

Minutes: Thirteenth Meeting of the Alaska Scientific Review Group 20-21 November 2001

This document is intended to summarize the main points of discussion at the 13th meeting of the Alaska Scientific Review Group. The document does not attempt to repeat everything that was said during the meeting.

1. Introduction

The 13th meeting of the Alaska Scientific Review Group (SRG) was held at the U.S. Fish and Wildlife Service building in Anchorage, Alaska from 20-21 November 2001. The main objectives of this meeting were to 1) review new information on polar bears, sea otters, and walrus to be included in the draft SARs for 2002, 2) discuss NMFS research and management issues, and 3) provide comments on the draft Stock Assessment Reports (SAR) for 2002. The draft agenda was reviewed and approved. The final agenda is provided in Appendix 1 and the list of participants is provided in Appendix 2. By the conclusion of the meeting, a draft list of topics to be discussed at the next meeting had been developed; this is included as Appendix 5. Lloyd Lowry chaired the meeting and Robyn Angliss served as rapporteur.

2. Administration

L. Lowry called for nominations for a new chair for the SRG. B. Kelly was nominated and the nomination was seconded. Kelly was selected by unanimous consent and will start his role as chair as of the next SRG meeting in March 2002.

Two members, Carl Hild and Denby Lloyd, recently withdrew from the SRG due to changing responsibilities. The SRG expressed appreciation for Hild's and Lloyd's past contributions.

The SRG discussed whether new members should be appointed to the SRG. The SRG can recommend to NMFS that new members be appointed whenever they feel that additional expertise should be added to the group. The SRG generally felt that the group is currently lacking expertise in genetics and in subsistence/traditional knowledge. Some members also felt that it would be useful to appoint a member who has expertise in Bering Sea ecology, and an individual who has expertise in marine mammal veterinary science. The SRG acknowledged that there are also no physiology experts in the group, but since physiology is not a focus of the SRG, this "hole" is probably more acceptable.

The SRG decided to not recommend appointing new members at this meeting. Instead, SRG members should consider what expertise is needed and who could provide this expertise, and prepare to discuss this at the March 2002 SRG meeting.

SRG members discussed whether the SRG should meet once or twice per year. Despite the fact that all members are quite busy with other responsibilities, it was decided that meeting twice per year would enable the group to spend more time reviewing the science behind the Stock

Assessment Reports (SARs), and less time wordsmithing the SARs. In addition, although special projects were assigned to small workgroups at the last SRG meeting, it was difficult for the workgroups to focus on providing advice to NMFS because the “ultimate” deadline (the next SRG meeting) was a year away.

There was general agreement that the meetings should rotate between Juneau and Anchorage, unless there is a compelling reason to schedule the meeting for a different venue. For instance, heavy involvement by FWS or USGS/BRD staff would be good justification for holding the meeting in Anchorage in lieu of Juneau.

The next SRG meeting will be 4-5 March 2002 in Juneau; the following meeting will be 4-5 November 2002

3. Discussion of NMFS research/management issues

3.1 Responses to December 2000 SRG letters

R. Angliss summarized the NMFS response to the December 2000 SRG letter. The SRG had recommended changing the stock designations for two Alaska SARs (harbor seals and killer whales), and recommended providing separate population abundance estimates and PBR levels for feeding aggregations of central North Pacific humpback whales. The formal NMFS response indicated that no changes in stock designation would be approved until a workshop can be held that provides guidance for designating stocks under the Marine Mammal Protection Act (MMPA). Lowry indicated that the SRG was very unsatisfied with this response. Over the years, the SRG has spent considerable time discussing stocks, and the SRG makes recommendations regarding stock designation when redefining stocks will improve management. The SRG would like to have NMFS follow these recommendations, or provide a good justification for not following the recommendations. In addition, it is not clear that developing one-size-fits-all guidelines for defining stocks will even be possible. There was considerable concern that attempting to set national standards for defining stocks could impede progress towards designating stocks in the SARs.

Angliss indicated that NMFS intended to hold the workshop early in 2002 so that progress towards designating stocks would not be affected. She also indicated that there had been internal discussions within NMML about changing the stock designation for the central North Pacific humpback whale stock and for killer whales. NMML staff did not support separating the central North Pacific humpback whale stock into discrete feeding areas because, although the SE AK portion of the population did seem to be reasonably discrete, the information on other feeding areas (e.g, Prince William Sound, Kodiak) was insufficient to justify a separate PBR level or stock designation. Similarly, although there is some new genetic information indicating that additional discrete groups of killer whales could be defined, the information is currently unpublished and the question “how much genetic differentiation is sufficient to warrant “stock” identification” has not yet been answered. Angliss admitted that none of this information was included in the official NMFS response, however.

The SRG reiterated that it would like NMFS to provide a detailed justification for not changing the central North Pacific humpback whale stock and the killer whale stocks as recommended by the SRG. In addition, the SRG would also like to know what information will be necessary before NMFS will consider changing the stock designations. Angliss agreed to revisit this issue with NMML staff and put the issue on the agenda for the March 2002 meeting.

3.2 Update on harbor seal issues

3.2.1 Report of the SRG sub-group on harbor seal genetics (Adkison and Kelly)

Milo Adkison provided a report of the review of the new information on Alaska harbor seal genetics. He indicated that several conversations between himself, Barb Taylor, Karen Martien, and Brendan Kelly occurred during the spring of 2001. In general, Adkison/Kelly agreed that the SWFSC has done a good job on the genetics work and they appreciated their openness about the primary limitation of their analytical procedure (the procedure ranks all possible stock boundaries from highest to lowest, but there are no guidelines for deciding what boundaries should be kept).

One of the genetics analyses yet to be done involves the calculation of dispersal rates between areas; however, Kelly pointed out that once you know the dispersal rate, it will still be necessary to make a management decision regarding what dispersal rate is important. It is possible that dispersal rates between harbor seal groups could be low enough to warrant separate management, but high enough to retain groups in the same stock.

3.2.2 Population decline in Glacier Bay

Beth Matthews reiterated that the current statement in the SAR that the number of harbor seals in Glacier Bay appears to be stable is incorrect. Counts declined in recent years; an analysis of data collected through 2001 will be available by the end of the year. When the report is available, Matthews will provide it to NMFS so the information can be included in the SAR for 2002.

3.2.3 Update on harbor seal stock structure and population assessment

Mike Payne summarized NMFS' progress towards designating a new stock structure for harbor seals in Alaska. NMML and AKR staff have been working with their comanagement partners and have developed a process and schedule for developing a joint recommendation for a new stock structure. According to the schedule, a new harbor seal stock structure will be recommended by June 2002. If this occurs, NMFS will be able to propose the new stock structure in the draft SARs for 2003.

Angliss summarized the preliminary new information on harbor seal abundance. At the last meeting, John Bengtson had committed to provide two things to the SRG in 2002: an analysis of covariate effects on harbor seal counts and a new statewide abundance estimate. The analysis of covariates (Boveng et al.) is currently in press and will be published late in 2002¹. Preliminary

¹ Note – at the SRG meeting, I indicated that the paper would be published early in 2002. I have double checked this with the author & he indicated that it would be better to anticipate publication by late in 2002.

estimates for each Alaska harbor seal stock are as follows:

Stock	Previous count reported in the SARs (year of survey)	Preliminary estimate (year of survey)	Comments
Bering Sea	13,312 (1995)	21,651 (2000)	
Gulf of Alaska	29,175 (Aleutian Is – 1994; Gulf of AK – 1996)	48,813 (Aleutian Is – 1999; Gulf of AK - 1996)	
Southeast Alaska	37,450 (1993)	112,391 (N. SE – 1997; S. SE - 1998)	1993 count is known to be a considerable underestimate
Statewide Totals	79,937	182,855	

The SRG was generally pleased that the analysis of covariates had been completed and that the information had been used to develop new, preliminary estimates of abundance for each. The SRG was very interested in reviewing the following:

- the manuscripts used to develop the new correction factor (Boveng et al. & Simpkins et al.)
- a report describing how the Boveng et al. paper was used to develop revised stock abundance estimates

In particular, the SRG is curious about why the covariate analysis results in such a huge apparent increase in the harbor seal population size and expressed concern that the new total could be an overestimate. The report describing how the revised stock abundance was determined should also include information on the calculation of CVs for the revised abundance estimates.

3.3 Alaska Native subsistence harvest monitoring—working group report and program status

At the November 2000 meeting, Angliss presented some information on estimates of the ice seal harvest in Alaska. At that time, the SRG had several questions about the harvest data and recommended that the ice seal harvest information not be included in the SAR until the documents on which the estimates were based could be reviewed by the SRG. These documents were provided to a working group (Hills, Kelly, and Johnson) for their review & comment.

Sue Hills summarized the report of the working group on ice seals (Appendix xx). In general, the ice seal harvest data are compiled from a number of different sources, and include estimates from different village in different years. However, these do represent the best data available on ice seal subsistence harvest and should be included in the SARs as such. Hills recommended specific changes to the draft language in the SARs to better indicate the sources of information and the fact that the information is not collected consistently between villages or between years.

The SRG noted that these estimates of ice seal subsistence harvest are quite a bit higher than those previously included in the SARs. Charlie Johnson indicated that the estimates seem realistic, though mentioned that there might have been a slight decrease in ice seal subsistence take in recent years due to changes in ice conditions.

The SRG discussed the fact that there are no abundance estimates for ice seals. Lowry mentioned that the SRG could recommend that a population estimate be determined, but given the challenges of getting abundance estimates for species that are so broadly distributed over such a remote area, it is not clear that NMFS could obtain population estimates even if the SRG made such a recommendation. It might be more appropriate to develop indices that provide some information on population status. The SRG recommended striking the language in the SARs that provides “arm-waving” estimates of the minimum size of the populations because including that information could cause SAR users to make inappropriate comparisons between a reasonably precise harvest estimate and a “ballpark” minimum population estimate.

The collection of information on the harvest of ice seals remains important. Although there have been efforts to work with subsistence hunters in the past to collect life history information on harvested ice seals (e.g., work by ADF&G in the 1970s), there have been only minimal efforts in recent years. The SRG recommended that, at a minimum, the ADF&G Division of Subsistence should continue collecting basic information on the magnitude of the ice seal subsistence harvest in each village. The SRG also recommended that the ADF&G should update their database with more current subsistence harvest information.

Payne indicated that, over the long term, NMFS will be looking to the Alaska Native community to provide information on their subsistence harvest. This will certainly be the case with the Alaska Native Harbor Seal Commission, who will be collecting information on the harbor seal subsistence harvest as of 2002. The Nanuuq Commission has also been considering whether it should start working on ice seal comanagement². Lowry indicated that the efforts to collect harbor seal subsistence harvest information had been very good so far, and that effort would have to be made to ensure that data on subsistence harvest of harbor seals and other marine mammals would be collected every year in a manner that allows the results of each year to be comparable. Monica Reidel indicated that the ANHSC has entered into an agreement with the ADF&G, and that there would be a transition period to ensure that the methods were comparable and that they would try to provide NMFS with the data they need. Beth Matthews recommended (and other SRG members agreed) that the subsistence harvest monitoring programs start trying to measure hunting effort, because this would provide a way to determine the relative population size because effort may increase if the population size decreases.

3.4 MMPA reauthorization

Payne provided a brief overview of NMFS’ plan for reauthorizing the MMPA. The following points seemed relevant to the SRG:

² As an aside, the Alaska Beluga Whale Committee is also considering taking on ice seal comanagement. These groups might want to coordinate.

- A modified regime for comanagement of marine mammals is included in the NMFS draft MMPA reauthorization language. The language was drafted by a coalition of Native Alaskans, the MMC, NMFS staff, and others. The new language will allow for comanagement of marine mammal subsistence harvest prior to a depletion designation under the MMPA, and will authorize tribal organizations to enforce comanagement agreements.
- A new regime is proposed for managing non-commercial fisheries that cause serious injuries or mortalities of marine mammals. Those fisheries would be classified in the List of Fisheries based on their level of impact on marine mammals, and the marine mammal takes in fisheries with high levels of take would be managed similar to commercial fisheries.
- New language will be proposed to highlight the development of new gear technologies that help to reduce marine mammal take in commercial fisheries.
- New language will be proposed that would require other federal agencies to use their authorities to cooperate w/NMFS.
- New language will be proposed to require any vessel engaging in a Category I or II fishery to carry an observer if requested in order to lawfully engage in the fishery (at this time, the MMPA indicates that a vessel engaging in a category I or II fishery must carry an observer if requested in order to lawfully take marine mammals).
- The new language proposes to change the notification requirements for allowing importation of polar bear materials.

3.5 Right whale critical habitat designation

Payne provided a brief description of the critical habitat petition submitted by the Center for Biodiversity³ and some preliminary comments on NMFS' possible response to the petition. Payne indicated that, from the perspective of the Alaska Region's Protected Resources office, the key issues regarding the designation of right whale critical habitat are: 1) whether critical habitat can be defined for right whales given the small number of sightings and the paucity of data on why the sightings are concentrated in a small area of the eastern Bering Sea, and 2) whether the area requires management. Payne indicated that he is pretty certain that, given the small size of this population, some area will require special protection, but it's not clear what area should be considered.

The area identified in the petition as "critical habitat" includes much of the shelf and slope waters of the eastern Bering Sea. However, sightings of right whales from the past few years have occurred only in a very small portion of this area, although little sighting effort has occurred in other areas. New information from bottom mounted acoustic recorders indicate that right whales may occur in a small area of the eastern Bering Sea through October. NMFS urgently needs information on winter distribution of right whales, which they hope to get in 2002 if a tagging program is initiated.

3 The full text of the petition can be found at: <http://www.sw-center.org/swcbd/species/right/petition.PDF>

J. Gauvin asked whether there is any evidence that right whales interact with commercial fisheries. Payne responded that, based on analogy with threats to right whales in the North Atlantic, it is reasonable for NMFS to go through the process of considering whether gillnets, ship strikes, and crab pots could be a potential threat to right whales in the North Pacific. However, Payne indicated that the distribution of gillnets does not overlap with the distribution of right whales in the Bering Sea, and there is very little vessel traffic – other than fishing vessels – in the Bering Sea (and there are no recorded cases of fishing vessels striking right whales in either the North Atlantic or North Pacific). Gauvin pointed out that the crab pot fishery does overlap spatially, but not temporally, with the area where right whales have been seen in the eastern Bering Sea. The only other fixed gear fishery in that area is the snail pot fishery, which involves 5-6 vessels. At this time, there is no evidence that commercial fisheries interact with right whales in the Bering Sea, although there is evidence that bowhead whales become entangled in pot gear in the Bering Sea.

Gauvin asked what types of information would be really useful when trying to decide what to do about critical habitat; Payne indicated that information on what makes an area attractive to a right whale, such as zooplankton concentrations, would be helpful. Lowry pointed out that designation of critical habitat is one tool that can be used by NMFS to protect habitat, however, in this case, it is not clear what the conservation benefits would be of designating critical habitat. Payne pointed out that, should critical habitat be designated, it would increase public awareness of the importance of the area and would require section 7's to be conducted for federal actions that may impact the area. However, section 7s are already conducted on this area because of Steller sea lion issues.

Payne indicated that NMFS is actively working to respond to the petition, and that a response should be available in the Federal Register soon.

3.6 Bowhead whale critical habitat designation

Payne summarized the petition to designate bowhead whale critical habitat submitted by the Center for Biodiversity⁴. Because there is no critical habitat currently designated for bowhead whales, this would technically be “new” critical habitat. Thus, NMFS has to adhere to the timelines outlined in the Administrative Procedures Act instead of the timeline outlined in the ESA, which requires that NMFS make decisions regarding “revised” critical habitat within a year of receiving the petition. Although the Alaska Region Protected Resources office does have some information on what habitat is important to bowhead whales, the species is already under an intensive management regime and the population is increasing, so it is not clear that additional management of habitat is necessary to ensure the recovery of the species.

3.7 SRG role in habitat conservation issues

The SRG had a brief discussion about what role the group should play in advising NMFS on habitat conservation issues. R. Angliss pointed out that the SRGs are charged to advise the

4 The full text of the petition can be found at: <http://www.sw-center.org/swcbd/species/bowhead/petition.pdf>

Secretary of Commerce on issues, including Stock Assessment Reports, Take Reduction Teams, or “actual or projected impacts of habitat destruction on marine mammal stocks”. Brendan Kelly pointed out that the overall role of the SRG should be to look at the science that is used to develop management decisions. For instance, there was general agreement that it would be appropriate for the SRG to consider how or whether NMFS should use those few sightings of North Pacific right whales in the eastern Bering Sea to make conclusions about how the species uses the remainder of the eastern Bering Sea habitat. Since these types of management issues do not occur very frequently, it is probably best for the SRG to be reactive rather than proactive, and discuss habitat management only when NMFS indicates that there is a management issue on which they would appreciate SRG advice.

Lowry indicated that, to date, when there have been significant concerns about habitat for a particular species, the SRG has recommended the addition of a small section to the relevant SAR that addresses habitat. Wynne supported the concept of continuing to focus on habitat for only those few species where habitat seems to be a concern (e.g., contaminants in killer whales). Gauvin pointed out that NMFS managers could really benefit from any recommendations that the SRG might have on how to measure the amount of prey a predator removes from a prey field.

Payne indicated that one role for the SRG might be to provide advice regarding Cook Inlet beluga whale research. The SRG could review the research/conservation plan for Cook Inlet beluga whales that is currently being developed by NMML and AKR.

The SRG decided that the only necessary steps at this time would be to pay careful attention to the habitat sections of the SARs as they are reviewed, and to expect that NMFS will request that the SRG review habitat-related science and management issues as necessary.

4. Preliminary review of NMFS stocks to be revised in 2003

Angliss provided a draft table outlining the stocks scheduled for revision in the 2003 SARs and what information is likely to be available for each revision (Appendix xx). The SRG discussed each stock and indicated what additional information may be available.

4.1 Harbor seals -- Southeast Alaska, Gulf of Alaska, and Bering Sea stocks

SRG members noted that the harbor seal SARs were last revised in 1996 and a revision is urgently needed.

Angliss indicated that NMFS and NMFS’ Alaska Native comanagement partners are currently on schedule to provide recommendations for new stock structure by spring of 2002, and that revised draft SARs for 2003 could be provided to the SRG in fall of 2002. Once recommendations regarding stock structure are made, fishery-related mortality and subsistence harvest information would have to be developed for each of the new stocks. It may be challenging to assign these mortalities to different stocks because of the way the data are recorded. For instance, the location of subsistence-harvested seals is often recorded as the village where the hunter resides instead of where the seal was actually killed. Although hunters in some areas typically hunt in the vicinity

of their village, there are exceptions to this general rule (e.g., Alaska Natives who live in Juneau often return to the village where they grew up to hunt). ADF&G does have information on where seals are killed in Southeast Alaska, but this information is not available for other parts of Alaska. It will be necessary for NMFS/AKR to work with the ADF&G and the ANHSSC to modify the methods of collecting subsistence harvest information to ask more specific information about where the seals are actually taken, or at least what stock the seals were taken from.

Similarly, the location of a mortality of an animal in a commercial fishery may only be identified to a general region (e.g., southeast Alaska, Prince William Sound), and the fishery may actually span two or more stocks of harbor seals.

Angliss will provide an update on NMFS' progress towards revising harbor seal stocks at the March 2002 SRG meeting.

4.2 Killer whales

The killer whale SARs were last updated in 2001, and the next update is scheduled for 2004. However, because the SRG has recommended a revision in stock structure, the killer whale SARs may be updated again in 2003.

The SRG reiterated their recommendation to revise the stock structure of killer whales. Matkin indicated that, although new information on genetics will be coming out in the near future, the AT1 pod in particular is already known to be distinct and should be split out now. It's likely that there is also a significant genetic difference between animals in Prince William Sound and "northern residents", but separating these groups is not as important from a management perspective since both of these groups appear to be robust.

Angliss pointed out that, as of the summer of 2002, there will be a great deal of new funds allocated towards collecting information on killer whales as of the summer of 2002, and told the SRG that new killer whale population information will be available in the next few years, particularly on the animals in western Alaska. Matkin indicated that new results from photo-identification studies in western Alaska would probably not be available for a few years. He also indicated that Paul Wade will conduct a mark-recapture estimate for western Alaska based on a within-year comparison between photographs collected by NGOS & NMML. Matkin indicated that he does not expect major changes in killer whale abundance estimates in the Kenai Fjords, Prince William Sound, or Southeast Alaska for the next round of SARs.

Matkin expressed concern that the cataloging of identities of whales in western Alaska will not be consistent between researchers unless all researchers agree to meet and develop a consistent system. The lack of a consistent numbering system will make it more difficult for researchers to figure out when they are seeing the same individuals and pods. Matkin recommended that a common system for labeling photographs and acoustic call types be developed soon to avoid confusion in the future. A common system might be developed quickly by convening a small workshop involving the individuals who do the labeling and match the photographs.

Similarly, Matkin was concerned that different geneticists were applying different methods to biopsy samples taken from killer whales in western Alaska (Taylor and Barrett-Lennard are using the same methods; Hoelzel is using a different method). By having all biopsy samples analyzed using the same method, the sample size could be substantially increased⁵.

Angliss asked Matkin about the availability of information on trends in abundance of the different killer whale stocks. Matkin indicated that he will soon have a new paper on trends in abundance for southern Alaska resident killer whales, and that P. Olesiuk is currently finishing a paper on British Columbia resident killer whales. Angliss asked that both of these manuscripts be made available in time for the next revision of the killer whale SARs; preferably for the next SRG meeting in March.

The SRG recommended that NMFS should revise the stock structure of killer whales per their earlier recommendation.

4.3 Harbor porpoise, Southeast Alaska, Gulf of Alaska, and Bering Sea

The killer whale SARs were last updated in 2000, and the next update is scheduled for 2003.

Lowry questioned the current stock structure of harbor porpoise in Alaska. After some discussion, it was pointed out that the stock structure currently in the SARs was proposed primarily based on geography, but better delineation of stock structure is a clear research need. However, there may be few opportunities to collect material for genetic analysis since few harbor porpoise are killed incidental to commercial fishing operations, strandings are infrequent, and there are no other sources of material.

4.4 Northern fur seal

Mike Williams questioned why entanglement of northern fur seals in marine debris was not included in the SARs. M. Adkison pointed out that this was the result of a policy decision by the SRG several years ago; since there is no way for NMFS to manage for discarded gear, it is not useful to include estimates of entanglement of marine debris in the section of the SAR that addresses fishery-specific take. J. Gauvin indicated that entanglement in marine debris is particularly complicated because webbing used by shipping vessels is the same webbing used by trawl vessels; thus, there will be no way to determine whether some debris originates from commercial fishing vessels or shipping vessels. However, entanglement in marine debris is included in the “other mortality” section, which does need to be updated.

4.5 Steller sea lion, eastern and western stocks

The SRG indicated that the habitat sections of these SARs should be updated.

⁵ No formal recommendation re. genetics methods were made. However, it is clear that the genetics research would benefit by sharing biopsy material.

4.6 Cook Inlet beluga whale

Angliss indicated that the results of the Cook Inlet gillnet fishery observer program in 1999 and 2000 showed that no beluga whales were taken incidental to this fishery. Since this new information is available, it might be appropriate to delete the section in the SAR that indicates that beluga whale takes have occurred. Lowry felt that the fishery take information should be retained because of concerns that the observer program may not have sampled the fishery during “representative” years. In addition, beluga whales may come into contact with the commercial fishery more frequently as the beluga whale population increases and, presumably, increases its range in Cook Inlet.

Wynne asked when the report from the observer program would be available. Amy Van Atten indicated that a poster on the observer program would be presented at the upcoming Marine Mammal Conference, and that a report should be available soon. The SRG indicated that they would like to receive copies of the report when it was finalized.

4.7 Bowhead whale

The bowhead whale SAR should be updated with a new population estimate and trend in abundance for the 2003 version. The SRG pointed out that Craig George has a reanalysis of entanglement and scarring data that should be included in the next version of the SAR. It seems that at least some of the entangling gear is from the opilio (crab) fishery. Gauvin indicated that he expects that the amount of crab pot gear in the water will likely decline in the near future due to changes in fishery management in the Bering Sea.

4.8 Humpback whale, western and central North Pacific

The SRG queried why NMFS decided not to calculate separate PBR levels for each AK feeding aggregation as recommended during the fall 2000 SRG meeting. Angliss indicated that the general feeling among some NMML staff is that, although there is information indicating that the southeast Alaska feeding aggregation is distinct, adequate information on distinct feeding areas does not exist for the remainder of the central North Pacific stock of humpback whales. In particular, there is evidence of exchange between Prince William Sound and the Shumagin Islands (e.g. Waite et al), so designating either of these areas as “distinct feeding areas” is problematic. Because inadequate information was available to designate all of the appropriate feeding aggregations, NMFS decided to wait to see if additional information would clarify what the appropriate separations would be in Alaska.

SRG members indicated that NMFS should consider separating the southeast Alaska feeding aggregation from the remainder of the central North Pacific stock, and not make any further separations for the stock since boundaries between the other feeding aggregations are not yet delineated. This approach recognizes that there is a clear “break” in distribution between southeast Alaska and Prince William Sound, but no clear “break” between Prince William Sound and waters to the west. Separation of the southeast Alaska feeding aggregation is particularly

important because there have been many humpback whales entangled in southeast in recent years (32 animals in the past 5 years).

Angliss indicated that, if the southeast Alaska feeding aggregation is separated, information on abundance and trends in abundance for this separate group would be necessary. Straley indicated that there is some information in her thesis, but that the numbers are old and no new numbers were likely to become available. Funding would be required in order to do an analysis of the recent photo-identification data in southeast Alaska. Another 2-3 years of efforts in the Kodiak/Shumagins should provide sufficient information to do an abundance estimate for that area.

5. Review of draft revised SARs for FWS species

5.1 Pacific walrus

J. Garlich-Miller presented a brief overview of the updates made to the SAR for Pacific walrus (Appendix xx). At this time, the FWS considers both the population size and the PBR level to be unknown. The fishery-specific mortality level has decreased for this stock; this decrease is primarily because the previous estimates of fishery-specific mortality had included decomposed animals that are pulled up in the nets. Gauvin also pointed out that a decrease would be expected because there is a lack of interest in trawling for yellowfin sole in areas that overlap with the distribution of walrus. Discussions with Russian colleagues indicate that there is no apparent problem with fishery take in Russian waters.

S. Hills asked a general question about NMFS' current policy about old abundance estimates. She pointed out that the GAMMS workshop report recommends that the PBR should be set to zero when an abundance estimate is more than 10 years old. Angliss indicated that the guidance provided by the SRG in the past has been to include an N_{min} in the SARs even if it's based on an old abundance estimate. Hills recommended that, if the FWS retains the undefined N_{min} , they should also provide some information in the SAR on the last N_{min} reported in the SAR and indicate why they have decided that the N_{min} is now undeterminable. B. Kelly followed up by recommending that the information provided in Table 1 be placed in the text instead of in a table, since a quick glance at the table might lead a reader to make incorrect conclusions about a trend in abundance. It was recommended that the FWS include a stronger statement indicating that the confidence intervals for the previous estimates of the population size are so large that they provide no information on population trend.

Lowry noted that the estimate of walrus harvest is rather high and that there is currently no population estimate and questioned whether this situation should be remedied. R. Meehan asked that if the SRG chooses to recommend that a new population estimate be developed, they should also provide a rationale for how the estimate should be developed. The Marine Mammal Commission had recently stressed that the FWS should not attempt a new survey for abundance unless the survey could be done "right"; the SRG should provide clear reasons for making any recommendation different from that made by the MMC. After some discussion, the SRG generally agreed that there is no real expectation that it will be reasonable to obtain a population

estimate until there is a conceptual breakthrough.

One method that has recently been explored by the FWS is the use of genetic markers to do a mark-recapture study. However, based on the results of a modeling effort, researchers would have to sample approximately 2000 animals per year.

Kelly noted that in Table 2 of the walrus SAR, harvest levels are adjusted for unreported walrus and asked how this adjustment was calculated. Garlich-Miller responded that data collected through the statewide Marking Tagging and Reporting Program (MTRP) is adjusted for unreported walrus. The correction factor is based on the ratio of animals reported through the MTRP to the number observed by walrus harvest monitors stationed in primary hunting villages.

5.2 Sea otters

D. Burn indicated that, during the last revision of the sea otter SARs, the FWS recommended that Alaska sea otters be separated into three stocks. The Alaska Sea Otter Commission (now the Alaska Sea Otter and Steller Sea Lion Commission) questioned the data used to support this separation, so the FWS signed a MOU with the ASOC that outlined the information the FWS would provide before separating the stocks. The FWS has provided the required information, and is now moving forward with a new proposed stock structure in the draft SARs for 2002. Burn presented a brief overview of the updates made to the SAR for Alaska sea otters (Appendix xx). At this time, sea otters in south central Alaska are increasing, but sea otters in southwest Alaska have experienced a severe decline.

R. Meehan provided a brief summary of the FWS response to the petitions that they received to list Alaska sea otters (statewide) under the MMPA, and southwestern sea otters under the ESA⁶. The FWS determined that, if Alaska sea otters were considered as a single unit, it was not appropriate to list them as depleted under the MMPA⁷. The FWS is now considering whether it is appropriate to list the southwest stock under the ESA. However, the FWS recognizes that the southwest stock of sea otters has suffered a severe decline, and the FWS has started moving towards taking additional actions to conserve the population of concern (e.g., sea otters were designated a candidate species under the ESA in 2001⁸). In addition, the FWS has requested funds to begin the listing process for the southwest stock of Alaska sea otters. When funds are provided, the listing process will be initiated⁹.

SRG members asked how the sea otter harvest was monitored. The FWS supports a harvest monitoring program that requires that pelts be marked. It is generally believed that compliance is high, so there is no correction for unreported harvest included in the SARs.

6 The petition to list Alaska sea otters under the MMPA and ESA can be found at: <http://www.sw-center.org/swcbd/species/otter/pet2.pdf>

7 The FWS response to the petition was published on 2 November 2001 (66 FR 55693).

8 See 66 FR 54808, October 30, 2001 for information.

9 Funds were later provided to the FWS to initiate this action in 2002.

The SRG indicated concern that two of the references cited to support the separation of sea otters into different stocks were “in preparation” (Cronin paper & Larsen paper). In general, sources referenced in SARs should be available for review by the SRG.

The SRG had a brief discussion about what critical habitat might be designated for Alaskan sea otters and how such a designation might assist in the conservation of the animals. Burn indicated that critical habitat would probably be delineated by bathymetric contours & would primarily be within Alaska state waters. Meehan added that a critical habitat designation (and listing under the ESA) would assist in conservation by providing additional funds for research and a formal mechanism for preparing a recovery plan. Burn added that, at this point, the FWS does not anticipate that designation of critical habitat will have a serious impact on commercial fisheries since there is no clear competition issue. However, it was noted that none of the nearshore fisheries are observed and that one type of nearshore fishery (the pot fisheries for Pacific cod & crabs) occurs in bays and may take sea otters. Native subsistence harvest is not expected to be an issue for Aleutian sea otters, as the subsistence level is very low in that region.

Burn indicated concern that there is no database that provides information on marine mammal take in commercial fisheries and effort information. VanAtten responded that NMFS does have much of this information for some fisheries: the AKR has the Marine Mammal Assessment Program database and NMML has access to a database that provides marine mammal take data and effort information for fisheries that are federally managed and have observer programs¹⁰.

There was some discussion that measuring effort in Alaska state fisheries has been problematic. The ADF&G did a report that examined effort in different fisheries using fish tickets, but the information was reported by statistical block, so determining the effort in nearshore waters that may have a higher potential to take marine mammals is not possible. Gauvin mentioned that as of 2002, additional information would be available for determining effort, since all groundfish vessels greater than 58ft will have to carry a Vessel Monitoring System (VMS)¹¹. Galen Tromble and Melanie Brown will be handling the processing of the incoming VMS information.

The SRG questioned whether good estimates of sea otter take in commercial fisheries were being collected. Straley indicated, and others generally agreed, that good estimates of sea otter take are not being collected, particularly in state waters where sea otters are most likely to occur. Lowry suggested that the FWS should consider what fisheries should be observed for sea otter purposes and should work with NMFS to get sea otter take rates in different fisheries.

Specific comments on the Southeast Alaska sea otter stock

J. Straley indicated considerable concern about the statement in the SAR which indicated that “offshore” shipping is not a concern with respect to sea otters. Tankers can be seen from shore,

10 The MMAP database includes self-reported takes of marine mammals in commercial fisheries and includes no information on fishing effort. In contrast, the database of marine mammal takes in observed federal fisheries includes the following fisheries: Bering Sea/Aleutian Islands groundfish trawl, Bering Sea/Aleutian Islands groundfish longline, Gulf of Alaska groundfish trawl, Gulf of Alaska groundfish longline, pot.

11 Contact Galen Tromble and Melanie Brown for information on the VMS system.

and if any of these were to spill oil, there would clearly be a risk. D. Burn agreed that the risk is greater than zero, but was probably not “large”. The language in the SAR will be modified.

Specific comments on the South Central sea otter stock

There is a mathematical error in the minimum population abundance estimate that needs to be corrected.

An SRG member suggested that the “Current and Maximum Net Productivity” section be revised in this and all other SARs to include only the maximum net productivity. The current productivity information could be placed in the “trends” section. Lowry indicated that the structure of the SARs is really a decision to be made by NMFS and FWS.

5.3 Polar bears

S. Schliebe presented a brief overview of the updates made to the SARs for polar bears. There are essentially no changes in the SAR for the Chukchi/Bering Sea stock of polar bears, although a slight decrease in the Alaska harvest level has occurred. Johnson indicated that the decline in polar bear harvest in 1999/00 was a result of ice and weather conditions making the bears less available to subsistence hunters. Other potential factors influencing the harvest include that older hunters are not being replaced by younger hunters, and the unquantified harvest in Chukotka may be reducing the number of bears available to Alaska hunters.

Lowry indicated concern about the statement in the Chukchi/Bering SAR that suggests that animals in the eastern Chukchi Sea are a separate management unit. He noted that, although there does seem to be some indication that there is a cluster of female bear activity near Barrow, there is no clear evidence that this group of bears is distinct. The statement about the separate management units should be removed. Schliebe indicated that at this time there are no genetic information comparing polar bears of the eastern Chukchi Sea and those of the southern Beaufort Sea, but that there are major differences in movements between animals in N. Beaufort Sea and in the S. Beaufort Sea.

SRG members indicated concern about poorly documented, but reportedly “high” polar bear harvest rates in Chukotka. Lowry questioned whether there was any effort on the part of the Nanuuq Commission to keep polar bear harvest “low” to compensate for “high” harvest levels in Russia; Johnson indicated that this was not occurring. The SRG indicated general concern about the status of the Bering/Chukchi Sea stock given the small number of bears and an undocumented number of animals taken on the Russian side. There are efforts to get better information on the Russian take, but because any harvest is illegal, hunters are not likely to report their harvest levels. The issue of considerable harvest on the Russian side should be addressed because it could represent a significant risk to the stock. The SRG recommended that a statement indicating what efforts are being taken by the Nanook Commission to address the illegal harvest should be added to the end of the first paragraph in the “other removals” section.

Specific comments on the Southern Beaufort Sea polar bear stock

The SRG noted that the new abundance estimate is higher than the old abundance estimate, although the new Nmin is lower than the old Nmin. M. Adkison noted that the SAR has not explained how Nmin was calculated; it appears that the Nmin calculation is incorrect in the current SAR (or was incorrect in the old SAR). This should be checked.

S. Hills indicated that the SRG has not yet reviewed the Amstrup papers which are being used to develop the new population estimates for polar bears. In general, the SRG should be allowed to review the papers that provide the new information for the SARs. These should be provided at the next meeting.

6. Discussion of FWS/USGS research/management issues

6.1 Walrus population estimation

In 2000, the FWS held a workshop to solicit recommendations regarding walrus population estimation. The workshop reports was finalized in 2001, and much progress on the recommendations of the workshop has been made.

FWS/USGS has investigated the use of a genetic mark-recapture technique to estimate population size. Based on preliminary analyses, 2000 walrus per year would have to be biopsied to get a mark-recapture estimate with a reasonable CV. However, for this technique to be effective, it will be necessary to obtain a random sample of the population. Achieving a random sample will be very difficult because of segregation issues. Garlich-Miller indicated that the FWS is hoping to schedule a meeting to discuss the utility of the mark-recapture approach in 2002, and will invite SRG members to attend.

M. Weber indicated that three remote sensing systems have been investigated to determine their usefulness in counting walrus: thermal sensors, the IKONOS satellite, and high-altitude aerial photography. Preliminary tests indicate that there is a good correlation between ground counts and remote sensing counts. At this time, the thermal system is the most promising. Surveys to compare thermal imagery to traditional photography are scheduled for April 2002.

The IKONOS satellite has been used to collect an image of walrus on Round Island, but it has been difficult to get the satellite to collect images at a particular time. However, this technique may be useful for counting walrus and may help to stratify surveys to account for sea ice.

One of the major challenges to obtaining an abundance estimate that still needs to be addressed is that not all walrus are hauled out at any one time. Thus, correction factors will have to be determined for various types of walrus haulouts. While some information is available on haulout patterns, much more will have to be collected before reliable correction factors are available.

Another approach to assessing the population size of walrus might involve a multi-scale aerial survey of ice habitat. This approach would involve two aircraft: one aircraft flown at a high

altitude could be used to detect walrus, and a second aircraft at a low altitude could be used to count the walrus detected by the higher survey aircraft.

The SRG was generally pleased by the progress made towards developing an estimate of walrus population size.

6.2 Sea otter status and recovery needs

The SRG questioned whether the FWS is currently conducting any research to determine the cause for the decline in sea otters. Burn indicated that this type of research is not being conducted. The FWS' first goal after the 1998 Estes paper was to determine the magnitude and extent of the population decline. At this time, the "en vogue" theory for the decline is an increase in killer whale predation, but there are also other theories. There has been some discussion at the FWS that a workshop should be convened to discuss theories for the decline, but this workshop is only a notion at this time. One issue is that 2002 will be the last year of funding for the Estes/Tinker project on sea otters in the Aleutians. The FWS hopes to overlap with Estes/Tinker during the upcoming field season so that they can carry on the research if Estes/Tinker do not get additional funding for future research. In addition, the FWS hopes to initiate research at other sites in the Aleutian Islands.

Lowry pointed out that it appears that the same problem may happen with sea otter research as has occurred with Steller sea lion research: a lot of the research got started before any long-term research planning occurred. Meehan indicated that the FWS currently has virtually no funding for sea otter research, and is starting to plan for what research projects will be implemented once funding is provided.

Lowry indicated that there are two major issues regarding Alaskan sea otters: 1) research cited in the current draft SARs needs to be written up and published, and 2) future research needs to be planned and prioritized.

Kelly observed that there is a unique characteristic of the sea otter situation that makes it very interesting. Because there is a long time series of depletion and recovery, we already know how quickly sea otters have the potential to increase. Examination of previous patterns of recovery will provide the FWS with a way to evaluate whether future recovery of the population is occurring.

6.3 Polar bears--management of western stock and regulation of take

The SRG again mentioned concern about the small size of the stock and the unknown, but presumably high, Russian take level. C. Johnson indicated that he is currently working on an agreement between the Nanuuq Commission and the Association of Marine Mammal Hunters in Chukotka to enforce the bilateral Polar Bear Agreement. He hopes to finish the report of this agreement by the end of 2001. Once the bilateral treaty is signed, one of the first duties of the new commission will be to design a research and management approach for the polar bear stock.

S. Schliebe indicated that they have started to revise the 1994 conservation plan for polar bears. The revision of the plan will be an interactive process and the SRG will be asked for their comments in the future.

7. Review of draft revised NMFS Stock Assessment Reports for 2002

7.1 Beluga whale stocks -- Beaufort Sea, eastern Chukchi Sea, eastern Bering Sea, Bristol Bay, Cook Inlet

The SRG commented that, in general, the genetics information published to date supports the stock structure in the SARs. Lowry made the following comments on the available data for the Beaufort sea, eastern Chukchi Sea, eastern Bering Sea, Bristol Bay, and Cook Inlet stocks.

Beaufort Sea stock

The SAR has been revised to update the subsistence harvest levels, but there are few other changes from the previous SAR. The Department of Fish and Oceans conducted the last population survey in 1992.

Eastern Chukchi Sea stock

Although there is some new information on movements of whales, there is no new information on the abundance of this stock. Attempts have been made to survey whales offshore, but it is very difficult to obtain a decent population estimate in 90% ice cover. However, nearshore surveys from 2001 did show that whales are continuously distributed along the coast. Whales (presumably from this stock) show up in Kotzebue Sound after ice breakup, then travel to Kasegaluk Lagoon. Tagged animals do not, however, seem to travel anywhere near the MacKenzie River Delta, which indicates that beluga whales harvested in that area are not part of the eastern Chukchi Sea stock. Further, the tagging information indicates that subsistence hunters in Norton Sound are probably only harvesting animals from the Norton Sound stock, and not some other stock.

Eastern Bering Sea stock

Abundance information for this stock was first collected in the early 1990s. The most recent surveys were conducted in 1999 & 2000 and are the most comparable; earlier surveys did not cover all of Norton Sound. Lowry indicated that aerial survey counts are corrected by using surfacing data from a few tagged beluga. One SRG member was concerned about whether it was valid to stratify the survey data into north/south strata; however, because the sighting rate in the two different areas is drastically different this approach seems reasonable. Another SRG member noted that the correction factors for the aerial surveys might now be improved since there is a great deal of new SDR data on beluga. Lowry has not yet published the results of the 1999 and 2000 Norton Sound and Bristol Bay surveys; he hopes to finish these by approximately fall of 2002.

Bristol Bay stock

Surveys for this stock involve only a coastal survey; when transects are flown offshore, animals are never observed. Current counts are roughly similar to counts done in the 1950s by Brooks, so the general belief is that the population abundance is roughly the same. There is some subsistence take of beluga in nets used for personal king salmon fishing, but the SRG recommended deleting the paragraph in the draft SAR which discussed subsistence take of beluga in this manner.

There have been some rumors that beluga takes occur incidental to the crab pot fishery in Bristol Bay; Herman Savikko may be able to provide additional information.

Cook Inlet stock

The SRG discussed the results of the observer program implemented in Cook Inlet in 1999-2000. Although no beluga mortalities or injuries were observed during the 2-year program, some SRG members indicated concern that the geographic distribution of the fishery might have been “atypical”, and that this might have been why no beluga whale takes were observed. Matkin indicated that he feels that it’s quite reasonable that no takes of beluga whales occurred in Cook Inlet fisheries.

M. Kookesh asked whether there had been any recent efforts to examine beluga stomachs to find out what species they are eating. Lowry indicated that this type of research had not occurred in a long time; however, the pattern documented in previous research in Bristol Bay was pretty straightforward, and indicated that, when there are smolts around, beluga eat smolts, and when smolts aren’t available, they eat yellowfin sole or other fish species until adult salmon migrate into the area.

The SRG would like copies of the Marine Fisheries Review collection of Cook Inlet beluga whale articles when it is published.

7.2 Beaked whales

There are no new updates to the SARs for beaked whales. Straley mentioned that she has records of 2 dead beaked whales which should be included in the SARs, including one dead Cuvier’s beaked whale near Kodiak in 1997.

7.3 Gray whale, eastern North Pacific stock

The SRG commended the authors of the eastern North Pacific gray whale SAR for a very thorough update. The SRG strongly recommended that preliminary information on stranding levels in 2001 be added to the SAR to avoid the appearance that the stranding levels might have continued at the high levels observed in 1999 and 2000. The SRG also recommended that the table in the gray whale SAR (and other SARs, as appropriate) reporting entanglements be sorted by animals that were dead, those that incurred serious injuries, and those which were considered injuries.

7.4 Steller sea lions (both stocks)

One SRG member commented that the estimate of serious injury/mortality of Steller sea lions in the GOA groundfish longline fishery seemed high, and that the extrapolation should be double-checked. Also, the paragraph on stranding information indicates that a mortality in troll gear was probably due to a sport fishery, not a commercial fishery. Gauvin noted that troll gear is used by both the salmon sport fishery and the shark sport fishery, so the mortality could have been caused by either.

SRG members familiar with both Steller sea lion research efforts and fishery management measures mentioned that the labeling for research areas and fishery management areas are not parallel, and that it would be easier for researchers and fishery managers to communicate about Steller sea lion data if similar geographic nomenclatures were used.

7.5 North Pacific humpback whales (both stocks)

SRG members were generally uncomfortable with adding information from Mizroch et al (in review) since the manuscript had not yet been widely reviewed. In addition, the section on the impacts of ATOC on humpback whales needs to be augmented by results from Frankel (Straley will provide). There is a ship strike record missing from the central North Pacific stock (Straley), and there will be some additional illegal whaling information to add to the information for the western North Pacific stock.

7.6. Sperm whale

SRG members mentioned that there are still problems with sperm whales taking fish off longlines in the Gulf of Alaska. In addition, there is still a need to take biopsy samples in order to better determine stock structure. Lowry questioned whether NMFS has any plans to determine an abundance estimate for this stock; Angliss indicated that NMFS recognizes that an abundance estimate is needed, but that obtaining this estimate is a low priority for NMFS at this time.

8. SRG discussion and recommendations

Lowry identified the following main points to address in a letter from the AK SRG to the FWS:

- Commend the FWS for their recent work to estimate walrus abundance
- A research plan for sea otters should be developed very soon

Lowry identified the following main points to address in a letter from the AK SRG to NMFS:

- Reiterate the SRG's recommendation regarding humpback whale and killer whale stock structure
- Reiterate the SRG's recommendation about harbor seal stock structure
- Comment on NMFS' plan to convene a workshop to develop national standards for stock designation (may be a separate letter)

An SRG member also suggested that, prior to any efforts to satellite tag right whales in Alaska, an evaluation of the Atlantic right whale satellite tagging efforts should be completed. There are rumors that there are different mortality rates for tagged Atlantic right whales than for untagged Atlantic right whales.

The SRG also provided NMFS and the FWS a reminder that documents supporting new information in the SARs should be provided prior to the SRG meetings.

List of Appendices

- Appendix 1: Final agenda
- Appendix 2: List of participants
- Appendix 3: Report of the working group on ice seal subsistence harvest
- Appendix 4: Table outlining anticipated data availability for 2003 draft SARs
- Appendix 5: Summary of changes to the draft SAR for polar bears
- Appendix 6: Summary of changes to the draft SAR for walrus
- Appendix 7: Draft list of topics to cover at the 4/5 March 2002 meeting

Appendix 1: Final agenda

**Alaska Scientific Review Group Meeting
6-7 November 2001
NMFS Conference Room
Federal Building
Anchorage, AK**

Major topics: 1. Review of FWS Stock Assessment Reports to be revised in 2002
2. Review of NMFS Stock Assessment Reports to be revised in 2002

Materials needed: Background documents supplied by NMFS, FWS, and USGS BRD

6 November 2001—Tuesday

- 9:30 am Introductory business
1. Introductions
 2. Review and approve agenda
 3. SRG Chair for next year
 4. SRG membership--replacement for Carl Hild
 5. Other business (e.g., travel vouchers)
- 10:15 am Review of draft revised SARs for FWS species
1. Pacific walrus
 2. Sea otters
 3. Polar bears
- 12:15 pm Break for lunch
- 1:30 pm Complete review of draft revised SARs for FWS species
- 2:30 pm Discussion of FWS/USGS research/management issues
1. Walrus population estimation
 2. Sea otter status and recovery needs
 3. Polar bear--management of western stock and regulation of take
 4. Others
- 4:00 pm Discussion of NMFS research/management issues
1. Responses to December 2000 SRG letters
 2. Harbor seal update—genetics [working group report—Adkison and Kelly], stock identity, population decline in Glacier Bay, progress on SARs
 3. Alaska Native subsistence harvest monitoring—working group report [Hills and Kelly], program status
 4. MMPA reauthorization
 5. Bowhead whale critical habitat designation
 6. Right whale critical habitat designation
 7. SRG role in habitat conservation issues
 8. Others
- 5:30 pm Adjourn

Draft Agenda: Alaska Scientific Review Group Meeting-continued

7 November 2001--Wednesday

- 8:00 am Continue discussion of NMFS research/management issues
- 9:00 am Review of draft revised NMFS Stock Assessment Reports for 2002
1. Beluga whale (Beaufort Sea, eastern Chukchi Sea, eastern Bering Sea, Bristol Bay, Cook Inlet)
 2. Beaked whales
 3. Gray whale, eastern North Pacific
 4. Other strategic stocks (northern fur seal, Steller sea lion (both stocks), bowhead whale, right whale, humpback whale (both stocks), fin whale, sperm whale)
- 12:15 pm Break for lunch
- 1:30 pm Continue review of draft revised NMFS SARs for 2002
- 2:30 pm Preliminary review of NMFS stocks to be revised in 2003
1. Harbor seals (all stocks)
 2. Killer whales (all stocks)—include update on western AK surveys
 3. Harbor porpoise (all stocks)
 4. Dall's porpoise
 5. Pacific white-sided dolphin
 6. Strategic stocks (northern fur seal, Steller sea lion (both stocks), Cook Inlet beluga whale, bowhead whale, right whale, humpback whale (both stocks), fin whale, sperm whale)
- 4:00 pm SRG discussion and recommendations
- 5:00 pm Future meetings--frequency and schedule
- 5:30 pm Adjourn

Appendix 2: List of participants

Participants in the Scientific Review Group November 20-21, 2001			
Last Name	First Name	E-Mail	Phone
Adkison	Milo	Milo.Adkison@uaf.edu	(907)465-6251
Angliss	Robyn	Robyn.Angliss@noaa.gov	(206)526-4032
Brix	Kaja	Kaja.Brix@noaa.gov	(907)586-7235
Burn	Douglas	Douglas_Burn@fws.gov	(907)786-3807
Garlich-Miller	Joel	Joel_Garlichmiller@fws.gov	(907)786-3820
Hills	Sue	shills@ims.uaf.edu	(907)474-5106
Johnson	Charles	cjohnson@nook.net	(907)443-5044
Kelly	Brendan	FFBPK@uaf.edu	(907)465-6510
Lowry	Lloyd	lloyry@eagle.ptialaska.net	(907)455-6885
Martin	Harold	hpmartin1934@hotmail.com	(907)789-1899
Mathews	Beth	Beth.Mathews@uas.alaska.edu	(907)465-1827
Matkin	Craig	comatkin@xyz.net	(907)235-6295
Meehan	Rosa	Rosa_Meehan@fws.gov	(907)786-3349
Payne	Mike	Michael.Payne@noaa.gov	(907)586-7236
Reidel	Monica	monicareidel@ctcak.net	(907)424-5882
Schliebe	Scott	Scott_Schliebe@fws.gov	(907)786-3812
Small	Bob	bob_small@Fishgame.state.ak.us	(907)465-6167
Straley	Jan	Jan.Straley@uas.alaska.edu	(907)747-7779
Van Atten	Amy	Amy.Van.Atten@noaa.gov	(907)586-7642
Vanek	Vicki	vicki_vanek@Fishgame.state.ak.us	(907)562-3339
Webber	Marc	Marc_Webber@fws.gov	(907)786-3479
Williams	Mike	mwilliams@lgl.com	(907)526-3339
Willoya	Donna	asoc@alaska.net	(907)274-9799
Wynne	Kate	ffkmw@uaf.edu	(907)486-1517

Appendix 3: Report of the working group on ice seal subsistence harvest

Email sent from Sue Hills to Brendan Kelly, Charlie Johnson, and Carl Hild on 8 November 2001

Brendan, Charlie, and Carl

Last fall, Robyn presented revised draft SARs with new sections on subsistence harvest of ringed, bearded, spotted, and ribbon seals. If you recall, the SRG recommended that a subcommittee (us) review the papers/reports on which the harvest information was based. Carl sent comments to Robyn but she is still asking for “official” input from the SRG. The draft 2002 SARs we all just received contain the new language and data on subsistence take from the ADFG subsistence database. The total estimated take was increased from what we saw a year ago because we recommended that the interpolated estimates from villages not surveyed be included in the total.

	# villages	# est.	# w/data older than 1990	Last year total take w/out estimates	New SAR total take including estimates	Previous (pre SAR) take estimate	“PBR” hypothetical population base	Est “PBR”
Spotted	157	22	16	3145	5265	2400	50,000	1500
Ribbon	151	22	16	136	193	< 100	50,000	1500
Bearded	151	22	16	4862	6788	1800	50,000	1500
Ringed	151	22	16	5007	9567	3000	250,000	7500

In addition to modifying the language of the SARs (see suggestions below) I think we should follow Carl’s suggestion (see comments attached below) of last spring to recommend that someone (NMFS? ADFG Subsistence?) compile and track the best ice seal subsistence harvest data available, even if some new program is not initiated to estimate it better. The following is how I propose that the SAR language be modified:

Spotted Seal

The division of Subsistence, Alaska Department of Fish and Game maintains a database that provides additional information on the subsistence harvest of ice seals in different regions of Alaska (ref). ~~Village-specific~~ information on subsistence harvest ~~of spotted seals levels has been compiled for 135 villages~~ from reports from the Division of Subsistence (ref) and a report from the Eskimo Walrus Commission (ref). ~~Diff data on subsistence harvest were~~ lacking for ~~22a-particular~~ additional villages; ~~their harvests were estimated using the~~ annual per capita rates of subsistence ~~harvest from in a nearby village are used to estimate the annual subsistence level.~~ ~~Harvests were estimated from data gathered in the 1980s for 16 villages, the remainder used data gathered from 1990-1998.~~ According to this database, ~~which was last~~ queried in August 2000, the estimated number of spotted seals harvested for subsistence use per year is 5,265.

A recent report on ice seal subsistence harvest in three Alaskan communities indicated that the number and species of ice seals harvested in a particular village may vary considerably between years (ref). These interannual differences are likely due to differences in ice and wind conditions that change in the hunter's' accessibility to different ice habitats frequented by different types of seals. Regardless of the extent to which the harvest may vary interannually, it is clear that the harvest level of 5,265 spotted seals estimated by ~~the~~ ADFG Subsistence is considerably higher than the previous minimum estimate of 244 per year from the northern Bristol Bay portion of their range. Although some of the more recent entries in the ADFG database have an associated measures of uncertainty (Coffing et al.1998, Georgette et al. 1998), the overall total does not and the estimate of 5,265 spotted seals therefore represents a mean estimate rather than a minimum estimate of subsistence harvest.

Bearded Seal

The division of Subsistence, Alaska Department of Fish and Game maintains a database that provides additional information on the subsistence harvest of ice seals in different regions of Alaska (ref). ~~Village-specific~~ information on subsistence harvest of bearded seals levels has been compiled for 129 villages from reports from the Division of Subsistence (ref) and a report from the Eskimo Walrus Commission (ref). ~~Dif data on subsistence harvest wereare~~ lacking for 22a-particular additional villages; ~~their harvests were estimated using the~~ annual per capita rates of subsistence harvest from in a nearby village ~~are used to estimate the annual subsistence level.~~ Harvests were estimated from data gathered in the 1980s for 16 villages, the remainder used data gathered from 1990-1998. According to this database, ~~which was last~~ queried in August 2000, the estimated number of ~~beardedspotted~~ seals harvested for subsistence use per year is 5,2656,788.

A recent report on ice seal subsistence harvest in three Alaskan communities indicated that the number and species of ice seals harvested in a particular village may vary considerably between years (ref). These interannual differences are likely due to differences in ice and wind conditions that change in the hunter's' accessibility to different ice habitats frequented by different types of seals. Regardless of the extent to which the harvest may vary interannually, it is clear that the harvest level of ~~5,265 spotted~~ 6,788 bearded seals estimated by ~~the~~ ADFG Subsistence is considerably higher than the previous minimum estimate of ~~244791~~ per year from five villages in Bering Strait. Although some of the more recent entries in the ADFG database have an associated measures of uncertainty (Coffing et al.1998, Georgette et al. 1998), the overall total does not and the estimate of 6,788 bearded seals therefore represents a mean estimate rather than a minimum estimate of subsistence harvest.

Ringed Seal

The division of Subsistence, Alaska Department of Fish and Game maintains a database that provides additional information on the subsistence harvest of ice seals in different regions of Alaska (ref). ~~Village-specific~~ information on subsistence harvest of ringed seals levels has been compiled for 129 villages from reports from the Division of Subsistence (ref) and a report from the Eskimo Walrus Commission (ref). ~~Dif data on subsistence harvest wereare~~ lacking for 22a-particular additional villages; ~~their harvests were estimated using the~~ annual per capita rates of subsistence harvest from in a nearby village ~~are used to estimate the annual subsistence level.~~

Harvests were estimated from data gathered in the 1980s for 16 villages, the remainder used data gathered from 1990-1998.. According to this database, ~~which was last~~ queried in August 2000, the estimated number of ~~ringed~~~~spotted~~ seals harvested for subsistence use per year is ~~5,265~~~~9567~~.

A recent report on ice seal subsistence harvest in three Alaskan communities indicated that the number and species of ice seals harvested in a particular village may vary considerably between years (ref). These interannual differences are likely due to differences in ice and wind conditions that change in the hunter's' accessibility to different ice habitats frequented by different types of seals. For instance, Alaskan Natives reported that there was little ice of the type preferred by ringed seals in Kuskokwim Bay in 1998, so fewer ringed seals were harvested in that area than during some previous years. Regardless of the extent to which the harvest may vary interannually, it is clear that the harvest level of 9,567 ringed seals estimated by ~~the~~ ADFG Subsistence is considerably higher than the previous minimum estimate. Although some of the more recent entries in the ADFG database have an associated measures of uncertainty (Coffing et al.1998, Georgette et al. 1998), the overall total does not and the estimate of 9,567 ringed seals therefore represents a mean estimate rather than an minimum estimate of subsistence harvest.

Ribbon Seal

The division of Subsistence, Alaska Department of Fish and Game maintains a database that provides additional information on the subsistence harvest of ice seals in different regions of Alaska (ref). ~~Village-specific~~ information on subsistence harvest of spotted seals levels has been compiled for 129 villages from reports from the Division of Subsistence (ref) and a report from the Eskimo Walrus Commission (ref). ~~Diff data on subsistence harvest were~~ lacking for ~~22a particular~~ additional villages; their harvests were estimated using the annual per capita rates of subsistence harvest from in a nearby village are used to estimate the annual subsistence level. Harvests were estimated from data gathered in the 1980s for 16 villages, the remainder used data gathered from 1990-1998.. According to this database, ~~which was last~~ queried in August 2000, the estimated number of ~~spotted~~~~ribbon~~ seals harvested for subsistence use per year is ~~5,265~~~~193~~.

A recent report on ice seal subsistence harvest in three Alaskan communities indicated that the number and species of ice seals harvested in a particular village may vary considerably between years (ref). These interannual differences are likely due to differences in ice and wind conditions that change in the hunter's' accessibility to different ice habitats frequented by different types of seals. Regardless of the extent to which the harvest may vary interannually, it is clear that the harvest level of ~~5,265~~~~spotted~~~~193 ribbon~~ seals estimated by ~~the~~ ADFG Subsistence is considerably higher than the previous minimum estimate. Although some of the more recent entries in the ADFG database have an associated measures of uncertainty (Coffing et al.1998, Georgette et al. 1998), the overall total does not and the estimate of 193 ribbon seals therefore represents a mean estimate rather than an minimum estimate of subsistence harvest.

Carl's comments to Robyn on 6 Mar.2001

First, the data reported appears to be aging and based on harvest surveys done by the State. While I am only aware of more recent data for ribbon, ringed and bearded seals in one area (NSB), harbor and spotted seals should have more current data. This gets to my second point, that there are now other groups engaged in tracking natural resource management. There are

Alaska Native groups, Regional Native non-profits, and local governments that have been collecting hunter subsistence harvest data. The Alaska Native Harbor Seal Commission may have more current numbers for harbor and spotted seals. Likewise BBNA has a Marine Mammal program coordinator who may have more current data on other ice seals. Maniilaq Association I understand has been gathering this type of information as has the North Slope Borough Department of Wildlife Management. The Northwest Arctic Borough would be another local government to check.

Overall I would urge a survey of all Alaska Native marine mammal organizations, perhaps through IPCoMM (wherever it may exist now that RurAL CAP has cut support), the natural resource management departments of the regional Native non-profit corporations, and the local governments. Bob Wolfe has done this in the past, but I do not know what support he currently has to do this more frequently. The SAR guidelines are to use data that is no older than a decade. Clarifying the available effort would help the SRG understand the current quality of the data as well as the potential for future data collection. While we need published data for the SARs, which is cited in this report, I believe that the SRG can and would consider reviewing unpublished materials to gain greater insight into the level of utilization.

Third, would be to approach this from the other direction. Similar to the Walrus data to sample a small number of communities every year where it is known the majority of the harvest takes place. From the existing charts it may be determined which communities are key for each species and then target them for some annual assessment of harvest. With the changing ice conditions and greater climate variability I wonder if funds for such surveys of sustainable biodiversity would be available via NOAA or other Federal agencies. All indications are the ice edge is changing dramatically. This will have a significant influence on many species and populations that depend on the ice edge ecosystem. We really need to know more about this highly utilized group of marine mammals.

Appendix 4: Expected availability of new information for the 2003 draft Stock Assessment Reports

Updates made after SRG comments in *italics*

12/31/01 rpa

Stock	Stock structure	Abundance/Trends	SIM in commercial fisheries	Subsistence harvest	Comments
Harbor seals, Gulf of Alaska, Bering Sea, and Southeast Alaska	Update	Update; see Boveng et al in press for a preview <i>Also see Simpkins et al., in press</i> <i>Will have updates to trends & other new information available from ADF&G through 2001</i>	Update	Update for each new stock; <i>should have statewide information for 2000, 2001</i>	NMFS will consult with partners in the Alaskan Native community to recommend appropriate stock structure in time to make changes to the 2003 draft SARs (Sept 02)
Killer whales, North Pacific residents	No (<i>Yes?</i>)	Have estimates in western Alaska based on line transects in 2000; line transect surveys will be repeated in 01 but 2 nd year of data will not be ready for the 03 draft SARs.	Update; no drastic changes expected	No harvest	Last population estimate was based on photos collected through ~1996-98. New counts from NMML's work in western Alaska will be available by March 02; unknown when new counts from non-NMML photo-id efforts in other areas.
Killer whales, North Pacific transients	No (<i>Yes?</i>)		Update; no drastic changes expected	No harvest	Last population estimate was based on photos collected through ~1996-98. Unknown when new counts from photo-id efforts will be available for PWS, SEAK, Kodiak, western Alaska, BC, WA/OR/CA.

Stock	Stock structure	Abundance/Trends	SI/M in commercial fisheries	Subsistence harvest	Comments
Harbor porpoise, Gulf of Alaska, Bering Sea, and Southeast Alaska	No	No? Some new information on portions of a stock's range, no new abundance estimates until new surveys flown	Update	No harvest	Aerial surveys for small cetaceans in Alaska are next scheduled for 03/04/05.
Dall's porpoise	No? Comment at last SRG meeting that new information was available on PD stock structure; however, not clear how that new information relates to the animals in US waters	Update is planned; if it occurs, will involve estimating PD abundance from aerial surveys flown for harbor porpoise in 1997-99. Some new information on #s in the Bering Sea will be included (~6300 in a portion of the BS - Waite et al 2001)	Update; no drastic changes expected	No harvest	.
Pacific white sided dolphin	No	No	Update; no drastic changes expected	No harvest	
Northern fur seal	No	Update	Update; no drastic changes expected	Update	
Steller sea lion, western and eastern	No	Update	Update; no drastic changes expected	No data for 1999; <i>data available for 2000, 2001</i>	
Cook Inlet beluga whales	No	Update	Update; no drastic changes expected	Update	
Bowhead whale	No	Update; new population estimate from 01 census should be available for 03 draft SARs	Update; no drastic changes expected	Update	

Stock	Stock structure	Abundance/Trends	SI/M in commercial fisheries	Subsistence harvest	Comments
North Pacific right whale	No	Update	Update	No harvest	
Humpback whale, central	Maybe; recommendation from 2000 to separate into feeding areas; however, sightings between PWS & Kodiak indicate movement	Maybe?	Update	No harvest	Last population estimate was based on photos collected between 19xx-xx. Unknown when a new estimate will be available for PWS, SEAK, Kodiak. <i>NMML investigating approaches for determining abundance estimates for the SE AK and for the Central North Pacific (minus SE AK)</i> Update distribution map - include documented movements?
Humpback whale, western	No	Maybe? Estimates from ship-based line transects along the south side of the Alaska Peninsula in 01 probably available; estimates from ship-based line transect surveys in 02 not available for the 03 draft SARs	Update	No harvest	Last population estimate was based on photos collected between 19xx-xx. Unknown when a new estimate will be available. New counts from photo-id efforts will be available for Kodiak, western Alaska. Update distribution map - include documented movements?
Fin whale	No	Maybe? Estimates from ship-based line transect surveys along the south side of the Alaska Peninsula in 01 probably available; estimates from ship-based line transect surveys in 02 not available for the 03 draft SARs	Update; no drastic changes expected	No harvest	Update distribution map - include documented movements?

Stock	Stock structure	Abundance/Trends	SIM in commercial fisheries	Subsistence harvest	Comments
Sperm whale	No	No	Update; no changes expected	No harvest	

Appendix 5: Summary of changes to the draft SAR for polar bears

Appendix 6: Summary of changes to the draft SAR for walrus

Appendix 7: Draft list of topics to be addressed at the 4/5 March 2002 meeting

(items in **BOLD** indicate what materials the SRG would like to have in advance of the meeting so they can be discussed at the meeting)

- Select new SRG members (genetics, subsistence/traditional knowledge/Bering Sea ecology)

Harbor seal information – *highest priority*

- **review of Boveng et al paper, Simpkins et al paper**
- **review of write-up of how the revised population estimates will be made**
- progress on stock designations
- progress on separating fishery/subsistence harvest information into smaller units

Killer whales

- update on convening a workshop to coordinate killer whale data processing
- review new papers on population abundance and trends by Matkin & Olesiuk
- progress on redefining stocks – *high priority*

Humpback whales

- check entanglement data
- progress on redefining CNP stocks – *high priority*
- need abundance estimate for the SE AK group

Harbor porpoise, Dall's porpoise abundance estimates (put on agenda for now, delete later if no new information)

Polar bears (postpone detailed discussion until next Anchorage meeting)

- review Amstrup papers on abundance estimates (might want to do this at the spring 02 meeting)

Sea otters (tie in FWS using teleconference)

- review reports on population abundance estimates

Walrus (postpone until next Anchorage meeting)

- review reports on mark-recapture population estimate

CI beluga whales – *high priority*

- **review CI beluga whale conservation plan & research plan**

Management issues

- bowhead/right whale critical habitat decisions