Minutes: Ninth Meeting of the Alaska Scientific Review Group (15-16 April, 1999)

1.1 Introduction

The ninth meeting of the Alaska Scientific Review Group (AKSRG) was held at the National Marine Mammal Laboratory, Alaska Fisheries Science Center in Seattle, Washington, from 15 - 16 April 1999. The purposes of the meeting included: 1) to solicit and discuss final comments on revised 1999 Stock Assessment Reports for NMFS stocks, 2) to review previous recommendations submitted to NMFS/FWS, 3) to receive a report on harbor seal genetics studies, and 4) to discuss Steller sea lion abundance techniques. Appendix 1 contains the list of AKSRG, NMFS and FWS participants. Appendix 2 presents the agenda, as adopted. Appendix 3 contains a list of the background papers and AKSRG documents that were distributed prior to, and during the meeting. The meeting was chaired by Lloyd Lowry. Beginning with this meeting, outgoing liaison Scott Hill was replaced by Richard Ferrero who also served as rapporteur. Appendix 4 presents a letter of thanks to Scott Hill for his excellent service to the AKSRG.

1.2 Review and Approval of Agenda

The agenda was adopted as shown in Appendix 2.

1.3 Approve Minutes from November 1998 AKSRG Meeting

The draft minutes from the eighth meeting of the AKSRG were approved with no additions or changes.

1.4 Other Business

Lowry was re-elected chair for the AKSRG (Note that the AKSRG had already elected him chair for 1999 at the previous meeting in November 1998). The members approved the replacement of Scott Hill by Richard Ferrero as NMFS liaison to the AKSRG and requested the chair to insert a letter of thanks to Scott in the minutes.

2. Discussion of Items from the Joint SRG Meeting.

A joint meeting of the Atlantic, Pacific and Alaska Scientific Review Groups was held at the National Oceanic and Atmospheric Administration, Western Regional Center Auditorium in Seattle, Washington, from 13 - 14 April 1999. The complete minutes of the joint meeting will be made available separately as a NOAA Technical Memorandum. Doug DeMaster provided an overview of the joint meeting, identifying its main objectives, key discussions and agreed upon recommendations.

The AKSRG did not engage in substantive discussion of most recommendations, but commented in some detail on the issue of what values are appropriate for recovery factors for

ESA listed species. In particular, the joint meeting discussion of whether to standardize recovery factors or leave them more flexible was of concern to AKSRG members. Brendan Kelly noted that rigid recovery factor application could result in over-protection and undue harm to constituencies; John Gauvin likewise emphasized the need for ongoing constituent involvement. Overall, the AKSRG advocated maintenance of flexibility, for example, as it exercised in the past with the western stock of Steller sea lion, but acknowledged that the analysis and package of recovery factor options presented by Barb Taylor and her co-authors was well done and worth further development. Milo Adkison and Jan Straley volunteered to represent the AKSRG on a working group tasked with formulating future recovery factor proposals. Doug DeMaster advised the group that even in the face of a standardized approach to setting recovery factors, if the AKSRG proposed a different one based on the best available information, the NMFS Alaska Region/Center would be likely to forward that recommendation to the NMFS Office of Protected Resources.

3. Status of the Cook Inlet Beluga Situation

Doug DeMaster provided an update of recent events regarding the Cook Inlet beluga whale situation. In early March, both a status review workshop and a beluga whale science workshop were held in Anchorage. Among the topics discussed were abundance, stock structure and changes in distribution over time. The Cook Inlet beluga population trend is downward, at a rate of 15%/year. DeMaster noted that between 1994 and 1998 the population declined from approximately 650 to 350 animals. Meanwhile, the mean subsistence take over the past 5 years averaged 20% of the population estimate. NMFS has attempted to develop management to address the decline and harvest level via multiple avenues, including co-management, a legislative fix that would allow NMFS to limit harvest in Cook Inlet to what was agreed upon through co-management, and consideration of listing under ESA or MMPA.

DeMaster stated that the co-management efforts with Cook Inlet Marine Mammal Commission (CIMMC) were ongoing, but that final decisions on an interim agreement to limit harvest had yet to be made. As previously recommended by the AKSRG, marking, tagging and reporting regulations were also being developed and likely to be in place by May 1999. If an interim agreement on harvest limitation is not reached, it is likely that NMFS will move toward an ESA listing for the stock. Note that the interim agreements discussed thus far all contain provisions to prohibit commercial sale.

DeMaster further noted that belugas will be addressed at this year's IWC meetings, with the U.S. anticipating a strong resolution against the U.S. in the absence of some sort of enforceable strike limit. Finally, DeMaster added that in no case is an emergency ESA listing by NMFS likely because it would contribute little to the government's ability to restrict harvests to levels considered sustainable.

Lloyd Lowry followed DeMaster's presentation with two observations. First, the spotlight is now being shown on the Cook Inlet beluga issue and it can't be ignored any longer.

Second, with marking and reporting regulations in place, the hunters and the extent of their harvesting could finally be identified.

Turning to more scientific issues, Lowry posed two questions: 1) what should the limit on subsistence takes be, recognizing that the Draft SAR has a PBR of 2.7, and 2) are there major data gaps in research and monitoring that the AKSRG should comment on? He also noted that the struck/lost relationship is uncertain and that a "non-zero" PBR, even of 3, could translate to many more whales actually wounded or killed. Brendan Kelly and Charlie Johnson then spoke to a PBR of zero, suggesting that it could communicate strong concern on the part of the AKSRG. Carl Hild noted that a PBR of zero could impact fisheries in lower Cook Inlet, although later it was pointed out that a zero or a 3 whale PBR would both be exceeded with just one observed take after extrapolation to the fleet. It was noted that exceeding the PBR would not invoke immediate fishery closures, but would necessitate the formation of a take reduction team/plan.

Kate Wynne suggested that perhaps the focus should be on the recovery factor, recommending a change down from the current 0.5, which in turn would precipitate a lower PBR. Lowry suggested that a lower recovery factor could be considered and the AKSRG could write a letter to NMFS suggesting a moratorium on harvest. The group proceeded to run the Cook Inlet beluga case through Barb Taylor's risk assessment checklist, and the result confirmed that this is indeed a high risk population.

Further discussion of a letter as the primary AKSRG response at this time led to identification of its key elements. Those included: 1) a statement indicating that biological data needed to estimate key life history parameters such as reproductive rates are unavailable, 2) a recommendation for a moratorium until such data are available; and 3) a request to NMFS to collect age and reproductive data to support estimation of the life history parameters. A qualifying statement with regard to support for a moratorium under item 2 was discussed at length and will be included in the draft letter.

4. Final SRG Comments on Draft 1999 SARs

The AKSRG members were asked to forward any editorial corrections on the Draft 1999 SARs to Richard Ferrero for collation and incorporation into the final version. Such minor changes would be treated as information received during the Public Review and Comment period. Milo Adkison asked for clarification of how mortalities were attributed to particular stocks. For example, he pointed to page 139 of the Draft 1999 SAR, asking why the humpback takes had been assigned to the central stock rather than the western stock, or to both. The group agreed that assignment of humpback mortalities in the Kodiak area was difficult since it is an area where all three stocks mix. This problem also exists for other species in other areas where stock boundaries overlap or transition. It was agreed that the ground rules should be case specific. For instance, in comparison to the humpback case, mortalities of killer whales that would not be ascribed to a specific stock have been attributed to all stocks, resulting in double counting of some observed mortalities.

5. Fish and Wildlife Service Activities

Rosa Meehan provided an update of U.S. Fish and Wildlife Service activities associated with walrus, sea otter and polar bear.

5.1 Walrus Census Plans

Fish and Wildlife Service activities associated with walrus focus on harvest monitoring, determination of Rmax, and estimation of total population size. A workshop being planned to review options for walrus survey methods, including a re-focus on the spring period, was described. The potential for consideration of coincident ice seal surveys was identified. Kelly cautioned that while synergy between walrus and ice seal surveys should be considered an item for discussion, it did not necessarily represent a recommendation, pending careful review of trade-offs to both species survey efforts. Other members of the AKSRG noted that the spring survey area would be vast and potentially cost prohibitive. Meehan responded by saying that she envisioned the workshop would address these and other concerns and provide a fair assessment of the best survey method.

Lowry asked the AKSRG members if they wanted to provide a statement relative to the workshop idea, to which the group agreed to note that 1) it was a good idea, and 2) that it should recognize and take advantage of other walrus survey work already done.

Kelly added that the AKSRG should strongly urge FWS to continue counts at the four major walrus haulouts consistently (i.e., every site, every year) to maintain its value as a long term index. The AKSRG members agreed, suggesting that it be stated as a recommendation.

The walrus SAR was updated last year, with a new update planned for three years hence, or sooner if new information becomes available.

5.2 Status of Sea Otter SARs

Meehan summarized FWS efforts on sea otter surveys and new work addressing stock structure. Group discussion focused on whether changing the stock structure was expected to fix the potential for harvest to cause localized depletion. For instance, Lowry asked what the benefit of a three stock split was from a management perspective, if any, or if it reflected a biological issue. Meehan indicated that there was no management benefit *per se*, furthermore, it may be appropriate to use the information to encourage local tribal entities to orient towards smaller area quotas. The AKSRG concluded that it would be useful to endorse continued efforts to gather more genetics information, but absent a problem to correct, it would be better to wait until the stock structure picture is clearer before making any more definitive statement.

A briefing statement on the polar bear bilateral agreement was distributed. Johnson

indicated that there were no particular problem issues regarding polar bear that needed to be discussed with the AKSRG at this time.

6. Status of Recommendations to NMFS and FWS

The status of five recommendations made by the AKSRG in November 1998 (Minutes of the Eighth AKSRG Meeting, page 19) were discussed, with responses provided by NMFS Alaska Region and Center staff.

6.1. "Reconsider the Pribilof Island Steller sea lion harvest data dispute, and inform the AKSRG on how the issue was reconciled with ADF&G and what are future plans."

Brian Fadely indicated that the issue was not yet resolved. Harvest monitoring was not currently taking place because the end of the contract had been reached. He stressed that the program had not been suspended because of data quality concerns. The original funding for harvest monitoring ran from 1993 to 1998, with a deadline of September 1999 to complete the work. No request for 1999 and beyond had been made during that period by NMFS, and subsequently, the proposal submitted to F/PR for 1999/2000 ranked low and was not funded. A proposal for its inclusion in the 2001 initiative is moving forward.

6.2. "Recommend that the method for calculating western Steller sea lion population in the SAR be the sum of counts of adults, juveniles, and pups counted at all sites, and that this estimate not be reduced or corrected for Nmin. This makes the estimate consistent with the method used for the eastern stock."

The Steller sea lion item was deferred until Friday since a report on the issue was slated for full discussion.

6.3. "Prior to issuing new regulations or permits for incidental harassment authorization for ringed seals due to seismic activities in the Arctic, NMFS should complete the workshop report on the authorization process for incidental harassments, and provide it to the AKSRG. NMFS should also ensure that ringed seal monitoring programs actually document animals taken."

John Bengtson summarized his draft report on incidental harassment authorization. He indicated that the on site monitoring, as currently carried out, is ineffective. Operator reporting of takes was considered problematic since observation of takes is not logistically feasible. A better approach to this concern would be to consider a group of scientific studies for determining what kind of effects can be expected from specific activities in specific areas. Four such studies are outlined on page 5 of the Draft Workshop Report.

Kelly asked why then did NMFS still consider operator reporting to be an acceptable form of take monitoring; he strongly suggested that the AKSRG should take a firmer stand and try to have an impact on next year's monitoring design. The AKSRG members agreed that they

should become more actively involved in researching the permit authorization process. Lowry noted that the context for AKSRG concern would center on whether the monitoring program will be able to provide the number of kills for subsequent input to the PBR process. Three actions were discussed: 1) request NMFS to provide a report to the SRG on the review process for harassment monitoring programs and authorization periods, and to suggest a way for the AKSRG to directly participate in the process; 2) recommend that the AKSRG see last year's monitoring plan, the next one, and all future ones, and make recommendations to NMFS on improvement; and 3) request copies of all existing annual reports on ice seal harassment prior to the AKSRG taking up the issue again, noting that industry receives their authorizations between 1 September and 1 January, annually. Bengtson indicated that he, with help from AK Region and F/PR staff could assemble these materials and provide the reports. Furthermore, Kelly and Straley volunteered to form a sub-group for developing an AKSRG strategy for the issue.

6.4 "NMFS should draft a subsistence harvest monitoring plan for all species taken to be reviewed by the AKSRG at the autumn 1999 meeting."

Fadely indicated that the Alaska Region agreed that this was a good idea. This spring, the Region will begin discussions to develop a programmatic framework with inclusion of Alaska Fisheries Science Center input this summer and input from appropriate Alaska Native Organizations by fall or winter. Thus, though a complete plan will not likely be available for the autumn SRG meeting, a presentation can be made of progress to date. The Region is currently working to have funding appropriated in anticipation of such a plan in the current 2001 funding initiative process.

Kelly suggested that an effort be made to maintain harvest monitoring in areas of greatest concern (i.e., where the harvest is very close to the PBR) as an interim measure. After some discussion, the AKSRG members agreed to recommend that NMFS secure funding to continue monitoring of subsistence harvests in areas where the take is close to the PBR as in the case of harbor seals. Lowry suggested that a review of the harvest monitoring plan be slated for the next AKSRG meeting.

6.5 "NMFS should observe Cook Inlet set and drift gillnet fisheries in 1999/2000. NMFS should seek additional internal funds, or request funds from affected fisheries to increase observer coverage."

Fadely responded that NMFS rewrote and issued a Request for Proposals to solicit bids for a program to observe Cook Inlet salmon set and drift gillnet fisheries during 1999 and 2000. Bids received by the March 25 closing date will be reviewed by a Source Evaluation Board by April 9th. Final awarding of the contract is projected to be by mid-late June, with observer training commencing immediately after award. This anticipated schedule may result in no coverage of the beginning period of these fisheries, but will still cover the peak fishing periods. Additional funds for FY99 were unavailable. Fadely noted that the AKR was working on acquiring supplemental funding for FY00 to increase observer coverage in 2000.

Wynne suggested that the AKSRG recommend re-establishment of observer coverage in the first month of the fishing season to cover the existing hole in coverage. Further, a comparison of where the fisheries occur and where beluga whales are found would be useful. Denby Lloyd and Wynne volunteered to work with Dave Rugh on this item.

7. Report on Harbor Seal Genetics Studies

Barb Taylor presented a report on Alaska harbor seal genetic studies currently in progress at NMFS SWFSC . Results of ongoing investigations on stock structure suggest greater separation than previously thought which, in turn, may precipitate important considerations for management. Members of the research team at SWFSC, Greg O'Corry Crowe, Robin Westlake and Karen Fear, participated by conference call. The majority of the Atlantic and Pacific SRG team members also attended the presentation.

Taylor provided an overview of genetic techniques used to estimate dispersal as background for the discussion of current results to follow. Two difficulties associated with genetics-based stock studies on harbor seals were highlighted: 1) the large population size, and 2) the continuous nature of their geographical distribution. She noted that highly significant differences between stocks in Alaska have been found, but the question of whether the boundaries chosen were correct remains uncertain. A series of simulations were developed to examine boundary choice impacts, wherein a continuously distributed sample of known composition was divided, and the subunits tested for discreetness. The results indicated that if the distribution is divided up coarsely, many significant results are obtained, but that they did not necessarily reflect "correctness" in determining boundaries. With respect to the harbor seal case in Alaska, highly significant stock differences found there (where boundaries were pre-selected along broad latitudinal or longitudinal divisions) may thus represent a statistical artifact, not biologically significant stock boundaries.

The most recent studies included both mitochondrial and nuclear DNA markers on an expanded sample of harbor seals. Rather than testing the significance of pre-determined group discreetness using conventional techniques, a stock boundary algorithm based on likelihood (developed by Karen Fear, Ph.D. candidate at UCSD) was used. The preliminary statistical results suggested identification of 16 separate stocks in Alaska, including 3 particularly strong separations in the Kodiak Archipelago alone. Even using conventional analytical approaches for comparison, very strong evidence exists for further sub-divisions than are currently recognized in the Gulf of Alaska. Future steps include ranking differences between proposed putative stocks, adding additional information on abundance, trends and human interactions in those areas, then identifying the boundaries that appear to be robust.

8. Report on Steller Sea Lion Population Estimation

Anne York (NMML) presented a summary of Steller sea lion population estimation techniques and addressed the AKSRG concerns reflected in recommendation 6.2. Ken Pitcher

described the census techniques at the field level and provided recommendations for modifications which may help detect more subtle changes in population size. Tom Loughlin and Ken Pitcher also reviewed the NMFS and ADF&G Steller sea lion projects planned for 1999.

8.1 York's Presentation

Two basic methods of estimating Steller sea lion population size from available counts were noted: 1) life table only; and 2) life table combined with observed counts of adults and juveniles. The former is based on the product of pups counted and a correction factor (which reflects the ratio of non-pups to pups, assuming pup counts are available each year). The latter is based on the product of non-pups and a correction factor. Both approaches assume survival and fecundity estimates based on the age-structure of animals sampled in the 1970s and a stable age distribution; neither provides estimates of standard error. Comparisons of correction factors derived by various authors using the life table method were noted to be relatively consistent, ranging from 4.5 to 5.1. Correction factors for the combined method from Loughlin 1992 (1.711) were, however, considerably different from that of Trites and Larkin 1996 (3.43) Anne explained that the difference was probably due to the former's inclusion of pups not yet born and pup mortalities on the rookery.

In the 1998 SAR, the eastern stock of Steller sea lions was estimated as the sum of adults, juveniles and pups counted at all sites, and not corrected for the probability of hauling. Conversely, the western stock estimate was based on the second approach outlined above, specifically that of Loughlin et al. 1992. That is, non-pup counts on rookeries were multiplied by 1.711 to which pup counts were added to estimate total population.

Regarding the population estimates for the western stock of Steller sea lion in the revised draft SAR, the AKSRG agreed that Nbest (and Nmin) should be estimated as the sum of pups and non-pups at all sites surveyed. Further, the numbers in the draft SAR on page 40, Table 3 should be replaced with those in Sease and Loughlin (1999), i.e., 29,658 non-pups plus 9,373 pups, for an Nbest estimate of 39,031.

8.2 Pitcher's Presentation

Pitcher indicated that the Steller sea lion decline was severe enough in the 1970s and early 1980s that even crude indices of trend were sufficient to detect the downward trajectory, but given the comparatively smaller contemporary changes, better census and analytical methods will be required. Two approaches, 1) counting non-pups and 2) counting pups were discussed.

With regard to non-pup counts, the work by Withrow on Ugamak Island set the stage for standardization of the survey period in mid-June. However, since then, a longitudinal trend in pupping has been noted, with later pupping peaks, for instance, in Southeast compared to the Aleutian Islands. The counts made by ADF&G in Southeast (e.g., at Forrester Island) appear to be after the peak period of non-pup attendance, while the NMFS counts further west tend to

occur as attendance is still building. Neither survey appears to take advantage of the plateau between build up and break up. Tide was also suggested to be a factor in some areas such as Prince William Sound and Southeast Alaska, while time of day may be a factor at all locations.

Pitcher also commented that pup counts that were done by driving non-pups off the beach tend to be very disruptive. Therefore, alternatives such as medium format photography may warrant consideration. Where aerial and drive counts have been done simultaneously, they are consistent, at least until pup densities are high. Under such circumstances, the drive count accuracy decreases with increasing pup production.

In conclusion, Pitcher suggested: 1) more attention should be paid to the temporal window of the survey; 2) pup counts via drive and aerial methods should be compared; and 3) more work on effects of environmental covariables on survey counts was needed.

9. SRG Recommendations

1. Because Cook Inlet belugas are a "high risk" stock, a recovery factor of 0.1 should be used to calculate their potential biological removal in the 1999 Stock Assessment Reports.

2. If the Category II fishery observer program in Cook Inlet is not operational when the fishing season starts, NMFS should, at a minimum, collect data on the distribution of commercial fishing effort and the distribution of beluga whales during the period before observers are in place.

3. NMFS should make all efforts to continue monitoring of Alaska Native subsistence harvests for all stocks and regions where the recent subsistence take has been close to the potential biological removal. In particular, the AKSRG thinks that it is important to continue, or resume as soon as possible, monitoring of Steller sea lion and harbor seal harvests in the Gulf of Alaska and Bering Sea.

4. For the western stock of Steller sea lions, NMFS should calculate the minimum population estimate from the 1998 counts of pups and non-pups given in NOAA Technical Memorandum NMFS-AFSC-100.

5. The AKSRG asks that NMFS prepare a report describing the process that it uses for reviewing and approving incidental harassment authorizations (e.g., for ringed seals and oil industry activities in the Beaufort Sea). The AKSRG would like to review that report at its next meeting in the fall of 1999.

10. Next AKSRG Meeting

The next meeting of the AKSRG will be held in Anchorage, sometime in November, with

the exact date to be determined after potential scheduling conflicts are resolved. The specific location will also be determined later.

10.1 SARs to be Reviewed/Revised

At the November 1999 AKSRG meeting, the gray whale, harbor porpoise, Dall's porpoise and Pacific white-sided dolphin SARs will be revised. The Cook Inlet beluga whale information will also be updated to include results from the 1999 survey/tagging season. Previous plans had called for minke whale and ice seal SARs to be revised in 1999, but those will be deferred to a future time.

10.3 Other Topics

Three additional topics may be discussed at the November 1999 AKSRG meeting: 1) walrus research; 2) NMFS subsistence monitoring strategy; and 3) ringed seal incidental harassment. Regarding the latter, the intention is for the AKSRG to provide input on the proposed Incidental Harassment Authorization study plan prior to its approval for the following year.

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

AKSRG
L. Lowry (Chair)
M. Adkison
J. Gauvin
C. Johnson
C. Hild
B. Kelly
M. Kookesh
D. Lloyd
B. Mathews
C. Matkin
J. Straley
K. Wynne

NMFS
D. DeMaster
B. Fadely
R. Ferrero
T. Loughlin
S. Moore
J. Sease
B. Taylor
A. York

FWS
R. Meehan

Appendix 2. Agenda for the ninth meeting of the Alaska Scientific Review Group 15-16 April 1999.

Alaska Scientific Review Group Meeting 15 - 16 April, 1999
Alaska Fisheries Science Center, National Marine Mammal Laboratory, Room 2039
7600 Sand Point Way, NE, Building 4, Seattle, WA

Purpose:

1. Final comments on revised 1999 Stock Assessment Reports for NMFS stocks
2. Review previous recommendations submitted to NMFS/FWS
3. Report on Alaska harbor seal genetics studies
4. Discussion of Steller sea lion abundance estimation techniques

Materials needed:

1. Public review drafts of 1999 NMFS Stock Assessment Reports
2. Background documents supplied by NMML

15 April -Thursday

8:30 Introductory business
1. Introductions
2. Review and approve agenda
3. Draft minutes from November 1998 AKSRG meeting
4. Other business (e.g., travel vouchers)

9:00 Discussion of items from joint SRG meeting

10:00 Status of Cook Inlet beluga situation

11:00 Fish and Wildlife Service activities
1. Walrus census plans
2. Status of sea otter SARs
3. Future schedule for SAR revisions

12:15 Break for lunch

1:30 Final SRG comments on draft 1999 SARs

2:30 Review status of previous recommendations to NMFS and FWS

3:30 Report on harbor seal genetics studies

5:00 Adjourn

16 April - Friday

8:30 Report on Steller sea lion population estimation

10:30 SRG recommendations

11:00 Next AKSRG meeting
1. Time and place
2. SARs to be reviewed/revised
3. Other topics

12:00 Adjourn

Appendix 3. Background papers and AKSRG documents distributed prior to, and during the meeting.

Bengtson, J. 1999. Incidental harassment authorization: on-ice seismic activities. Draft Workshop Report. 20-21 May 1998. 37p.

Chivers, S. 1999. Biological indices for monitoring population status of walrus evaluated with an individual-based model. NMFS, SWFSC, P.O. Box 271, La Jolla, CA 92038-0271. 9p.

Gilbert, J.R. 1999. Review of previous Pacific walrus surveys to develop improved survey designs. Department of Wildlife Ecology, University of Maine, Orono, ME 04473. 10p.

Hill, P.S. and D. DeMaster. 1999. Draft Alaska marine mammal stock assessments 1999. NMML, AFSC. 7600 Sand Point Way, N.E., Seattle, WA 98115. 162p.

O'Corry-Crowe. 1998. Analysis of genetic and behavioural differences among harbour seal populations in Alaska using microsatellite DNA variation. NMFS, SWFSC, P.O. Box 271, La Jolla, CA 92038-0271. 11p

Sease, J., J.M. Strick, R.M. Merrick, and J.P. Lewis. 1999. Aerial and land-based surveys of Steller sea lions (Eumatopias jubatus) in Alaska, June and July 1996. NOAA Tech. Memo. NMFS-AFSC-99. 43p.

Sease, J. and T.R. Loughlin. 1999. Aerial and land-based surveys of Steller sea lions (Eumatopias jubatus) in Alaska, June and July 1997 and 1998. NOAA Tech. Memo. NMFS-AFSC-100. 61p.

Udevitz, M. 1999. Modeling variability in replicated surveys at aggregation sites. USGS, Alaska Biological Science Center, 1011 E. Tudor Road, Anchorage, AK 99503. 12p.

U.S. Department of Commerce. 1998. Marine mammal protection act and endangered species act implementation program 1997. AFSC Processed Report 98-10. 7600 Sand Point Way, N.E., Bldg. 4, Seattle WA 98115. 246p.

Appendix 4. Letter of thanks to Scott Hill for his service to the AKSRG.

ALASKA REGIONAL SCIENTIFIC REVIEW GROUP

Address correspondence to: Lloyd Lowry, Department of Fish and Game,
1300 College Road, Fairbanks, AK 99701

June 23, 1999

Penny Dalton
Assistant Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway, 13th Floor
Silver Spring, MD 20910

Dear Ms. Dalton:

During the past three years, LCDR Philip S. Hill, an officer in the NOAA Corps, has provided staff assistance to the Alaska Regional Scientific Review Group (SRG). During that time LCDR Hill has provided invaluable assistance to the SRG as we have worked with the National Marine Fisheries Service (NMFS) to implement requirements of Section 117 of the Marine Mammal Protection Act (MMPA).

As a member of the staff at the NMFS National Marine Mammal Laboratory, LCDR Hill acted as the principal liaison between NMFS and the SRG. One of his more important tasks was to draft Stock Assessment Reports (SARs), and to prepare final SARs that incorporated comments and concerns of the SRG. This required him to become intimately familiar with both published and unpublished results from scientific studies, and to evaluate those results and incorporate them into the SARs. He also provided this information to the SRG and assisted us in our review of the draft SARs. Because he had such a complete understanding of the material, the SRG learned to rely on him to direct us to subjects and issues that required our attention. Another major duty was to organize SRG meetings. This required drafting agendas, distributing background materials, organizing logistics, and recording meeting minutes.

During his tour of duty with NMFS, LCDR Hill served as much more than just support staff for the SRG. He displayed a very strong concern that Section 117 of the MMPA should be implemented properly, and that it should provide an effective method for dealing with marine mammal-fisheries issues. A good example of that has to do with the issue of sperm whales depredating fish caught on longlines. Initial indications that such events were occurring were little more than rumors. On his own initiative LCDR Hill developed a study to document and quantify sperm whale-fishery

interactions that was implemented through the NMFS observer program. He then analyzed results from the study and presented them to the SRG. Because of his efforts we obtained a much better perspective on the actual nature of this problem.

In all the things he did for the Alaska SRG LCDR Hill was very efficient and accurate. That, and his friendly and professional demeanor, did much to enhance the efforts of the SRG. It was a pleasure working with him.

Sincerely,

Lloyd F. Lowry
Chairman

cc: Alaska SRG members
Hilda Diaz-Soltero, F/PR
RADM Evelyn Fields, NC
Steve Pennoyer, F/AKR
Jim Balsiger, F/AKC
Rod McInnis, F/SWR
Doug DeMaster, F/AKC4
Scott Hill, F/AKC4