Harbor Porpoise Stocks

Wynne summarized the discussion of stock structure for west coast harbor porpoise at the recent meeting of the Pacific SRG. She noted that based on new genetic information, it was likely that the stock boundary in the future will be moved from Cape Flattery to Spike Rock. Pending completion of the analyses, no stock boundary changes will occur in the 1999 stock assessments for west coast harbor porpoise. There were no recommended changes in the stock structure of

harbor porpoise in Alaska. Hill noted that the area occupied by harbor porpoise stocks in Alaska was considerably larger than that for stocks of harbor porpoise along the west and east coast of North America.

7. Plans for NMFS Marine Mammal Program Activities

7.1 Incidental Take Monitoring Programs

Brian Fadely (NMFS) reported that NMFS was planning on initiating an observer program for Category II fisheries in 1999 in the Gulf of Alaska that would be continued a second year in 2000. The specific fisheries to be observed had yet to be finalized, but the current plans include observing the Kodiak Island and Cook Inlet salmon setnet fisheries. After some discussion, the AKSRG recommended that at a minimum the fisheries to be covered should include the driftnet and setnet fisheries for salmon in Cook Inlet. It was noted that information from these observer programs would be very important in the process of determining what the appropriate classification of Cook Inlet beluga whales should be (note: NMFS has solicited information regarding the listing of this stock as endangered or threatened under the ESA or depleted under the MMPA). Adkison noted his concern over the low coverage rates, which would mean that a single observed mortality could be extrapolated to a total mortality of 30 to 50 animals. He encouraged NMFS to work with the fishermen to make sure they understood the problems associated with low rates of observer coverage. He further encouraged NMFS to design the observer studies to produce acceptable levels of precision on estimates of marine mammal mortality.

7.2 Other Fishery Management Issues

There was no substantive discussion on this issue. Several of the AKSRG members commented that they appreciated the efforts of NMFS to include as appendices to the previous meeting's minutes many of the handouts from the talks about Alaskan fisheries.

7.3 Subsistence Harvest Monitoring

As noted earlier, the AKSRG recommended that NMFS resolve the uncertainty over the validity of the harvest estimates for Steller sea lions as soon as possible. NMFS should report back to the AKSRG on progress at the next meeting of the AKSRG. Fadely added that NMFS intended to support harvest monitoring programs for the following stocks: Bering-Chukchi-Beaufort stock of bowhead whale, all stocks of harbor seal and Steller sea lion, all stocks of beluga, and all species of ice seal.

7.4 Comanagement with Alaska Natives

As noted above, support for various Alaskan Native Organizations had been approved for FY99 to support various comanagement-type programs, including harvest monitoring. Fadely

also reported that efforts were underway to finalize comanagement agreements with 1) the ABWC for the management of the four western Alaska stocks of beluga whale, 2) the CIMMC for the management of the Cook Inlet beluga whale, 3) the Alaska Native Harbor Seal Commission for the management of harbor seal, and 4) the Tribal government of St. Paul for the management of northern fur seals and Steller sea lions on and around the Pribilof Islands.

7.5 Population Assessment

DeMaster summarized research plans for FY99 by the staff of the National Marine Mammal Laboratory. There was general agreement among AKSRG members that the written summary was a useful way to present this information (Appendix 5).

8. Plans for FWS Marine Mammal Program Activities

8.1 Subsistence Harvest Monitoring

Joel Garlich-Miller (FWS) summarized the harvest monitoring program for walrus. Johnson commented that the FWS had done a good job working with the hunters in villages that hunted walrus, and encouraged NMFS to develop similar programs. Kelly commented regarding his concerns over potential bias in the biological data collected through harvest monitoring programs, which are related to the selectivity of hunters to take certain size classes of animals. Garlich-Miller responded that these concerns had been recognized and that the stock assessment report for walrus had been revised accordingly. He added that the primary goal of the harvest monitoring program was to enumerate the number of animals harvested annually. Regarding sea otter harvest monitoring, Kelly noted that there were several areas in Southeast Alaska where biological sampling was inadequate.

8.2 Comanagement with Alaska Natives

Johnson noted that for polar bears, an agreement between Native Alaskans and the Inuvialuit was an important component of the successful management of the transboundary Beaufort Sea stock. He said that mention of this agreement should be added to the stock assessment report for the Beaufort stock of polar bear. It was also noted that interviews of Alaskan Native hunters regarding the availability of good quality habitat for polar bears had been conducted and that similar interviews were planned to take place in Russia, as well. Kelly commented that he was currently involved with the Alaskan Sea Otter Commission in the development of survey methods to enumerate sea otters in Alaska.

8.3 Population Assessment

The question was raised as to the FWS's plans to survey walrus in the near future. Chad Jay (BRD) responded that it had been concluded by previous research that fall surveys did not produce reliable results commensurate with the cost of such surveys, and that a recent review

paper by Jim Gilbert (University of Maine), suggests considering conducting spring surveys. There may be several advantages to conducting spring surveys relative to fall surveys, such as possibly a more uniform distribution of animals, which should allow for acceptable levels of precision in estimating abundance. Jay noted that the decision to conduct a spring survey should be approached cautiously. Kelly and several other members of the AKSRG expressed concern about conducting a spring survey and asked to see a copy of the experimental design for spring surveys, if and when it becomes available. Regarding walrus abundance in Bristol Bay, Garlich-Miller noted that Mark Udevitz (USGS) had recently completed a paper (in press) on modeling availability bias from haulout count data of walrus in Bristol Bay. It was agreed that copies of this paper would be made available to Kelly for review.

Hills asked about the status of the re-evaluation of the most appropriate value for R_{max} for walrus. Garlich-Miller responded that Sue Chivers (NMFS-LaJolla) had completed a report presenting an analysis of walrus life history and had estimated R_{max} using available data on age-specific rates of reproduction and survival in the context of an individual-based-model. Copies of this paper will also be made available to AKSRG members.

8.4 Other Research

Garlich-Miller commented that the FWS had limited funding and could not undertake all of the research that was needed to fully evaluate the status of walrus, polar bear, and sea otter in Alaska. One source of possible funding was through recently appropriated Dinkum-Sands funds (approximately \$6.6 million in FY1999) to the University of Alaska for the purpose of conducting research on the Bering Sea marine ecosystem. FWS intends to work with both University of Alaska and NMFS researchers to maximize the extent to which resources, such as vessels and aircraft, could be shared. One particular study of interest would be a joint spring surveys of ice seals and walrus.

Doug Burn (BRD) noted that the FWS was scheduled to meet with representatives of the Alaska Sea Otter Commission regarding the ASOC's request for a hearing concerning the proposed stock structure of sea otters in Alaska.

8.5 Schedule for Future Stock Assessment Reports

Burn noted that the next round of revisions to the Stock Assessment Reports for polar bear, walrus, and sea otter was scheduled for 2001.

9. SRG Discussion and Recommendations

Kelly referred to page 9 of the draft AKSRG minutes from the June meeting, asking for clarification of the AKSRG recommendation to not attribute northern fur seal entanglements to a specific fishery. Hill elaborated that entanglements do not necessarily equate to mortalities

because of an active disentanglement program. Seals found dead on the beach and entangled in fishing gear would be listed in the SAR as a stranding mortality from an unknown fishery. Thus, dead animals were not being neglected in the assessment.

Kelly reported that he attended a NMFS-sponsored workshop convened to refine the process for authorizing harassment of ringed seals resulting from seismic exploration activities, but was concerned that a workshop report had not yet been produced. The results of this workshop were to be used by NMFS to develop new regulations, but in the meantime the industry is applying for a new five-year incidental harassment authorization (IHA) for the upcoming season, and is referring to an unpublished report by British Petroleum and the unprepared workshop report. Kelly expressed concern that NMFS could issue permits based upon documents that can not be reviewed, and feels that the current monitoring requirements are inadequate. This is largely because monitoring occurs while seals are in lairs. Harassment of polar bears is also an issue. He commented further that good science had not resulted from the monitoring that has been done to date. Kelly proposed that the AKSRG should review the monitoring program, and that the AKSRG should be involved before new regulations are issued by NMFS, since NMFS may not be doing an adequate job. Lowry felt it would be appropriate for the AKSRG to help with the science so that the monitoring programs in fact monitor what they are supposed to. This could be put on the agenda for a later meeting, but the ice seals SAR review next year may be too late. Hills suggested that the appropriate context for this review was that it is a job of the AKSRG to review the human-takes sections of the SARs. Thus, the AKSRG has already spent a lot of time examining fisheries and subsistence harvest mortality estimates, but not other types of human-takes. Hill stated that this was in part because the SARs ask for mortality estimates specifically, not "takes" in general. It was noted, however, that mortalities do occur during the seismic exploration activities. Following general discussion, it was agreed by the AKSRG members present that monitoring for IHA's is an issue, and the AKSRG would like to help NMFS. Kelly (assisted by Hills) will draft a letter for AKSRG signature summarizing the AKSRG discussion, level of concern, and asking to be pulled into the loop. AKSRG also will request that NMFS finalize the workshop report.

Straley suggested the AKSRG should review recommendations made at the last meeting, to keep apprised of their status. Paul Wade noted that the recommendations from the last meeting were still in the draft minutes, and that may influence status. He also noted that the Pacific SRG tries to categorize the status of past recommendations to review on an annual basis. The AKSRG asks that for future meetings NMFS and FWS address recommended items in prepared paragraphs in addition to the paragraphs about current and future plans.

The AKSRG reviewed progress on recommendations from the last meeting, as follows:

- 1) *FWS needs to improve on lack of coordination with other research/management institutions in Alaska, and develop a clear plan for population assessment of walrus in Alaska.* Chad Jay of USGS BRD had electronically mailed the survey plans, but there was no time for the

AKSRG to review. The AKSRG appreciated the participation of FWS and BRD at the November meeting, and encouraged them to attend future meetings.

- 2) *NMFS should discontinue the use of fisher self-reports in calculating mortality incidental to commercial fisheries.* This has been done.
- 3) *NMFS should consider initiating the fisheries observer program in the Gulf of Alaska where stocks of major concern (e.g., Cook Inlet beluga whales and western Steller sea lions) are more prevalent.* Program was revised to observe Cook Inlet set gillnet and Kodiak Island set gillnet fisheries in 1999/2000, and Cook Inlet drift gillnet fisheries in 2001/02.
- 4) *NMFS should develop and initiate an "integrated marine mammal mortality" monitoring program in addition to the observer program.* Designed and scheduled to begin in 1999 pending receipt of funding.
- 5) *NMFS should develop a plan for the monitoring of mortality related to marine mammal subsistence hunting in Alaska, including monitoring of ice seal harvests.* No overall plan yet exists. The current contract with ADF&G for monitoring is ending, and NMFS can review how to use resources. Hills and Kelly suggested that there needs to be a real harvest monitoring program plan, including a rotational schedule with planned locations and times. The plan should also have clearly laid out sampling objectives, such as numbers, sex, age, other data, and should include a matrix of all harvested species showing a schedule by year, priorities relative to PBR, and discussions for each species. The AKSRG is not necessarily concerned with how the monitoring is to be accomplished, but they do want to see a plan, and how it relates to population monitoring schedules. Kelly noted that the FWS has such a plan, but that their management effort is directed mostly to walrus harvest monitoring. Lowry suggested that FWS and NMFS could work together, since FWS already has harvest monitors in all of the most important harvesting villages. He also noted that NMFS has models to plan fisheries mortality observer programs relative to abundance surveys, and that similar models should be used for harvest monitoring. NMFS could also implement a harvest marking/tagging program to get actual numbers. The AKSRG would like to review a harvest monitoring plan at the autumn 1999 meeting.
- 6) *NMFS should develop a matrix of actions that may be needed relative to the management of Cook Inlet beluga whales.* Though a 'matrix' was never created, NMFS, CIMMC and others have frequently discussed a plan of action that included status reviews and scientific information meetings. Harvest management and other management actions that need to be initiated, or that could arise, have been included in these discussions. Thus, the intent of this recommendation was accomplished.
- 7) *AKSRG agrees to do the following prior to the Fall 1998 meeting:*
 - 1) Chair to send a letter recommending replacement for Caleb Pungowiyi: done.
 - 2) Chair to send NMFS a letter regarding need for additional training of marine mammal biologists and staff in methods for disentangling marine mammals: letter not written, but issue taken care of by Straley. Kaja Brix (NMFS) convened a disentanglement workshop in November, and presented an update on the stranding network database. Straley and Wynne will write recommendations. AKSRG noted the excellent work performed by Brix in convening the workshop.

- 3) Chair will send a letter to CIMMC detailing concerns about the Cook Inlet beluga situation: letter sent.
- 4) AKSRG will send a letter of response to Petersburg Vessel Owners Association: letter sent.
- 5) AKSRG members will send to Alaska Regional Office (c/o Kaja Brix) stranding data that are not currently included in NMFS database: some members have done this.

Kelly began a discussion based on page 7 of the previous meeting's minutes regarding walrus research and management, stating that the AKSRG should look at BRD's narrow focus on research. He noted that the current BRD research projects, while interesting, may not be the most important tasks, and that BRD research should be reviewed as to how it fits within the overall walrus plan. For example, it might be more important to get estimates of the walrus population size, and develop methods for establishing appropriate trend analyses. In general discussion it was noted that the independence of BRD relative to FWS, and thus between research and management is a chronic problem and disconnect, and it would be useful for the AKSRG to help remedy this. Kelly and Hills were tasked with preparing a report for presentation to the AKSRG.

Kelly revisited the role of AKSRG members as conduits to the public, as noted by Craig Matkin in the previous meeting's minutes. The general philosophy of this statement was agreed to that AKSRG members should be open to public comments or questions and not become an isolated group, but this does not suggest that the AKSRG should proactively conduct outreach activities. It was noted that it was useful having hunters and others present at this meeting, and perhaps meetings could be located to facilitate appropriate public attendance. Lowry noted that generally anyone is welcome to attend AKSRG meetings, but that visitors can sometimes reduce the speed at which material can be processed by the group. Kelly stated that gripe sessions can be extremely useful, but that the AKSRG may not be the appropriate place for them. Lowry noted that AKSRG members should feel free to discuss 'bigger' issues with the public, and that members have behaved well in that no one is out crusading. He also noted that it is important for the public to know that the AKSRG is not the group making regulations or negotiating cooperative agreements.

Lowry raised the recurring question of what data are appropriate for use in SAR's. Adkinson stated that at AKSRG meetings too much time is spent addressing the PBR and the specific numbers going into the calculation, rather than the quality of the science behind the numbers. Often the issue tends to be whether the results of a report affect PBR, rather than whether it was good science or not. This led to discussions of two issues, what form of data are acceptable to the AKSRG, and what is the role of SRG's? Kelly suggested that data should at least be available in a report so that others could see it. Hills noted that in the past, the AKSRG job was to get the SAR's consistent and into shape. Now that this has been achieved, more effort can be focused on reviewing the science. Wade noted that SRG's are tasked to "advise agencies on information in the SAR", and that rather than focusing on the SAR itself, the AKSRG could focus on reviewing processed reports the agencies use to produce a given SAR. Hill noted that reviewing such

documents prior to drafting new SAR's would be ideal, but in practice reports are not received in quite so timely a manner. Lowry felt that the AKSRG has a limited scope of abilities, and that efforts should focus on issues where the AKSRG can make a difference. For instance, let the agencies decide on what to measure/study, and then the AKSRG can comment on the methods used. Also, the AKSRG has been reducing the number of stocks reviewed per meeting. A change in AKSRG focus should be appropriate if members are comfortable with what is now in the SAR's. Currently the AKSRG has agreed that public comments to draft SAR's do not have to be addressed by the Group if new science issues did not arise. However, there are many stocks that do not yet have new reports. There was agreement that having 'special topic' presentations (for example fisheries at the last meeting, and killer whales) was extremely useful and well-received. The topic of changing SRG roles may be appropriate for the upcoming joint SRG meeting.

Summary of New Recommendations to NMFS

1. Reconsider the Pribilof Island Steller sea lion harvest data dispute, and inform the AKSRG on how the issue was reconciled with ADF&G and what are future plans.
2. Recommend that the method for calculating western Steller sea lion stock populations in the SAR be the sum of counts of adults, juveniles, and pups counted at all sites, and that this estimate not be reduced or corrected for Nmin. This makes the estimate consistent with the method used for the eastern stock.
3. Prior to issuing new regulations or permits for incidental harassment authorizations, NMFS should complete the workshop report on the authorization process for incidental harassments, and provide it to the AKSRG. NMFS should also ensure that ringed seal monitoring programs actually document animals taken.
4. NMFS should draft a subsistence harvest monitoring plan for all species taken to be reviewed by the AKSRG at the autumn 1999 meeting.
5. NMFS should observe Cook Inlet set and drift gillnet fisheries in 1999/2000. 2001 as currently scheduled for the drift fishery would be too late. NMFS should seek additional internal funds, or request funds from affected fisheries to increase observer coverage.

Recommendations 5 and 6 will be included in a separate AKSRG letter to NMFS detailing recommendations specific to Cook Inlet.

Cook Inlet Beluga Whale Recommendations Discussion

There was general discussion and identification of specific recommendations for NMFS to address the Cook Inlet beluga whale situation. The sense of the AKSRG was that the Cook Inlet beluga whale issue has gone sufficiently past the time required to justify an "emergency" listing. It was also agreed that monitoring beluga whale harvest with a tagging program was not inconsistent with co-management practices, and could be an organizational builder that would help the overall process. The AKSRG recommends that NMFS take every effort that will ensure drastic reduction of the take immediately. This must be done soon, and can not wait for co-management. NMFS should detail someone to be focused on Cook Inlet issues. This should be someone who has the

authority to commit resources to focus on the Cook Inlet beluga issue, which is potentially as important as the groundfish fishery/Steller sea lion issue.

Lowry will draft a letter to NMFS (and circulate through the AKSRG) that includes recommendations for these topics for Cook Inlet:

1. Focus of observer program.
2. Harvest monitoring program.
3. Co-management efforts should continue. NMFS is urged to ensure that all those involved in taking beluga whales are involved in the co-management process. It was noted by Charlie Johnson that this might be problematic since lots of hunters are from outside the area.
4. Make immediate, drastic reductions in beluga whale take.
5. AKSRG supports the status review action taken by NMFS. Based on review of the Cook Inlet beluga whale stock PBR and harvest estimates, the AKSRG feels that there is a high chance of extinction.

Members of CIMMC in attendance urged that NMFS work with local tribes via the CIMMC, rather than with outside tribal entities.

Other recommendations

Several members raised concern over marine mammal takes that may be occurring incidental to ADF&G test and research fisheries, and noted that these should be reported to NMFS. There could also be considerable bycatch in personal use fisheries, but that the magnitude is unknown. AKSRG recommends that NMFS address the issue of non-commercial research, hatchery, and personal use incidental take of marine mammals.

Wade suggested that recommendations be sent as a letter to NMFS from the AKSRG prior to the minutes being finalized. Adkinson wanted it to be recognized that the Hobbs' study of marine mammal abundance was superior to most, and shows that the CV default of 0.2 may not be conservative.

10. Topics for Discussion at Joint SRG Meeting in Spring 1999

Wade summarized efforts to date in bringing about the joint meeting. The meeting will probably be held in Seattle. Pacific SRG suggested mid-April, and Atlantic SRG did not suggest a time. The sense of many AKSRG members was that early April would be better. AKSRG members need to let Lowry know when in early April they can not attend. Wade was designated to work as the point of contact with other SRG's for the AKSRG. Lloyd called for a list of issues that could be of potential interest to discuss at the joint meeting. Suggestions were:

1. Rmax for large whale stocks-how long to use default data?
2. Sperm whale/fin whale stock structure in Pacific-should be considered as one North Pacific stock?
3. Incidental take reporting methods-what would be better?

4. Type of data to include in SAR's-minimum standards (i.e., processed reports).
5. Transboundary issues with Canada.
6. Recovery factors for ESA-listed species - Wade and Barbara Taylor (NMFS) will report and provide recommendations. To include distinctions between truly endangered stocks and "endangered" stocks that are not in immediate risk of extinction.
7. Definition of ZMRG-hopeful that NMFS report will be ready for review.
8. Schedule for SAR revisions.
9. Relation between NMFS and SRG's-what is role of SRG? Should role be refined?
10. How widespread is the problem between BRD and FWS?
11. Jan Straley proposed delisting criteria might be an appropriate topic. It was noted that though these criteria are not specifically an MMPA issue, the "status" of marine mammals may fall within the ESA, so it would be appropriate to discuss. For example, how well do criteria match true stock status? Kelly noted that it might be more appropriate to look at the science behind the down-listing, rather than delisting criteria in general. Adkinson suggested that NMFS might be able to provide an informational update.

Wade will circulate a list of topics with summary paragraphs about the nature of each, and will circulate it among the SRG chairs. He will suggest a length of one-and-a-half (AKSRG preference) to two days for joint session to the other chairs. In no case should it be more than two days. The AKSRG recommended that Wade chair the combined session. The AKSRG agreed that having background documents available prior to the meeting would help with facilitation. SRG members could write up one page position papers and send to Wade to condense.

11. Schedule for Next AKSRG Meeting (after joint meeting: AKSRG Spring 1999 Meeting)

It was agreed that the AKSRG independent portion of the joint meeting should last 1-1.5 days. It was hoped that the combined joint and independent meeting would total three days.

Agenda items could be:

1. Final review of SAR drafts.
2. Update on Cook Inlet beluga issue.
3. Follow-up on status of recommendations to Agencies.
4. Develop autumn 1999 meeting agenda, by specific issues and identify needed background documents.
5. Invite presentation by NMML regarding Steller sea lion correction factors, and trend site counts vs. total counts. Have NMML prepare a report for review prior to meeting, which should be received at least 30 days prior to meeting.
6. Invite presentation on harbor seal genetics; but just the science, not where the stock lines are drawn. Would also need a report first, and could invite PSRG.

Rich Ferrero (NMML) will replace DeMaster as rapporteur, and may also assume the primary responsibility for the drafting the SAR's, as Hill will be going to a sea assignment in August 1999. DeMaster will still be ultimately responsible for getting the SAR's out. AKSRG may need to build in some transition time after Hill departs. Marsha Muto (NMML) has taken over the lead responsibility for drafting the portion of the Pacific SAR's prepared by NMML. The NOAA Corps officer replacing Hill (Anita Lopez) has considerably less marine mammal experience than Hill (although she has participated in the SWFSC's eastern tropical Pacific dolphin surveys for the past several years), and will not likely be involved in the SAR process.

AKSRG Autumn 1999 Meeting

AKSRG members discussed items to be accomplished, and topics that might be appropriate for the fall meeting. AKSRG members should be prepared to make final decisions at the April 1999 meeting. It was noted that many stock assessment reports were not reviewed since the initial SARs were prepared. Of those, the most important to review may be:

- Gray whale, which will have a NMFS status review in spring/summer 1999, so there may be reports to examine.
- Harbor porpoise. Next autumn would be poor timing since surveys will still be going on next summer, though the AKSRG could identify data gaps.
- Walrus could also be in need of review. Kelly reported that his September 1998 survey showed a low proportion of cows with calves. He was alarmed that BRD has no plans to assess population size, and that there is a substantial harvest with poor population size data. Hills and Kelly will draft guidance for how to proceed with surveys for the AKSRG.
- Hills pointed out that because of an Alaska Sea Otter Commission request for an adjudicatory hearing to discuss sea otter stock divisions, the AKSRG may want to be prepared for discussions. However, the AKSRG was not aware of new science regarding the issue.
- Comprehensive NMFS harvest monitoring survey plan.

There was general agreement that having the Agencies prepare summaries of research and management plans for the remainder of the fiscal year was a good concept. There was also agreement that every autumn NMFS/FWS should provide updates or summaries on planned activities, and address past AKSRG recommendations.

Appendix 1. List of AKSRG, NMFS, and FWS participants.

AKSRG- M. Adkison, S. Hills, C. Johnson, B. Kelly, M. Kookesh, D. Lloyd, L. Lowry, C. Matkin, J. Straley, and K. Wynne.

NMFS- D. DeMaster, T. Eagle, B. Fadely, S. Hill, B. Mahoney, D. Rugh, B. Smith, and R. Hobbs

FWS/U.S. GS-BRD- D. Burn, J. Garlich-Miller, and C. Jay.

Appendix 2. Final Agenda: Alaska Scientific Review Group Meeting

Rural CAP Office
731 East 8th Avenue, Anchorage, AK
18-20 November 1998

Purpose:

1. Initial review of revised 1999 Stock Assessment Reports for NMFS stocks
2. In depth discussion of Cook Inlet belugas
3. Review NMFS and FWS plans for marine mammal research and management
4. Plan for joint SRG meeting in spring 1999

Materials needed:

1. Initial drafts of 1999 NMFS Stock Assessment Reports
2. Background documents supplied by Scott Hill

18 November 1998-Wednesday

8:30 am Introductory business

1. Introductions, new member
2. Review and approve agenda
3. Draft minutes from June 1998 AKSRG meeting
4. AKSRG Chair for 1998-1999
5. Other business (e.g., travel vouchers)

9:00 am Presentations on Cook Inlet beluga whales

1. Scientific results
2. Co-management

12:15 pm Break for lunch

1:30 pm Initial SRG review of draft 1999 Cook Inlet beluga SAR

3:00 pm Begin initial SRG review of draft 1999 SARs for other beluga stocks

1. Bristol Bay
2. Eastern Bering Sea
3. Eastern Chukchi Sea
4. Eastern Beaufort Sea

5:30 pm Adjourn

19 November 1998-Thursday

8:30 am Complete initial SRG review of draft 1999 SARs for beluga stocks

10:00 am Initial review of beaked whale SARs

10:30 am Begin initial review of draft 1999 SARs for ESA-listed strategic stocks

1. Steller sea lions
2. Humpback whales
3. Other species not revised

12:00 pm Break for lunch

1:30 pm Complete initial review of draft 1999 SARs for ESA-listed strategic stocks

2:30 pm Status of changes to west coast killer whale and harbor porpoise SARs

3:00 pm Plans for NMFS marine mammal program activities

1. Incidental take monitoring programs
2. Other fishery management issues
3. Subsistence harvest monitoring
4. Co-management with Alaska Natives
5. Population assessments
6. Other research

4:30 pm Plans for FWS marine mammal program activities

1. Subsistence harvest monitoring
2. Co-management with Alaska Natives
3. Population assessments
4. Other research
5. Schedule for future Stock Assessment Reports

5:00 pm Adjourn

20 November 1998-Friday

8:30 am SRG discussion and recommendations

11:00 am Topics for discussion at joint SRG meeting in spring 1999

1. Transboundary issues
2. Stock definitions
3. Recovery factors for ESA listed species
4. Definition of ZMRG

5. Schedule for SAR revisions
6. Relationships between NMFS and SRGs
7. MMPA reauthorization
8. Others

11:45 am Next AKSRG meeting

1. Time and place
2. Topics

12:00 pm Adjourn

Appendix 3.

Background Documents for the 18-20 November 1998 Alaska SRG Meeting

- Baker, C.S., L. Medrano-Gonzalez, J. Calambokidis, A. Perry, F. Pichler, H. Rosenbaum, J.M. Straley, J. Urban-Ramirez, M. Yamaguchi, and O. von Ziegeler. 1998. *Molecular Ecology* 7:695-707.
- DeMaster, D.P. 1998. Draft minutes: seventh meeting of the Alaska Scientific Review Group (2-4 June 1998). Unpubl. doc. 30 p.
- FWS. 1998. U.S. Fish and Wildlife Agency Report. Unpubl. doc. 3 p.
- Hobbs, R.C., D.J. Rugh, and D.P. DeMaster. 1998. Abundance of beluga whales in Cook Inlet, 1994-1998. Draft unpubl. doc. 14 p.
- Lowry, L.F., and K.J. Frost. 1998. Alaska Beluga Whale Committee surveys of beluga whales in Bristol Bay, Alaska, 1993-1994. Alaska Beluga Whale Committee Rep. 98-1. 14 p. Draft document.
- Mizroch, S.A., D.W. Rice, D. Zweifelhofer, J. Waite, and W.L. Perryman. 1998. Distribution and movements of fin whales in the North Pacific Ocean. Draft manuscript prepared for the Alaska SRG. 32 p. plus figs.
- NMFS. 1998. Plans for NMFS Marine Mammal Program Activities. Unpubl. doc. 5 p.
- Rugh, D.J., K.E.W. Sheldon, and B.A. Mahoney. Distribution of beluga whales in Cook Inlet, Alaska, during June and July, 1993-1998. In review. *Fish. Bull.* 27 p.
- Sease, J. 1998. Letter for the record: 1998 Steller sea lion survey results. Dated 2 October 1998. 5 p.
- Wade, P.R., and D.P. DeMaster. In press. Determining the optimum interval for abundance surveys. *Proceedings of the Symposium on Marine Mammal Surveys and Status*. McDonald et al. (eds.). 14 p.

Appendix 4. Summary of strategic stock review for the 1999 Stock Assessment Reports. Included in this table are only stocks for which new information was reviewed and the stock assessment was not revised in 1999. New data is indicated by an asterisk (*).

Species	Stock	Nmin	PBR	Fishery Mortality	Subsistence Mortality	Status
Northern fur seal	Eastern Pacific	868,539	18,244	17*	1,577*	S
sperm whale	North Pacific	n/a	n/a	0	0	S
fin whale	Northeast Pacific	n/a	n/a	0	0	S
Northern right whale	North Pacific	n/a	n/a	0	0	S
Bowhead whale	Western Arctic	7,738	77	0	56*	S

n/a indicates that data are not available.

Appendix 5. Summary of activities proposed by NMFS in FY99.

Plans for NMFS Marine Mammal Program Activities

Incidental take monitoring program

NMFS continues with development of a rotational marine mammal observer program to observe eight Category II salmon net fisheries. Following the ASRG recommendation to consider relocating the program from Southeast Alaska to the northern Gulf of Alaska, NMFS reorganized the rotational schedule. NMFS determined, however, that it was not possible to maintain statistically adequate coverage levels of the three fisheries to be observed within this region (Kodiak Island set gillnet, Cook Inlet drift and set gillnet) within the available budget. Initial minimum coverage levels were estimated based on the coverage necessary to ascertain with a 95% certainty that fishery mortalities of harbor porpoise do not exceed PBR, even if no takes were observed. Based on the estimated annual minimum fisheries mortality of Cook Inlet beluga whale (0.0), it was not economically feasible to use that as a basis for recalculating observer coverage.

Thus, depending on the primary objective of the program, two options available were to observe all three fisheries, but with less than adequate coverage for determination of take relative to PBR (which would provide some minimal, but statistically questionable, information on all fisheries), or to reduce the number of fisheries observed and maintain coverage at statistically appropriate levels (based on harbor porpoise estimates). Following the latter approach, NMFS plans to observe Cook Inlet and Kodiak Island set gillnet fisheries during 1999-00, and Cook Inlet drift fisheries in 2001-02. This solution will provide coverage as originally intended, and collect some information regarding beluga whale interactions with the Cook Inlet set gillnet fishery. Of the two Cook Inlet fisheries, the timing and location of set gillnet deployments results in a greater likelihood of beluga whale interaction.

Also following an ASRG recommendation, NMFS designed an integrated marine mammal mortality monitoring program for Cook Inlet that was recommended for funding the by national NMFS marine mammal funding review panel. This study proposes to utilize aerial surveys twice per week throughout Upper Cook Inlet, one survey flown between fishery openers and another flown during an opener. The objectives are to survey beaches for carcasses (and land when possible/appropriate for sampling), attempt to determine temporal/spatial patterns in marine mammal mortality throughout the fishing season, and collect data on beluga whale/set gillnet interactions. Additional outreach, education programs and workshops would be incorporated into the fisheries observer program.

The reordering of the rotational program and a recent change in NMFS funding policies regarding disposition of MMPA funds necessitated submitting a new funding proposal for the entire observer program. The proposed schedule is now: 1999/00 Kodiak Island and Cook Inlet

set gillnet; 2001/02 Cook Inlet drift and Yakutat set gillnet; 2003/04 Southeast drift gillnet and purse seine; and 2005/06 Bristol Bay set and drift gillnet. The aerial survey program has been incorporated into a Cook Inlet beluga mortality monitoring program proposal. The funding status of unsuccessful proposals is currently unknown. If approved, funding may not be committed until January 1999.

Steller sea lions and groundfish fisheries

The impact of groundfish removals, particularly Atka mackerel and pollock, on the western stock of Steller sea lion populations has been an ongoing concern for several years. During 1998 these concerns were heightened both within NMFS and by the environmental community, precipitating intensified management attention. As the western stock of Steller sea lions continues to decline in the face of large scale commercial harvest of important forage species, efforts to prevent or mitigate potential localized reductions in prey availability or adverse modification of critical habitat have been suggested.

With respect to the Atka mackerel fishery, the North Pacific Fisheries Management Council voted in April to phase in a reduction of catch inside central and western Aleutian Islands Steller sea lion critical habitat to roughly one half of the current levels and to temporally partition catch into two seasons. Regarding pollock harvests in the eastern Bering Sea and Gulf of Alaska, efforts to disperse harvests in time and space, and to institute new no trawl zones near sea lion haulouts are under serious consideration.

Subsistence harvest monitoring

Monitoring of harbor seal and Steller sea lion harvests is by contract to the Alaska Department of Fish and Game (ADF&G) Division of Subsistence. The current contract is active through the end of the 1998 harvest season, which will provide harvest estimates for the years 1992-98. The draft final report of Wolfe and Mishler (1998) estimated the 1997 harbor seal take at 2,546 (95% CI 2,069-3,309) seals, with 351 (13.8%) struck and lost. This was the lowest reported take among the six years surveyed, but there was no apparent annual trend. This harvest was primarily from the Southeast Alaska stock (1,567), followed by the Gulf of Alaska stock (784) and the Bering sea stock (195). Wolfe and Mishler (1998) estimated the 1997 Steller sea lion take at 164 sea lions (95% CI 129-227), with 18 sea lions (10.9%) struck and lost. This was also the lowest harvest recorded during the six year survey period, and harvests have apparently declined at a mean annual rate of 21.5% throughout this period. The ADF&G Division of Subsistence also conducted a survey of seal and sea lion harvests in the Norton Sound-Bering Sea region during the 12-month period between February 1996 and January 1997. Georgette et al. (1998) reported a total take of 4,223 seals, with 563 (13.3%) struck and lost. By species, this harvest was composed of bearded seal (36.2% of total take), ringed seal (33.1%), spotted seal (29.0%), and ribbon seal (1.7%). No surveyed household reported hunting or using Steller sea lions during the survey period, though there were reports of occasional harvest at other times.

The funding status for these harvest monitoring programs under the fiscal year 1999 budget appropriation has not yet been determined. Depending upon funding appropriations, the Division of Subsistence may apply funds utilized previously for ice seal harvest monitoring to continuation of the harbor seal and Steller sea lion program.

Annual harvest levels of Pribilof Island northern fur seals are set for three-year periods, with 1999 being the third year of the current cycle. Harvests in 1998 were 1297 seals taken on St. Paul, and 256 seals taken on St. George. Allowable harvest levels for 1999 are 1645-2000 for St. Paul and 281-500 for St. George. However, NMFS anticipates substantial changes in the northern fur seal harvest process on the Pribilof Islands next year. Rather than being dressed and bagged in the field, new guidelines established by the tribal government call for transporting seal carcasses in chilled containers to a central processing location for butchering, flash freezing, storage and distribution. There are many advantages to this change that should result in more efficient use of the harvested seals. Increased sanitary conditions will decrease waste from spoilage or contamination, and using a central location as a distribution center allows users to only take the parts they desire, rather than being required to take an entire seal. These guidelines are legal under current regulations, and the Tribal Government of St. Paul is also reviewing regulations governing the harvest to suggest additional changes to reduce waste.

Beluga whale harvest data for stocks other than Cook Inlet is collected by the Alaska Beluga Whale Commission at their annual meeting, scheduled for November 16-17, 1998. A survey of hunters for Cook Inlet beluga whale hunting activities is expected to start soon and be complete by December 1998.

Cooperative Management (other than Cook Inlet beluga whales)

The development of several co-management agreements is continuing. NMFS and the Alaska Native Harbor Seal Commission (ANHSC) have each reviewed draft agreements produced as a result of a bipartisan drafting team. This team is expected to reconvene in early November to continue the drafting process. Draft agreements from the Tribal Government of St. Paul for northern fur seals and Steller sea lions are anticipated to be received in early December. The formation of a Pribilof Island Marine Mammal Commission is also expected to occur by December, to negotiate for and represent hunters of all subsistence harvested marine mammals on the Pribilof Islands. NMFS is also finalizing review comments of a draft agreement for beluga whale co-management outside of Cook Inlet received from the Alaska Beluga Whale Commission (ABWC). Available funding for co-management activities is still being assessed following the recent passage of the budget bill. However, \$750,000 was appropriated as a line item for Alaska Native marine mammal commissions, and included \$400,000 for the Alaska Eskimo Whaling Commission, \$200,000 for the ABWC, \$100,000 for the ANHSC, and \$50,000 for the Bristol Bay Marine Mammal Commission.

Population Assessment

The FY99 budget has not been finalized, but we anticipate support for the following projects:

1) Steller sea lion - a) 3 week SMMOCI cruise in Feb/March to evaluate prey abundance around haulouts and to conduct surveys for marine mammals and seabirds, b) 3 week June/July cruise to conduct physiological studies on Steller sea lions, weigh and tag pups, collect scats, and evaluate prey abundance, and c) initiate studies on the efficacy of buffer zones (jointly with RACE/REFM).

2) northern fur seal - a) conduct bull and pup counts, b) collect scats, c) continue disease studies using dead adult females and pups, and d) initiate studies on possible adverse effects of effluent from fish processing plants (e.g., behavioral studies, environmental monitoring).

3) harbor seal - a) survey haulouts along the Aleutian Islands, and b) radio-tag animals in the survey area (or if not possible, along the north side of the Alaskan Peninsula).

4) ringed seal - a) conduct surveys jointly with ADFG along North Slope and eastern Chukchi Sea, b) conduct radio-tagging studies to determine suitable correction factors, and c) initiate harvest monitoring program for ice seals in Alaska.

5) beluga whale - a) continue surveys of Cook Inlet beluga whales, b) conduct tagging studies to determine suitable correction factors for Cook Inlet belugas, c) cooperate with Region in collecting biological samples from harvested animals in Cook Inlet, and d) cooperate, as requested, with activities of ABWC.

6) killer whale - continue studies in SE Alaska on distribution, abundance, ecology, and stock structure.

7) small cetaceans - complete third and final year of State wide survey (year 3 - Aleutian Islands).

8) humpback whale - continue support of North Pacific Humpback Whale Fluke Collection, where efforts will be directed at finishing papers on calf mortality and the reproductive interval of the central North Pacific stock of humpback whale.

9) North Pacific right whale - a) in cooperation with the SWC, conduct aerial surveys, including photogrammetric studies, on right whales in the SE Bering Sea, and b) cooperate with NSF supported studies on fronts (PI- G. Hunt) in the SE Bering Sea.

10) gray whale - convene workshop to review the status of the eastern North Pacific stock of gray whale (late spring/early summer 1999).

Other Research

In addition to assessment related research on Alaskan marine mammals, the staff of the NMML will undertake the following activities: 1) participate as U.S. delegates to the IWC SC, where this year's meeting will focus on development of Aboriginal Whaling Management Plan, development of a new initiative for research on large whales in the Arctic, and a worldwide review of beluga and narwhal populations (DeMaster, Wade, Breiwick, and Moore), 2) participate in meetings and activities of CAFF (Bengtson), 3) participate in meetings and activities

of PICES (Bengtson and Loughlin), 4) participate in meetings and activities under the auspices of the U.S.- Russia Environmental Agreement (Loughlin), 5) maintain database on marine mammal sightings through the Platform of Opportunities Program (Mizroch), 6) in cooperation with the ADFG, evaluate the utility of using microstructures in harbor seal teeth to infer changes in condition over time (e.g., average age of sexual maturity, individual growth rates, and number of feeding trips during lactation - Bengtson, Boveng), 7) in cooperation with ADFG and the Seward SeaLife Center, develop capability for remote censusing of Steller sea lion rookeries (Loughlin, Horning), 8) develop capability for placing relatively inexpensive, critter-cam recorders on pinnipeds (Bengtson), 9) develop capability for determining location and time of death via telemetry for Steller sea lions (Loughlin, Horning), and 10) improve our ability to place satellite linked tags to small cetaceans (Hanson, Ferrero, Hobbs).

Reauthorization of MMPA

Very little action has been formally initiated to date on issues related to the reauthorization of the MMPA in FY99. At present, F/PR has the lead for NMFS. Several possible topics for developing positions have been identified, but these may change: 1) achievement of zero mortality rate goal in seven years, given uncertainty in data and potential fishery-pinniped interactions, 2) issues related to pinniped-salmonid interactions in the Northwest, 3) issues related to utility of level B harassment permits, and 4) issues related to permitting of captive animals. Issues the AKSRG believes should be raised would be welcomed.