January 22, 1997

Minutes: Fourth Meeting of the Alaska Scientific Review Group (11-13 September 1996)

The fourth meeting of the Alaska Scientific Review Group (ASRG) was held at the RURalCAP offices in Anchorage, AK from 11-13 Sept. 1996. Participants at the meeting are listed in Appendix 1. Appendix 2 presents the final agenda. Lloyd Lowry was elected to chair the ASRG during its second year of service; Doug DeMaster agreed to be the rapporteur.

The first order of business concerned developing a list of people to recommend to NMFS and FWS to replace the three ASRG members that no longer serve on the ASRG (Blum, Branson, and Sparck). Rather than assume that the empty seats would be filled by people representing the same constituent groups, the ASRG identified several areas of expertise that were under-represented in the existing ASRG: commercial fisheries, subsistence in central and SE Alaska, and cetacean biology. Initially all of the ASRG members were asked to identify individuals they thought would contribute to the workings of the group. After some discussion there was general agreement on four individuals, but no consensus for just three individuals. **Following additional discussion, it was recommended that all four individuals be recommended for consideration by NMFS and the FWS to invite to serve on the ASRG (Appendix 3).**

Paul Wade introduced the topic of whether the ASRG would like to participate in a joint meeting with the Pacific SRG. He noted that during the development of the first round of status reports, several inconsistencies in the way different SRGs approached status assessment were obvious. Further, DeMaster added that the Pacific SRG and the ASRG review status of several species, where the stock boundaries are less than clear (i.e., Steller sea lion, harbor seal, harbor porpoise, killer whale, and humpback whale). There was general agreement that such a joint meeting would be beneficial. However, it was noted that the next meeting of the ASRG would likely be at the end of the 90-day comment period for the draft Stock Assessment Report (SAR), which is expected to occur in late January 1997. Therefore, it was recognized that any such joint

SRG meeting would likely be held in February 1997. It was also agreed that, given the occurrence of all five of the species listed above in British Columbia, Canadian marine mammalogists familiar with these species should also be invited to the joint meeting of the two SRGs.

Wade summarized the results of the GAMMS workshop. He noted that among other things there was general agreement by GAMMS participants to 1) improve efforts to define stock structure, which would be more robust to assumptions regarding dispersal, 2) discourage the use of correction factors (CF), where CV(CF) were not available, 3) discontinue the previous policy to "age" abundance estimates in the PBR process, and 4) increase the flexibility in assigning recovery factors (FR) to listed stocks. It was also noted that GAMMS workshop participants recommended a subsequent workshop on serious injury be held to improve the consistency among regions as to how information on injuries and serious injuries were included in estimates of annual human-related removals. Further, GAMMS workshop participants recommended that statements regarding the influence of habitat on the population dynamics be included in each status report for strategic stocks.

There was discussion on the issue of stock identification. While the need to manage conservatively was recognized by all members of the group, some continued to be concerned about the implied biological significance of the term "stock" when data to make such an evaluation are inadequate. The ASRG agreed that in its discussions the term "stock" would be used only when it was concluded that data were adequate to define stock boundaries. In other instances the term "management unit" will be used to refer to the portion of a species within a certain geographical area.

After some discussion, it was agreed that the ASRG supported the use of the revised PBR guidelines that resulted from the GAMMS workshop. Further, it was agreed that any specific comments from ASRG members would be sent to Wade within the next two weeks. Jan Straley, who participated in the workshop as an ASRG representative, commented that the experience was

valuable in that it helped her understand how the different SRGs operated. She added that there was a consensus among SRG representatives that NMFS should try to keep the SRGs better informed regarding the status of recommendations from an SRG to NMFS/FWS. Brendan Kelly commented that last year's time line in getting the SARs published likely contributed to this situation. He added that given the advisory nature of the ASRG, he wasn't particularly bothered by uncertainties as to whether a particular ASRG recommendation would be incorporated into the SAR. However, he recommended that in the future, the agencies should try to minimize the number of policy decisions about which the ASRG was asked to comment. There was considerable discussion regarding the recommendation from the GAMMS workshop for the agencies to jointly publish the SAR reports. The ASRG recommended that the agencies jointly publish their SARs. Carol Gorbics noted that the FWS at this point did not intend to revise the SAR for polar bear, sea otter, and walrus and was not willing to commit to the publication time line proposed by NMFS. The ASRG expressed considerable disappointment regarding FWS's reluctance to co-publish the SARs with NMFS. **The following recommendation was agreed: a letter should be sent from the Chair of the ASRG to FWS recommending that the two agencies agree to a specific time line for publishing future SARs. It was also recommended that the SARs be co-published and that the most recent information available be included in the revised SARs.**

During a brief discussion of how the ASRG should function, there was agreement that ASRG members should be informed by the agencies as to the consequences of actions recommended by the ASRG. It was also noted that, as possible, ASRG members should be prepared to review revisions to the SAR. **After some discussion, it was recommended that 1) the agencies prepare a list of available publications that were used in preparation of the SAR six weeks prior to a scheduled meeting of the ASRG, and 2) copies of unpublished material referenced in the SAR would be available at the ASRG meeting.** Regarding the development of an agenda for subsequent meetings, it was agreed that the Chair would circulate a draft agenda prior to the meeting and members would provide comments on the draft agenda prior to the meeting. Finally, there was general agreement that the ASRG should focus on key

issues in the SAR and not minor revisions. DeMaster noted that appendix 1 in the revised (draft) SAR was added to summarize key changes from the previous SAR. There was general agreement that such a summary in the revised SAR was extremely helpful.

Review of FWS Species

Walrus

Dana Seagars reported that there was no new information on subsistence takes, Rmax, or abundance. He further noted that FWS did not anticipate the availability of significant new information in the next two years and that, therefore, the FWS did not intend to revise the stock assessment report for walrus until the end of the mandated 3-year period for non-strategic stocks. Regarding abundance estimates, Seagars commented that field work was scheduled in 1998 to provide a new abundance estimate, which given that the last survey was in 1990, would satisfy the maximum interval recommended at the GAMMS workshop (i.e., eight years). Regarding the estimate of Rmax, Seagars noted that the FWS plans to compile information from their harvest monitoring program on the reproductive status of walrus that were harvested between 1992 and 1996. **After some discussion, the ASRG recommended that the FWS should revise the stock assessment report for walrus, as well as the stock assessment reports for sea otter and polar bear and publish them jointly with the status assessment reports prepared by NMFS. For walrus, the revised SAR should address 1) recently identified problems with the Russian harvest data, 2) the availability of new US harvest data, and 3) problems with the 8% per year figure for Rmax (i.e., the use of the skewed sex ratio to support the 8% value is likely in error).** Further, it was agreed that the Chair would prepare a letter requesting that the FWS agree to the NMFS time line for revising the status reports, and if possible, agree to publishing the status reports in a joint publication with NMFS).

Polar bear

Tom Evans reported that there was no significant new information on subsistence takes, Rmax or abundance; therefore, the FWS did not anticipate revising the existing status report. He

added that it was recognized that the quality of harvest data from Russia was low. He further noted that the FWS and Russian biologists were planning to conduct a joint den survey to monitor the number of polar bear dens over time on Wrangel Island, Herald Island, and the northern coast of the Chukotkan Peninsula. If possible, this information will be used to develop an index to evaluate the population status of the Chukchi/Bering Seas population of polar bear. **After some discussion, the ASRG recommended that the FWS should revise the stock assessment report for polar bears and specifically should include a discussion of problems related to the interpretation of the harvest data from Russia.**

Sea otter

Gorbics presented an extensive summary of available information regarding the stock structure of sea otters in Alaska. She noted that sea otters in Alaska are currently managed as a single stock; however, available information on genetics, population growth, contaminant levels, distribution, distribution of hunting effort, and existing geopolitical boundaries indicated that multiple stocks of sea otters likely exist within Alaska. It was noted that while evidence consistent with a multiple stock structure existed, the evidence needed to draw specific stock boundaries was not. Gorbics suggested that it was likely that the FWS would revise the stock assessment for sea otters next year, following a resolution of where stock boundaries should be established. The ASRG complimented Gorbics on her presentation. It was agreed that the currently available data on stock structure were informative, but recommended that FWS investigate the statistical power of detecting significant differences in genetic diversity and population growth rates among putative stocks of sea otters in Alaska, and as necessary, undertake designed studies to clarify stock structure. For example, additional sampling of tissues to reduce the potential problem of interpreting patterns of genetic diversity, which are based on discontinuous sampling, is necessary. It was further noted that translocations within Alaska and ongoing increases in local populations complicated the issue of stock structure. **After considerable discussion on what constitutes a stock, the ASRG recommended that the information presented was insufficient to justify the establishment of two or more biological stocks (i.e., stocks between which interbreeding was unlikely) in Alaska; but was**

sufficient to support the usage of management units within Alaska. Sue Hills suggested, and there was general agreement, that the issue of stock structure for sea otters in Alaska was fundamentally different from other stocks of marine mammals because there was no compelling reason at this time to manage under the multiple-stock hypothesis (e.g., the population in Alaska is generally increasing and incidental mortalities due to fishery interactions are thought to be relatively rare). **Regarding the issue of revising the stock assessment, the ASRG recommended a revised assessment should be prepared by the FWS, which would include a discussion of harvest data and a reevaluation of Rmax. It was further recommended that, as was the case for the walrus and polar bear, the stock assessments should be published as a joint volume with the NMFS.**

Review of NMFS Species

Western stock of Steller sea lion

There was general agreement regarding the proposed stock structure, Nmin, and RF. A suggestion to incorporate a default CV for the correction factor (CF) used to extrapolate from pup counts to total abundance was rejected. Rather it was argued that given the existing CF was based on pup production data from the 1980s, it was likely conservative. That is, the ASRG concluded that the current fraction of the population composed of pups is less than it was when the data used to derive a CF were collected and, therefore, the CF is negatively biased to some unknown degree. Kate Wynne commented that some of the pooling of fishery mortality done in Table 2 (fishery mortalities) led to inaccurate conclusions. Denby Lloyd and Wynne were asked (and agreed) to work with NMFS in revising the tables summarizing fishery interactions throughout the SAR. Finally, it was noted that while the 1995 subsistence harvest data were not currently available, they might be available within the next month and, if so, should be included in the revised status report.

Eastern stock of Steller sea lion

As with the western stock, it was agreed that the correction factor currently used to

extrapolate counts to an estimate of total abundance was sufficiently conservative that applying a default CV and using this value in the estimation of Nmin was unnecessary in satisfying the intent of Congress in defining Nmin. The ASRG noted that movement of animals between SE Alaska and British Columbia had been reported and that it recommended that this stock be considered a transboundary stock, as referred to by Barlow (1995). Therefore, information from British Columbia on annual removals of Steller sea lions, if available, and abundance should be included in the status report and used to estimate PBR. Beth Mathews and Wynne commented that Steller sea lions have been reported injured following interactions with trolling fisheries (e.g., swallowing of flashers). Wade noted that a general recommendation to include injury and serious injury information in the status reports had been agreed to at the GAMMS workshop. There was general agreement that including this information in the SAR would be useful.

Southeast stock of harbor seal

Monica Reidel (Alaska Native Harbor Seal Commission) was asked to comment on the Commission's recommendation to manage harbor seals in Alaska as a single stock. Reidel noted that it was the Commission's opinion that 1) there was no biological information to support multiple stocks in Alaska, 2) if this stock was classified as strategic, it would likely become classified as depleted under the MMPA, which could result in restrictions on subsistence hunting, 3) a better approach would be to define a single stock in Alaska, but then manage takes by specific regions in Alaska, and 4) the Commission was generally not sufficiently knowledgeable regarding the PBR process and would welcome such information from the agencies. Lowry asked whether the Commission recognized that intense hunting pressure in a local area could lead to local depletion. Reidel responded that subsistence hunters in Prince William Sound generally didn't hunt in the same location, but rather hunted throughout the entire Sound. She further commented that it was well established that fish stocks will recover from depletion due to increases in net production associated with low density. Lowry responded that whether a stock would recover and the rate at which it would recover was typically stock-specific and depended on the life history of the stock in question and the degree to which human-related mortalities are reduced. Lowry asked whether the Commission would be interested in a demonstration on

population modeling at their next meeting. Reidel, while expressing some interest, noted that model results were not considered reliable by the Commission as they did not incorporate traditional knowledge.

Regarding the stock structure of harbor seals in Alaska, it was recommended that the current section on stock identification should be rewritten by NMFS and circulated to Lowry, Kelly, and Mathews for review prior to the SAR being made available to the general public as part of the 90-day comment period. The revised stock section should include 1) a discussion of the results of recent satellite tagging studies in Prince William Sound (e.g., Lewis et al. 1996), 2) a reevaluation of the differences in trends in abundance between the two western most stocks, 3) reference to recent reports prepared by Withrow and Loughlin regarding trends in abundance, 4) inclusion of animals hauled along the Aleutian Island chain with the Gulf of Alaska stock, and 5) a statement that while harbor seals in SE Alaska likely did represent a distinct stock in Alaska, the distinction between harbor seals in the Gulf of Alaska and Bristol Bay was less obvious. Therefore, the level of distinction between the two western stocks should be referred to as putative management units at this time. Kelly commented that harbor seals that were resident near and around Otter Island were being arbitrarily assigned to the Bristol Bay management unit, but did not recommend that these animals be considered a separate management unit at this time.

Regarding the section on estimates of abundance, the ASRG recommended that additional attention be directed at the problem of applying correction factors from one habitat type to count data from a different habitat type (e.g., radio-tag data from rocky substrates applied to count data from glacial haulouts). The problem of applying correction factor data collected later in the year than count data was also identified as a potentially significant problem. Mathews agreed to work with DeMaster and Hill in modifying the text in the section on abundance. There was general agreement that the recent paper by Mathews and Kelly should be referenced in this section.

Wynne commented that fishery reports of unidentified phocids were currently not included in the estimate of total mortality. Given that harbor seals are the only common phocid in this area, she recommended that these animals be included in the mortality estimate for SE Alaska harbor seals. The ASRG concurred with this suggestion, but noted that this approach was not recommended for reports of unidentified otariids or small cetaceans.

Gulf of Alaska stock of harbor seal

It was agreed that the same text developed for SE Alaska harbor seals should be used for this stock (and the Bering Sea stock). A discussion regarding the most appropriate correction factor to apply to the count data concluded with the recommendation that Lowry, Kelly, and Mathews would provide DeMaster with comments and proposed text. Mathews added that in the section on trends a better reference than the Small and DeMaster was needed and agreed to provide DeMaster with a complete reference after the meeting. **Finally, the ASRG recommended that NMFS recalculate the PBR for this stock (based on recommended changes in correction factors to be applied to the count data and the inclusion of the Aleutian animals in with this stock) using an FR of 0.5 and classify this stock accordingly (i.e., strategic or non-strategic depending on the relationship between PBR and annual removals).**

Bering Sea stock of harbor seal

The ASRG agreed that the abundance estimate for this stock should be recalculated, excluding the estimated number of animals associated with the Aleutian Islands.

Northern fur seal

As for Steller sea lions, the ASRG agreed that it was unnecessary to use a default CV of 0.2 for the CF because Nmin, as calculated, was considered conservative, due to: 1) the population is increasing and the pup counts, which form the basis of Nbest, were averaged over the last six years, and 2) while an underestimate of CV(Nbest), the CV associated with the pup count is used as a proxy in the formula to estimate Nmin. DeMaster noted that research was

underway at the National Marine Mammal Laboratory (NMML) to evaluate bias in the currently used CF for converting pup counts to estimates of absolute abundance, as well as to try to develop techniques for estimating the variance associated with the CF. The ASRG strongly encouraged the completion of such research and looked forward to reviewing the findings of such studies. Lloyd raised the issue of whether this stock should be classified as depleted under the MMPA. DeMaster responded that in the 1993 Conservation Plan for the northern fur seal, the estimate of current abundance (982,000) was less than 50% of the best estimate of historic abundance (2.1 million- which has been used as a proxy for carrying capacity for this stock) and, that the currently used definition of depleted was a population level less than 60% of its carrying capacity. Therefore, the stock was reasonably classified as depleted. However, it was noted that the best estimate of abundance for this stock, as of 1996, was 1,019,192 animals or 49% of 2.1 million. Were the CF to increase to 5.48 (22%) during the revaluation process, a strong case could be argued to delist this stock.

Regarding the FR for this stock, Lloyd proposed that it be changed from 0.5 to 0.75, pending the reevaluation of the CF. Lowry noted that the current level of take was less than 10% of the PBR, using an FR of 0.5 and that there was substantial evidence that the carrying capacity for this stock had declined relative to the mid-1950s. Wade commented that one of the purposes of using an FR of 0.5 rather than 1.0 for threatened and depleted stocks was to allow these stocks to recover to optimal levels more quickly. After substantive discussion, Sue Hills proposed, and it was agreed, that until additional information was available, the FR should remain at 0.5, which was the value used in the 1995 status report (e.g., Small and DeMaster). Finally, Wynne noted that Table 5 (Summary of incidental mortality) needed some revision, as it incorrectly implied mortalities were occurring in the Bristol Bay set net fishery. Wynne agreed to work with Scott Hill (NMML; first author of 1996 Status Assessment Report) in revising the table.

Alaska stock of sperm whale

Wade commented that the Pacific SRG would like to revisit the stock structure of North

Pacific sperm whales at the joint Pacific-Alaska SRG meeting in early 1997. There was general support for this recommendation. Further, Lowry proposed, and it was agreed that here, and elsewhere (e.g., beaked whales), where the reported annual level of incidental mortalities due to commercial fisheries was zero, the level of human-caused mortality should be classified as insignificant, including those stocks where PBRs could not be calculated. In addition, Straley reported on several anecdotal accounts of sperm whale - sablefish interactions from the late 1980s. She agreed to try to locate specific references to these reports. Finally, it was noted that Japanese whalers were reported to have taken sperm whales in the western North Pacific, but that depending on the assumed stock structure, these takes may or may not have influenced the dynamics of sperm whales in the waters off Alaska.

Eastern North Pacific stock of gray whale

Lowry noted that under the section on stocks, the population response should be changed from "unknown" to "increasing in the eastern stock and unknown in the western stock." Further, as the population appears to be above 60% of the estimated carrying capacity, the statement in the section on PBRs should be changed from "with unknown population status" to "appears to be above its MNPL." Finally, Straley reported that she had several anecdotal reports regarding gray whale -fishery interactions and would make these reports available to Hill.

Humpback whale

While the ASRG had no recommendations regarding the draft status report, concern was expressed regarding the reliability of the Baker and Herman abundance estimate. **The ASRG strongly recommended that NMFS complete ongoing studies to determine the abundance of humpback whales in the North Pacific as soon as possible, and as needed, initiate additional studies to provide estimates of abundance for the central stock of humpback whales in the North Pacific.** If possible, estimates of the number of animals using specific summering grounds in waters off Alaska should also be made.

Fin whale

Straley commented that the section on population size in the draft status report should be changed to reflect that the 1994 vessel survey did not include all waters off the coast of Alaska, where fin whale sightings have been reported.

Northern right whale

Straley noted that a reference to a recent sighting by D. Salden should be added to the section on population size. She agreed to provide this information to Hill.

Harbor porpoise

DeMaster commented that this was one of the species where NMFS was proposing a major change in stock structure from that reported in Small and DeMaster (1995). That is, while only a single stock of harbor porpoise was used in last year's status report, the draft status report for 1996 included three stocks of harbor porpoise in Alaska. Wade noted that this change was consistent with the existing stock structures applied to populations of harbor porpoise off the west coast of the U.S. and off the northeast coast of the U.S. Further, this was consistent with proposals to manage harbor porpoise in the North Sea and Baltic Sea. Several ASRG members, who supported the proposed change, noted that there were several examples where harbor porpoise had been locally extirpated, and that a conservative approach seemed warranted. Others noted that there were no genetic data, tagging data, or distributional data to support the recognition of separate stocks in Alaska. Further, there were insufficient data to draw boundary lines between putative stocks. **After considerable discussion, it was recommended that: 1) there are insufficient data to evaluate various hypotheses regarding the stock structure of harbor porpoise in Alaska at this time, 2) if sufficient data were available, some type of sub-specific stock structure would be expected, given the wide distribution of harbor porpoise in Alaska, and 3) the ASRG would not disagree with an approach that managed harbor porpoise in Alaska as three separate management units at this time.**

Hills noted that much of the discussion related to stock structure of harbor porpoise in Alaska was analogous to earlier ASRG discussions related to sea otters in Alaska, except for the

following: harbor porpoise in Alaska had never been translocated to other parts of the state, and they have never been determined to have increased in abundance locally. For these reasons, the ASRG expressed some concern that once extirpated, harbor porpoise populations, unlike sea otter populations, might be very difficult to successfully reintroduce or return to a healthy population status.

Finally, Straley commented that she considered the current abundance estimate for SE Alaska to be negatively biased to some unknown degree due to the lack of adequate coverage of the vessel surveys in SE Alaska in certain bays and fjords. DeMaster noted that the NMML was planning on initiating a second three year survey to estimate abundance of harbor porpoise in Alaska. Straley agreed to work with the NMML in modifying the existing survey protocol in SE Alaska. After some additional discussion, it was agreed that the NMML should provide the ASRG with an opportunity to comment on the survey protocol prior to the initiation of the 1997 surveys.

Beaufort Sea stock of beluga whale

There was some discussion as to where the boundary lines for the five stocks of belugas should be drawn in Alaska. Lowry commented that the stock structure of belugas in Alaska was initially based primarily on the distribution of summering animals. Genetics studies to date, supported by the ABWC, ADFG, and NMFS, have supported the existing stock structure. Lowry added that a manuscript detailing the results of the genetic studies was in review and would hopefully be published soon.

Regarding Nmin for the Beaufort Sea stock, it was noted that an estimate of the CV for the CF was not available at this time. After some discussion, the ASRG recommended against using a default value (e.g., 0.2) for the CV because the CF of 2.0 was considered conservative and because the aerial surveys used to estimate abundance did not include the entire range of belugas in this area.

Eastern Chukchi stock of beluga whale

Regarding Nmin for this stock, the ASRG recommended that NMFS undertake an analysis of the existing radio-telemetry data for the purpose of developing a CV for the CF used in estimating abundance. Lacking such an analysis, the ASRG agreed that using the smallest CF associated with the procedure reported by Frost and Lowry was sufficiently conservative and that it was unnecessary to use a default value for the CV.

Norton Sound stock of beluga whale

The ASRG recommended that the variance associated with the line transect estimate should be incorporated in the estimate of Nmin.

Bristol Bay stock of beluga whale

There was some discussion as to how to classify beluga mortalities caught in personal-use nets. That is, should such mortalities be considered a subsistence kill or incidental mortality in a commercial fishery? It was noted that a resolution on this issue was necessary to allow the classification of stranded (dead) beluga whales, where the carcasses showed evidence of entanglement in gill nets. In the past, such whales in Bristol Bay and elsewhere would have been classified as an interaction with a commercial fishery. **The ASRG recommended that NMFS develop guidelines for classifying mortalities associated with personal-use nets and provide recommendations as to how such mortalities would be classified in the PBR-management regime.**

Cook Inlet stock of beluga whale

The ASRG recommended that NMFS should develop a variance estimate for the CF based on available radio-telemetry data and video-imagery. However, it was agreed that pending the estimation of the variance associated with CF, the current estimate of abundance was likely conservative, and, therefore, could be used as an estimate of Nmin. They further noted the following: 1) the best estimate of current abundance is unlikely to be much in excess of 1000 animals, 2) incorporating variance of the CF into the estimate of Nmin can only reduce the

estimate of abundance, 3) the average level of take over the last three years is approximately 40 animals per year or roughly 4% per year, and 4) the reported level of take in 1995 was the largest ever reported (72 animals or approximately 7% of the population) and is clearly not sustainable. **Therefore, the ASRG recommended that NMFS classify this stock as strategic and include in the draft, revised status report estimates for Nmin, FR, and the PBR.**

Killer whale

DeMaster commented that this was another species where a change was being proposed to the stock structure reported in Small and DeMaster (1995). That is, killer whales considered to be part of the southern resident group in British Columbia and Washington would be managed separately from killer whales considered to be part of the northern resident group in British Columbia and Alaska. There was considerable discussion about the most appropriate way to classify the stock structure of this species in the eastern North Pacific, but there was agreement that the terms, "resident" and "transient" may be misleading and that some sort of disclaimer should be added to the stock assessment reports. Wynne also recommended, and it was agreed, that logbook data should be added to tables 15 and 16 for completeness. Given the uncertainty in how to incorporate unpublished data and personal communications and given the relative lack of published data regarding this species, Straley agreed to work with Hill and DeMaster in revising the text for both stocks.

Other stocks

The ASRG had no additional comments on the draft stock assessment reports for any of the stocks not listed above.

Habitat Issues

The ASRG agreed with the recommendations reported in the GAMMS workshop report that the following statements should be included each assessment report for strategic stocks, as

appropriate:

"Possible habitat issues that could adversely affect the status of this stock include, but are not limited to, the following: ..."

or

"No single habitat issue is considered sufficiently averse to pose a threat to this stock at this time."

The only stock-specific issue regarding habitat concerns was raised by Straley, and concerned humpback whales in SE Alaska. Straley noted that humpbacks seem to have established discrete summer feeding groups that were maternally determined. Therefore, certain types of disturbance, such as anthropogenic noise, could disrupt the social structure of this species to some unknown degree. Straley recommended that, as possible, research on the potential impact of noise disturbance and disturbance in general be initiated on humpback whales in Alaska.

Research Issues

DeMaster commented that the handout distributed to the group summarized research recommendations from the last meeting of the ASRG. He added that the ASRG did not have sufficient time last year to discuss all of the species adequately and that the handout should be considered only as a starting point.

Regarding research and management recommendations for species managed by the FWS, the ASRG's recommendations are summarized in Table 1 (high priority recommendations only).

Table 1. Summary of research recommendations for sea otter, walrus, and polar bear.