Minutes of the Twenty-second Meeting of the Alaska Scientific Review Group

10 - 11 February 2009, Seattle, WA

This report summarizes the 22nd meeting of the Alaska Scientific Review Group (SRG). This document is intended to summarize the main points of the discussion and does not attempt to repeat everything that was said during the meeting. The final agenda is included as Appendix 1 and the list of SRG members and observers present is provided in Appendix 3. Appendix 2 contains a list of SRG recommendations to NMFS.

1) Adoption of agenda

The agenda was reviewed and, after some discussion, adopted. Dee Allen added a brief presentation of several SARs overview slides prior to the review of individual SARs.

2) Adoption of minutes from January 2008 meeting

The Alaska SRG adopted the draft minutes from the January 2008 SRG meeting as submitted and final.

3) Membership

Individual introductions were made to the group, including SRG members and observers. An extended introduction of George Noongwook was made, as this was his first attendance at an Alaska SRG meeting since being appointed a member. Jan Straley expressed her intention to step down from the Alaska SRG. After some persuasion by SRG members, Straley agreed to delay her final decision; Straley indicated she may consider serving one more year, although she emphasized that her decision is rather firm. John Gauvin revisited his consideration to step off the Alaska SRG once he or the Alaska SRG finds a comparable replacement for him; the SRG agreed to search for a candidate with a similar background.

4) Administration, travel, membership

Allen addressed the issue of travel reimbursement for SRG members, and encouraged members to turn in papers as soon as possible for reimbursement. Allen also confirmed that there were no issues with travel paperwork from last year remaining.

5) Consideration of new Alaska SRG Chair

Beth Mathews opened the floor for nominations for a new Alaska SRG Chair. Lowry expressed his opinion that Mathews has done a fantastic job as Chair, and other SRG members concurred. The SRG encouraged Mathews to consider remaining Chair. Mathews indicated her willingness to continue to serve as Chair for one more year, but expressed her interest in stepping down next year. The SRG will consider a new Chair at the 2010 meeting.

6) Summary of letters sent by the Alaska SRG in 2008

Mathews summarized the letters drafted by the SRG and responses to letters sent in 2008 from the SRG to NMFS. The following three letters were identified:

1) Citing unpublished data in the SARs (draft) – Lance Barrrett-Lennard drafted a letter from the SRG recommending that NMFS not cite unpublished data in the SARs. If unpublished data are cited, those data should be trackable. This letter was drafted and sent to other SRGs. Both the Atlantic and Pacific SRGs responded and concurred with the Alaska SRGs letter. Mathews possesses the current draft of this letter and intends to send the letter to NMFS.
2) Use of genetics in SARs – The SRG responded to two letters that were written which stated that genetics should NOT be used in making stock assessment determinations. The SRG drafted a letter in response to these letters and sent this letter to NMFS and the ANHSC. The SRG received two letters from NMFS in response: 1) Jim Balsinger responded that NMFS agrees with the use of genetics in stock assessment, and provided harbor seal co-management committee updates, 2) Jim Lecky responded that the co-management process is an important stage in the harbor seal stock assessment process. Harbor seal stock assessment issues should be resolved during FY2009.
3) Alaska SRG response to 2008 SRG Joint Meeting – The SRG still intends to draft a letter regarding the Alaska SRG's concerns in response to the 2008 Joint Meeting. Mathews will take the lead on drafting this letter.

7) Summary of SRG recommendations to NMFS from 2008 meeting

Mathews systematically read through the SRG's list of recommendations to NMFS from the 2008 SRG meeting summarized on pages 24-25 of the meeting minutes. The SRG was pleased to note that a "Habitat Concerns" section was added to the stocks scheduled for review as per the SRG's recommendation. The SRG agreed to capture the 2008 recommendations and wrap those up before making new recommendations for 2009.

8) Update on narwhal sightings in Alaska waters & possible SAR implications

Robert Suydam reported on narwhal sightings in Alaska waters. Historically, there have been occasional reports of narwhal carcasses in Alaska. Ljungblad reported on 3-5 sightings of narwhal in the Bering Sea from 1985 and prior. In 1989, there was one narwhal sighting off Barrow; a narwhal tusk was found in 2001 south of Pt. Lay. In November 2008, a male narwhal was seen off Chukotka, with a total of 8-9 sightings since 2001. Most of these sightings were males, and some observations were narwhal with beluga. There appears to be an increase in the occurrence of narwhal in Alaska waters, perhaps as a result of narwhal coming from Canada or Russia. Suydam and Craig George suspect that diminishing sea ice is probably contributing to the increased number of sightings of narwhal off Alaska. Craig George will send a summary list of narwhal sightings to the SRG with permission to distribute the list widely. Suydam and George have also noted an increase in sea otter, fur seal, fin whale, and humpback sightings off the North Slope as well.

Lloyd Lowry reported that narwhals have historically been seen in Alaska waters during the month of May. It very well may be that narwhal overwinter in the Bering Sea; sightings will not occur if nobody is out there surveying. Lowry indicated that it wouldn't be surprising if narwhal were out there. In the 1950's, there was a summary paper of 3-4 sightings. Lowry concurred with Suydam's conclusion that there does seem to be a change in the occurrence of narwhal in Alaska waters. Suydam further supported this conclusion by the fact that many aerial surveys

have been conducted over the North Bering, Chukchi, and Beaufort seas over the past 20 years, indicating that there has been some effort; however, the narwhal sightings tend to be more recent.

Angliss mentioned that BP has an interest in narwhal distribution based on their concern for disturbing narwhal. Angliss also indicated that NMFS has no problem with drafting a stock assessment report for narwhal based on limited information, as has been done with beaked whale species. Tom Eagle questioned which stock the narwhal would be fit into if a SAR was created. Eagle also indicated that Alaska could have a "skeleton" SAR with very limited information, much like several of the Hawaii stocks used to be.

Lowry inquired about the vocalizations of narwhal – are they vocal enough to detect on hydrophones? Bob Gisiner responded affirmatively; narwhal are very vocal. Suydam mentioned the existence of approximately 120 acoustic recording instruments deployed in the Chukchi Sea; these instruments collect so much data that people probably have not looked in the data for narwhal detections. Suydam suggested processing the acoustic data using an algorithm to attempt to tease out narwhal acoustic signals, although the data processors are currently overwhelmed. Lowry recommended highlighting the narwhal issue as something for the SRG to consider, and suggested that acoustic data may be the best approach for acquiring more information on the presence of narwhal in Alaska waters.

9) New and reestablished fisheries and the role of the SRG

John Gauvin inquired about a 2008 SRG recommendation to NMFS to be proactive about highlighting new or reestablished fisheries that move into new areas, especially in the higher latitudes where loss of sea ice is occurring. The SRG indicated that they would like to be advised of these fisheries as they are being considered. Gauvin was not present at the 2008 SRG meeting, and he requested more information regarding the discussions that prompted this recommendation. Straley responded that there have been two humpback whales entangled in a reestablished state fishery in recent years. If the SRG was made aware of new or reestablished fisheries that are coming down the line, they could advise NMFS and the state of Alaska on the presence of marine mammals in planned fishing areas.

Gauvin added that fisheries are moving further and further north and inquired about the process for increasing the fishing area as well as how this information gets transferred from the state to NMFS. Lowry clarified the two issues of concern: 1) new fisheries opening, and 2) redistribution of fishing effort of existing fisheries into new areas. Gauvin stated that these data are available and inquired about the amount of information the SRG would like to receive on new and redistributed fishing areas. Lowry indicated that the SRG is interested in information on new fishing areas, and added that if Gauvin is tracking this information over time, it is good to know that these data are available if needed. Barrett-Lennard inquired whether there are any areas where fishing cannot occur. Gauvin responded affirmatively; there is a research plan with the North Pacific Research Council that has determined that if the bottom trawl fisheries continue to expand north, areas may need to be closed to fishery extension. Straley added that marine mammal species are also moving into areas where state fisheries occur; there had been no prior overlap because marine mammals did occur in these areas previously (e.g., sablefish longline fishery and sperm whales in the inside waters off southeast Alaska). Mathews

recommended Gauvin consider suggesting the fishing industry consult with the SRG for guidance on changes to fishing areas in the northeast area of the Bering Sea; if the SRG had the opportunity to get in on the ground phase in the development of these new fishing areas and have a say in observer placement on vessels in new areas, it may be beneficial.

10) Update on National Marine Mammal Laboratory (NMML) research funding, priorities, & prioritization process (Bengtson)

John Bengtson gave an overview of the five programs within NMML, summarizing each program and program leaders. Bengtson also summarized recent and current NMML research priorities and activities, as well as funding sources and distribution of funds. Overall, half of NMML's funds are from NMFS, half are external funds. Bengston indicated that NMML's base funding is not sufficient to cover salary expenses for permanent staff. Discretionary funds are essentially non-existent at NMML; budget line items must be spent on what the funds are designated for, and funds acquired through contracts and grants are designated for a specific project or research focus. All funding is devoted to a specific item. As of February, there was still no FY09 budget.

Bengston also summarized recent and continuing NMML research. NMML is cooperating with Russian colleagues on Northern fur seal and Steller sea lion research. Bengston emphasized the importance of the Russian work, and differences in activities in Russian waters versus U.S. waters are being examined. Ongoing Steller sea lion research includes studies into vital rates, population trends and abundance, feeding ecology, stock structure, pup counts, and a branding program for vital rate estimation. Northern fur seal research includes annual bull counts in the Pribolof Islands, pup counts, foraging ecology studies, seasonal movements, vital rates estimation, and increased tagging efforts. Tracking of fur seals in 2005-2006 indicate that fur seals continue to decline on St. Paul, while St. George is showing a slight increase. Bengtson presented a graph of the distribution of funds for Steller sea lion and Northern fur seal efforts, with most funds supporting salaries of staff. Most Steller sea lion and Northern fur seal projects are funded under the "Alaska pinnipeds" line item from Congress.

There is an ongoing effort to determine a state-wide abundance estimate of Alaska harbor seals. Bengtson is still trying to carve out funds for ice-associated seal research, which includes aerial surveys, captures, shipboard surveys, satellite telemetry, abundance estimates in the Bering and Chukchi seas, behavior, and genetics. Bengtson presented on both harbor seal and ice seal funds distribution. Funds for harbor seals are primarily supporting surveys, with some funds going towards stock structure and abundance in glacial fjords. Most funds for ice seal research is directed towards ecological studies of ice seals in the Bering Sea. There is some funding from the Mineral Management Service, which will ideally increase over time, as well as from the Unmanned Aircraft System surveys, which are reimbursable funds.

Bengtson presented on cetacean research, which is primarily focused on distribution and movements, abundance trends and monitoring, feeding ecology, and stock structure. Again, most available funding goes towards salaries. NMML may acquire new funds for cetacean habitat use and movements in the northeast Bering and south Chukchi seas. Very little NMML funding is designated to right whale research; most funding for right whales comes from the Mineral Management Service (MMS; approximately $1 million) to investigate distribution and

movements, habitat use, abundance, and stock structure. The MMS is also funding bowhead whale studies on distribution, movements, and habitat use. Some NMFS funding is directed towards killer whale, large whale, gray whale, and Cook Inlet beluga research, although much of the funding for killer whales comes from Alaska seals and Steller sea lion fund with the justification that the funds are being used to study the impacts of predation by killer whales. Funding for bowhead and right whales is all from external sources. Cetacean research is primarily funded by external sources and designated to a very specific purpose.

Straley inquired about the future of the Southeast Alaska cetacean research since the retirement of the NOAA SHIP COBB. Bengtson responded that there was one-time funding available to hire a charter vessel in the absence of the NOAA SHIP COBB; Southeast Alaska cetacean surveys are a priority for NMML, and additional funding sources will be sought. Gauvin mentioned that the North Pacific Research Board (NPRB) is a source for some reimbursable funds, and several NPRB one-time funds are directed towards "integrated ecosystem" type of projects for the Bering Sea. Bengtson responded that NPRB funds were not included in this report on the NMML budget, and that NPRB is not a major source for cetacean funding; most reimbursable funds are MMS funds. Mathews suggested that NMML may have a stronger argument for acquiring NOAA ship time given the loss of the NOAA SHIP COBB. Bengtson clarified that ship time is competitive, and most ship time is used for fish surveys. NMML is getting some ship time now, which is a positive step forward from the past when NMML had no ship time. NMML is currently receiving a couple of months of ship time for ice seal and right whale research projects. Ship time has been used as leverage for MMS funding. NMML is always trying to acquire more ship time; however, the ship is always overbooked and time is very competitive.

Bengtson reported on funding for gray whales and San Miguel Island research conducted by the California Current Program. Overall, NMML's budget for 2008 was $13.5 million, with $6 million directed at permanent salaries. NMML is becoming increasingly dependent on external funding, which currently supports approximately half of all NMML activities. MMS has been very supportive of NMML. Lowry thanked Bengtson for presenting the NMML budget information and informed him that this is precisely the type of information the SRG wants to hear, and also inquired about getting a copy of the breakdown of the funding tables.

Lowry thanked Bengtson for his presentation, stating this is precisely the type of information the SRG wants to hear. Lowry also requested copies of the funding tables for the SRG. Tom Eagle emphasized that NMML activities are driven by multiple sources, including AKR direction, AK SRG direction, NMFS HQ direction, MMC guidance, and other priorities such as recovery plans, conservation plans, research implementation plans; NMML then has to consider funding availability for all these activities. There is a lot of cross-over within the agency. For example, the California Current Program provides a lot of information and direction to NWR and SWR. Peter Boveng also added that Bengtson is dependent on the Program Leaders to keep him up to date with numbers for the budget table; the numbers on the existing table may not be current.

11) Update on harbor seal stocks (Boveng)

Peter Boveng informed the SRG that there is a new survey design for studying harbor seal stock structure and boundaries. He provided a recap of the milestones that have been completed as progress is made towards stock revision.

- The SWFSC Administrative Report on mtDNA results became available in August 2003. Approximately 1,200 harbor seal samples were taken around the state, and the haplotype frequencies from these samples reveal a lot about stock structure. The three current stocks are not a biologically realistic division. It was determined that publication of the results from the genetic analyses may take significant time to publish; therefore, it was recommended that the review of stocks should move forward.

- In October 2004, an independent scientific review of genetic analyses was conducted by CIE and AIBS. CIE is a group from SWFSC; AIBS includes NMFS and individuals contracted from the Alaska Native Harbor Seal Commission (ANHSC).

- In March 2005, a co-management meeting was held to discuss the scientific reviews. There was not unanimity in the decisions from this meeting regarding dispersal rates for genetic diversity versus stocks and preventing depletion of stocks. The agency stated that the reviews exist, and urged that moving forward with designating stocks is the next step. The agency also recommended the use of genetics and satellite tagging, as well as including ADF&G involvement and traditional history from the ANHSC.

- In September 2005, a co-management meeting was held to draft provisional stock boundaries; these boundaries matched with tribal hunt history.

- In October 2005, the Marine Mammal Commission and ANHSC meetings were held, during which there was a call for more community outreach and distribution of results. The ANHSC backed away from the provisional stocks that were originally agreed upon.

- In February 2006, the southeast Alaska marine mammal hunters' workshop was held.

- In 2007-2008, the Hoonah leaders' meeting was held. A Tlingit-Haida Council resolution against the use of genetic analysis was presented at the Hoonah gathering. NMFS received a letter against the use of genetics in stock structure for the Committee, resulting in a slight digression away from stock resolution.

- In March 2008, an agreement was made to draft provisional stocks and discuss assessment data.

- In November 2008, population estimates were completed for provisional stocks; mortality data from fisheries, the subsistence harvest, and strandings still needed to be incorporated into these provisional stock assessments.

- In February 2009, NMFS plans to incorporate the mortality data into the provisional stock assessment reports, and there is a co-management meeting to discuss these results tentatively planned for March or April of 2009. The tracking and genetic studies are still

unpublished. Unpublished data from Greg O'Corry-Crowe and Harriman suggest that male dispersal rates are higher than female dispersal rates, which brings to question what may be an appropriate tool for defining stocks.

Lowry inquired about available funding for harbor seal stock structure. Based on Bengtson's budget presentation, Lowry inquired about what is being done to set funding aside for harbor seal stocks and whether there is a plan for ongoing genetics studies. Boveng responded that efforts are being made to get the genetics paper published, although there is a need for a push to get this done. Mathews inquired whether it would help to get a letter of support from the SRG encouraging a timely publication of the genetics results. Boveng informed the SRG that the agency is in support of getting this work published and would like to see this done, and is actively encouraging the author to publish. He added that there is a lot of uncertainty in the data and about the interpretation of the data; there seem to be discrete areas suggesting stocks, but the data do not necessarily reveal where, precisely, boundaries should be set. There is some question regarding how well the provisional boundaries correspond to actual biological population structure. Lowry stated that the SRG has been recommending for at least 5 years that harbor seal stocks be revised, and the SRG would really like to see progress made. NMFS is currently using stock structures that the agency knows are wrong.

12) Update on ice-dependent seals (Boveng)

Research has been conducted by NMML on ice-dependent seals in both 2007 and 2008. Boveng summarized the ice-dependent seal research, ESA petitions, and ribbon seal status review. A research cruise was conducted aboard the USCGC HEALY from April – June 2007 concurrently with aerial surveys for abundance and distribution of seals. In May 2007, NMML conducted ice seals studies from the NOAA SHIP OSCAR DYSON, which included measuring distance from the ice edge, satellite tagging, and sampling for genetics and blood analyses. In April 2008, studies were conducted from the U.S. Coast Guard icebreaker Polar Sea, including aerial surveys for abundance and distribution. Also in April 2008, studies of ribbon seal pupping and breeding, sampling, and tagging were based off the NOAA SHIP OSCAR DYSON. In 2008, studies off the NOAA SHIP MILLER FREEMAN included satellite tag deployment, genetics and blood sample collection, and assessment of molting conditions. These last two cruises in 2008 both had vessel problems; the Freeman never left port. The DYSON left for five days, during which time one seal was tagged. The cruise aboard the Freeman never happened due to ship maintenance issues.

Sightings maps of spotted, ribbon, bearded, and unknown pinnipeds were produced based on the helicopter and ship-based surveys conducted in 2007. Sightings of all four species of ice seals occurred during the April 2008 cruise aboard the Polar Sea; this cruise was able to cover the northeast Bering Sea. More ringed seals were observed by surveying areas closer to shore on ice. During the 2007 studies conducted from the DYSON, a total of 45 seals were captured, including 31 ribbon seals and 14 spotted seals, and several tags were deployed. In 2008, flipper mounted tags were deployed. These tags provided successful tracking data for a full year; hind flipper mounted tags only provide data when the seal is haul out, so there is a longer duration for the tag.

Boveng provided an update on the ESA petitions to list the ice dependent seal species. NMFS received petitions to list all four ice-associated seals as threatened under the ESA. On 20 December 2007, the Center for Biological Diversity (CBD) petitioned NMFS to list the ribbon seal under the ESA. On 28 May 2008, CBD petitioned NMFS to list bearded, ringed, and spotted seals under the ESA. The basis for these petitions is primarily threats from global climate change. The agency accepted both petitions, and on 28 March 2008, NMFS presented their position on a 90-day finding on the CBD's ribbon seal petition that a review was warranted. On 04 September 2008, NMFS presented a positive 90-day finding on CBD's petition to list bearded, spotted, and ringed seals. As a result of these findings, NMFS initiated comprehensive status reviews of the ice seal species. In late December 2008, NMFS released a decision to not list the ribbon seal as endangered or threatened. Status review and species assessments are still ongoing for the other species.

Several questions arose during the status review, including: Where, when, and how do ribbon seals use sea ice? Within this context, what are the expectations for future ice conditions? And what are the implications for the fate of the ribbon seal? It is known that ribbon seals interact with ice when they pup, breed, and molt. In April, whelping and nursing occurs, and this is possibly a critical period for breeding and nourishment of pups. April to June seems to be a critical period for ribbon seal sea ice association.

In 2007, there was record low sea ice coverage. Ribbon seals do not use ice in the summer months. Despite the record low ice coverage in perennial ice in 2007, 2008 had record annual ice in the Bering Sea. There is an overall downward trend of ice coverage, but also an inter-annual variation in ice coverage. April, May, and June are the critical months of concern with ice coverage for ribbon seals. It is difficult to predict future ice coverage; even if there is a decline, there will still be ice present. The ribbon seal has adapted to changes in ice coverage in the past, and there is no reason to believe they will not continue to adapt. The northern Bering Sea will continue to have ice in April. Sea ice in May will continue to vary substantially from year to year, with possible rapid melting in June. Many years have had zero ice coverage in the summers in the past, and these will increase in frequency. This is also a resolution issue of sea ice models and sea ice data.

Data are lacking for quantifying an effect of changes in sea ice coverage on vital rates, energetic effects, and effects on ribbon seal pups trying to become self-sufficient. In order to assess the implications of changes in sea ice, the size of the ribbon seal population needs to be estimated to assess where the population is large enough to withstand a gradual decline over the next several decades. NMFS believe the ribbon seal population is big enough to withstand these changes. Based on surveys, there were approximately 18,000 seals estimated to be present on ice. Assuming approximately 36.5% of the animals are hauled out on ice during the surveys, a total estimate of approximately 49,000 ribbon seals was calculated.

The ribbon seal status review is available as a PDF and the FR notice is available on the AKR website. The status reviews for the other species of ice-associated seals will examine where, how, and when do the various species interact with ice, predict ice conditions for those contexts, and also predict the effects of the ice conditions on each species.

Mathews and Lowry both commended Boveng and his team on attaining an abundance estimate for ribbon seals, and for a very thorough status review. The review was well written and well done. Boveng responded that it has been very challenging to work on status reviews and not compromise fieldwork, especially now that funding is available for fieldwork. The Polar Ecosystems Program is under a tight timeline for the remaining reviews; the spotted seal status review is currently further along than the other reviews. The team will complete these reviews are quickly as possible, but it is challenging. This is the first time that this program has had to deal with ESA petitions, so there was a bit of a ramp-up period and a steep learning curve on the process of preparing a status review. More data exist on the other species, so these reviews may actually take more time than the ribbon seal review. Lowry commented again that he commends the agency for responding within the timeline, and he applauds efforts to stay within the time limit. Boveng recognized the SRG's role and involvement, and noted that there will be an effort by the Polar Ecosystems Program to beef up the SARs content on the ice-associated seals. This effort was driven by the status review and response to the petition, but the program is also now more aware of the involvement of the SRG and the SARs process, and hopeful that updates to the SARs are forthcoming.

13) Unmanned Aerial Systems (UAS) in marine mammal research

Robyn Angliss reported on NOAA's UAS program (uas.noaa.gov). Robbie Hood is the Director of the new NOAA UAS Program. One objective of this program is to bridge the gap between satellites and surface-based sensors; UAS have a great potential for accomplishing this task.

NOAA is considering a broad range of platforms to meet the science needs of the agency. UAS's were originally developed for defense purposes, and now science applications of these aircraft are being considered. Why UAS? Manned aircraft pose many challenges, including availability. One project funded in 2009 was for a study of ice seals using UAS. NOAA is partnering with University of Alaska, Fairbanks, on this project, and NOAA is supplementing the study with ship-based work. NOAA is will be using a platform that is called the Insitu "Insight" or Boeing "ScanEagle". This unmanned platform has the ability for launch and retrieval from a vessel and collecting aerial photographs. Other potential marine mammal applications include estimating density of cetaceans (e.g., humpback and bowhead whales), as well as abundance of manatees. Significant barriers for this new technology include the aircraft designed for hot, sandy places, not cold, wet places where icing may be a problem. Other challenges include high costs and gaining access to airspace. UAS's are an expensive technology, and projects to date have been heavily leveraged. The FAA restricts air space, thus permission is needed from the FAA to gain access to airspace. Shell conducted a study using UAS's and was only able to fly within line of sight; a proposal has been submitted to conduct studies outside line of sight. Although the airspace issue will need to be addressed, the use of UAS's does provide lots of opportunities for potential projects. Nationwide, there are multiple marine mammal projects that might benefit from UAS.

Jan Straley inquired whether or not the use of UAS's will be a permit issue. Angliss responded that NMFS has a permit to fly manned aerial surveys; the unmanned surveys will be flown at the same altitude. Robert Suydam commented that there seems to be the potential for good opportunities to fly into areas where people are not or can't go. Is there a plan to get permission to fly over air space offshore? Angliss replied that as there becomes an increase in interest and considerations for more applications, the

process may become more streamlined. Restrictions on projects may be more conservative initially, but may become less so with more experience and with more project proposals.

14) Cook Inlet beluga update

Kim Shelden presented an update on the Cook Inlet belugas, including the results of the population viability analysis (PVA). In April 2008, recommendations were made for a thorough analysis of abundance and population structure. A separate analysis of survey data since 1999 was conducted, and a determination was made that the environmental statements will remain unchanged. Since then, more recent abundance estimates have been determined and new information about diseases has been obtained. The State of Alaska challenged the findings published in an FR notice.

In September 2008, an abundance estimate for the Cook Inlet beluga stock of 375 animals was released, indicating that the trends are still declining. In October 2008, NMFS published a final rule to list the Cook Inlet beluga stock as endangered. A conservation plan is being developed, and NMFS is currently working on critical habitat designation. The State of Alaska initiated a lawsuit challenging NMFS's decision, and NMFS is currently responding to a FOIA request pertaining to the notice of intent to sue. Funds currently exist for June and August surveys for 2009; August is a calf survey. Mathews inquired whether this funding for surveys is only available if NMFS goes forward with the listing. Shelden responded that NMFS is moving forward as if the listing has happened.

15) Update on walrus stock assessment reports

Suzann Speckman gave an update on the draft walrus stock assessment reports. USFWS is still working on a population estimate based on spring 2006 fieldwork. Several USFWS staff called in via teleconference line to participate in the USFWS presentations, including Rosa Meehan, Terry DeBruyn, Doug Burn, a thermal image specialist, Mark Udevitz, and Joel Garlich-Miller. The 2006 fieldwork consisted of an aerial survey component, photography, and a correction for varying detection probabilities. There were also vessel based operations and a satellite telemetry component. The tagged walruses served to help with the estimation of the population in the water that was unavailable for counting during the thermal images. From this study, an estimate of the population size will be developed. The study design included both Russian and U.S. waters, and ideally all pack ice was surveyed. Line transects included transects where only photos were taken, transect with only thermal imagery, and transects with both photos and thermal imagery. In total, 204 groups were encountered. Small groups cannot be detected by a thermal image, so a model was developed to account for these groups. During the survey, 21,610 walruses were estimated to be hauled out on ice. This is the best population estimate to date for the SAR; however, it is currently a minimum estimate because it is not corrected for animals in the water nor for animals in areas not surveyed.

Lyderson et al. 2008 estimated 75% of walruses are not counted during surveys because they spend 60-80% of their time in the water. Based on this, the preliminary corrected estimated used in the SAR is 86,440 to account for those in water. Speckman posed several questions to the group pertaining to survey blocks. Some survey blocks were surveyed more than once. For these areas, one estimate was not too different from another, another was somewhat different, and a third was significantly different (zero vs. 11,802, extrapolated). The reasons for the zero estimate could have been that there were no walruses in

the area, the walruses were in the water and not seen, or that the survey covered such a small area that they were missed. The estimates for those areas surveyed twice were averaged for the SARs.

Grey Pendleton inquired whether tags were on the walruses, and whether the tags gave any insight into walrus movements in the double-surveyed areas. George Noongwook commented that in 2007, the winds blew the ice quickly out of the area of Savoonga, and all marine mammals were gone within days. By late April, the walrus may have already started migrating. Walrus are north of Gambell by April because the ice is moving quickly. John Gauvin suggested that since the walruses were tagged, perhaps the ice could also be tagged to measure the ice flow. Lowry responded that there have been some studies of ice flow in the past. Ice can move very rapidly; ice flow data are out there. It was mentioned that Mark U. has been working a bit with NASA ice imagery to track movements of ice in relation to walrus data. Ice movement may not have a direct bearing on survey data, but it can give some indication as to how closely associated walruses are associated with flow ice. Gauvin commented that just averaging the data may either double count animals, or worse, may under count animals. Gisiner remarked that arithmetic averaging will over-estimate abundance and suggested that a Bayesian analysis may be a better approach.

Noongwook inquired about the type of tag that was used. Speckman responded that the tag was a darted satellite tag which did not require capturing the animal. Noongwook commented that males tend to migrate following the ice pack, not with the ice pack; females migrate in April, then the males show up in June. Barrett-Lennard recommended possibly dividing the survey blocks into sub-blocks; this would give a better sense of how many animals are falling off the edge of the blocks. Speckman remarked that a lot was learned about survey design after this walrus survey; perhaps that approach is something to consider for the next survey. There are certainly other modifications to the next survey that are already being considered. Pendleton commented that he would lean towards using an average of the survey blocks; if the high count is used, it may result in "double-dipping". If there are variances associated with the data that might be the way to go. Speckman added that input from the SRG would be appreciated. For the draft SARs, a correction factor of 75% was used based on Lydersen et al. 2008 (Arctic). This study was based on all males, and included haul-out data from August and September. This paper was also based on a different subspecies and included terrestrial haulouts.

Mathews suggested using caution regarding considering this a conservative estimate and the use of a correction factor that seems to fit with the tag data regarding time in the water. Lowry expressed concern regarding using a population estimate in the SAR that does not seem to be ready for public release, and releasing that estimate in a public document such as the SARs. Eagle remarked that the SARs are "based on best data available"; therefore, why doesn't the USFWS state that abundance data are not available, and that the best data currently available is from the last suryey? Lowry added that the USFWS did provide a draft SAR for the SRG to review and discuss at their meeting, and the SRG advice is to NOT publish an estimate if an estimate is not ready. Rosa Meehan responded that the requirements of the settlement state that the USFWS must turn in stock assessment reports and that there are several "must have" elements required in those SARs, including a population estimate and PBR; USFWS is trying to provide a best estimate from what is known today. Lowry responded that the SRG will be candid about their assessment of the reliability of the science and the data presented in the draft walrus SAR; the SRG considers the data "shakey". **The SRG recommends that the USFWS not put the walrus population**

estimate and PBR out to the public in the SAR if these data are not ready, and the SRG does not support using these data in the walrus SARs.

Speckman inquired about how to deal with the unsurveyed areas – can an uncertain correction factor be used to produce an abundance estimate for now, and then modify that number later with further analysis? Pendleton responded that as long as assumptions are carried through and there is a huge correction factor, it should be alright to use this estimate because there will be great variability in the estimate. Mathews countered that the MMPA states that the SRG must accept an Nmin that is a very reasonable estimate with a great level of certainty that it is a minimum estimate (i.e., never overestimate Nmin). Barrett-Lennard added that Nmin is one of the most important numbers in the SARs and that it must as conservative as possible. He suggested that the SAR state that this is the most conservative estimate and most conservative correct factor available, and state that the numbers will be modified as more is learned from further analysis. Suydam suggested correcting it and qualifying it. Suydam expressed concern that these numbers may be used for subsistence. The PBR is designed for fishery takes, but questions whether this will ever be used for subsistence. Matkin inquired why extrapolation would be used for walrus but not for cetaceans. Suydam mentioned that there are actually variable methods being used; for some cetaceans, Nmin is the lowest count, but for others, such as bowheads, Nmin is extrapolated. Suydam suggested this may be an issue for the SRG to address further. Pendleton suggested creating a model. Barrent-Lennard commented that if extrapolations are used, then there may be a problem of not being able to calculate a CV for this model. Lowry expressed concern if the walrus abundance estimate is published in a final SAR, especially given that this number has so much uncertainty associated with it. **Lowry suggested that the SRG send a letter to the USFWS regarding their opinion of using a number that is questionable in the SARs.** Barrett-Lennard added that the draft SAR and the estimates were presented to the SRG as required, and the SRG expresses concerns about using this number. Lowry is correct; this number will be used regardless of how many caveats are placed on it. Meehan added that there is nothing that can be done to change the deadline and requirements. Meehan has no problem putting in caveats; however, the requirements were set by courts and solicitors. Matkin suggested putting a banner on the front page of the SAR similar to that on the harbor seal SARs stating that there are huge caveats on the numbers presented in the SAR. Meehan again stated she is amenable to the caveat; if there is really clear guidance from the SRG, this may be the way to go. Suydam added that the SRG's role and decision can be further discussed with the individual SAR review.

Speckman added that subsistence takes will be calculated based on information on Fay et al. 1994. The next step will be to apply tagging results to the aerial survey results, and to estimate the number of walruses in each block. From this analysis, the total population size will be estimated. In summer 2009, a preliminary walrus population estimate is expected. This estimate will not be released to the public until the review process is complete. One of the challenges is that this study involves data collected in two languages. There will be both an internal and external review. The population estimate will then be presented to the Eskimo Walrus Commission and the walrus hunting communities. In late 2009, the estimate will be made available to other scientists and to the public (after review). Speckman recapped the ESA timeline, which included a petition to list the walrus submitted in 2008; there was no funding to address the petition, therefore, a lawsuit was filed 03 December 2008, and settlement negotiations are underway.

Lowry commented on the expected summer release of the actual population estimate; if a premature estimate is produced in the SAR, they USFWS is putting an estimate out there for the public to use. Why not state that an estimate will not be available until the review process is complete? By releasing the premature estimate in the SARs, an uncertain estimate is being released to the public, and it will be used. Suydam inquired whether data were collected on other groups of marine mammals while the walrus survey was being conducted, to which Speckman responded affirmatively.

16) Update on polar bear stock assessment reports

Terry gave an update on polar bears. There have been declining growth rates, suggesting that the population is declining, especially around the boundary change between the U.S. and Canada. The south Beaufort Sea PBR is estimated at 22 bears. This population is listed as depleted under the MMPA, and is therefore considered a strategic stock. Suydam noted that a recovery factor of 0.25 was used instead of 0.5 for this stock. Terry inquired which recovery factor the SRG would recommend using. Eagle responded that the SARs guidelines state that the default recovery factors are not required; if another number is used, there can be a justification as to why this number was used instead. Suydam noted that a PBR of 22 is lower than the subsistence harvest and again expressed concern about whether the PBR will be used for subsistence, especially if the PBR level set is half the subsistence level. Lowry mentioned that the recovery factor is rather arbitrary since there are no fisheries takes, and suggested that another recovery factor may be used. The draft SAR states that the stock may not be in existence in 45 years, so all will need to do what they can to help this stock recover, including subsistence hunters. Suydam suggested the need to ensure that the Commission is involved with discussions and staying informed, providing input, and involved in decisions. Pendleton noted that if K is dropping, it doesn't really matter which recovery factor is used because the population is dropping and will crash; whichever recovery factor is used, the population is not recovering, so it doesn't really matter which recovery factor is used. Meehan added that the outcome is grim regardless; however, the USFWS is again under a court order on the polar bear SARs. Mathews commented that the SRG will email all individual reviews of the SARs to the USFWS with their comments attached.

Suydam inquired whether there is a confidence estimate associated with the estimated 3% annual population decline. Mathews reminded the groups of a recommendation at the 2008 Joint SRG Meeting to have all citations and reference material for the SARs available. Suydam noted that the subheadins in the USFWS SARs are a little different from the NMFS SARs and recommended that an effort be made to make the format consistent. Eagle mentioned recommending adding a habitat and management implications section if considered necessary.

Terry mentioned that the population estimate for the Chukchi/ Bering Sea polar bear stock is weak. **Suydam reiterated that Lowry's suggestion to send a letter regarding the SRG's concern on the estimates used in the polar bear SARs; Nmin seems unsupported by data, and the SRG should send a letter stating their opinion to not report these estimates in the SAR.** Lowry followed up by suggesting that it may be time to get out and obtain a polar bear estimate. Lowry suggested that the SRG should send a letter recommending USFWS receive support to conduct line transect surveys to get an abundance estimate for polar bears in the Chukchi/ Bering Sea. Meehan also mentioned doing a mark-recapture analysis. Suydam added that NMML flew aerial surveys in the Chukchi Sea in June 2008 and

recommended that NMML and USFWS share data from surveys, so some data for polar bears and bowheads may already exist. Mathews added that Suydam will work with USFWS on language of the SARs regarding separating Russia and U.S. data.

17) Discussion of draft SARs for 2009

Allen presented several summary slides for the SARs updates. These slides included a list of all stocks that are being reviewed for 2009, a summary of the SRG's recommendations from the 2008 meeting, major themes of the public comments on the draft 2008 SARs, a summary table of the updates of estimates for all stocks, a summary of new fisheries take data, and a summary of letters prepared by the SRG.

Suydam inquired to the group what the SRG's recommendation to the USFWS will be regarding the walrus SARs. Lowry responded that the survey was a great effort, and the SRG appreciates the new data; however, for the purposes of the SARs, these data are not ready. Using Svalbard as a comparison in not appropriate, as that subspecies uses a different habitat. Matkin inquired whether the SRG should recommend that the USFWS just use counts, and Mathews suggested possibly stating that the estimates are "undetermined". Lowry stated that a specific number is not ready, and appreciates the pressures of being put in a box and forced to develop numbers. **However, the SRG comments on the science, and Lowry believes the science on walrus and polar bear stocks is not ready for public release.** This assessment is best addressed in a letter to the agency rather than just as track changes comments on the SARs. Lowry added that the SRG should commend the effort; this is a timing issue, not a judgment on the science and methods. **Mathews agreed to write a letter and to draft 3-5 sentences similar to the harbor porpoise caveat. Suydam added that the same comment should be made about the polar bear SARs as is being made about the walrus SARs; it would be better to use the old abundance estimate and PBR = undetermined than to present data that are not ready. A letter and caveat statement will be drafted.**

Bearded seal

Bearded seal:

Lowry commented on a study that uses a phylogeographical approach that may help with the bearded seal abundance estimates. Lowry also expressed concern about only using the St. Lawrence Island spring counts. The harvest data reported do not denote that this is only a seasonal harvest, and it appears that it's an overall harvest. A statement should be included to indicate this.

Matkin suggested keeping a file of the gaps in data for each stock. Mathews mentioned that this is part of the intent of rating the quality of each SAR. Matkin stated that this information could be kept in a separate file that serves as a tool for SRG reviewers and is not made available to the general public.

Suydam agreed that the subsistence information is confusing for the bearded seal. He also noted that the BSAI pollock trawl is listed as having 73% observer coverage with 2 observed takes, yet the estimated mortality is 5; this doesn't add up and the data should be checked.

Ribbon seals

Lowry commented that the status review has been released. He suggested adding input from the status review, where appropriate, and again had questions regarding presenting seasonal harvest data. These data do not represent the annual harvest totals. Pendleton recommended including confidence intervals on the estimated mortalities and CVs.

Bowhead

Gauvin inquired about the scarring data – could these scars be from a struck and lost animal from the hunt or are they definitely from fisheries? Suydam offered to assist with updating the data on scarring. There were two bowheads with confirmed crab gear (line), which the whales are picking up in the Bering Sea. Pendleton inquired whether it is common to see scarring on bowheads. Suydam added that scarring could be due to old harpoons, but probably not. Scarring can be difficult to identify and attribute to a source. Whales do not often wash up with harpoons from whaling. Suydam will help modify this section of the SAR.

Noongwook commented that no whales have washed up with fishing gear in Savoonga, although he did hear about a whale with gear that washed up outside of Savoonga. He has observed whales with killer whale bite scars. Eagle inquired whether or not these bowhead whales could be getting scarring from other fisheries outside of U.S. waters, which can be one of the issues when dealing with trans-boundary stocks. Lowry responded that he didn't believe Russian crabbing overlaps with the presence of bowheads, and added that there are currently 10 satellite tags on whales working in the Bering Sea. Suydam added that all tags seem to be not at the ice edge, but instead under the ice.

Eagle commented on a statement on p.210 that states, "IWC quota takes precedence over PBR". This statement is not exactly true, and added that the monk seal SAR used to state something to this effect. Suydam added that the PBR is well backed, so this statement should be reworded; Matkin agreed that this statement needs to be changed. Matkin added that the subsistence harvest quote is managed under the auspices of IWC.

Spotted seal

Lowry made a similar comment on the harvest data; these data only represent data from the spring harvest. Lowry also suggested citing the ribbon seal status review under the habitat section. Suydam concurred with Lowry's comments. Pendleton inquired whether any other state data exist on the harvest. These data exist somewhere, and the North Slope harvest data will be available soon.

Cook Inlet beluga

Barrett-Lennard inquired about including Yakutat belugas in the Cook Inlet stock if they are not included in the DPS, and whether Yakutat should be a separate DPS. Eagle responded that this is not the case, and clarified that designating a DPS is a rule-making process. Matkin questioned where the Yakutat belugas were counted if they are not a part of a DPS. Lowry added that there is one haplotype for the Yakutat group. Barrett-Lennard inquired about the rule-making process for designating a DPS, and whether every group belongs to a DPS; is this the same as the AT1 killer whales? Angliss responded that not every

group of animals needs to belong to a DPS. Eagle commented that this issue will need to be addressed at some point, although the AKR focus is on the Cook Inlet DPS at the moment. Lowry recommend rewording "while not included in the CIB DPS designated under the ESA…".

Suydam suggested using consistency in how different stocks are referenced. For example, instead of stating "Norton Sound" refer to the group as "eastern Bering Sea". Mathews recommended that the recovery factor should be changed to 0.1.

Barrett-Lennard recommended not calculating a PBR for those stocks with abundance data older than 8 years. Matkin added that if a population is large enough, even if the population is declining, a PBR can still be calculated.

Steller sea lion - eastern

Pendleton commented that the statement suggesting that movements between stocks accounts for changes in counts is a bold statement, and he recommended toning it down. Pendleton also suggested that if observer data exists for a fishery, even if there are no takes, that fishery should be added to the table so it is clear what the take was (if that fishery was known to interact historically). Pendleton also suggested recording which fisheries have observer coverage (some have none), not just those with takes. He also suggested including the following statement for all stocks: "Of the 22 fisheries, ## occur within the range of this stock; of those, ## have no observer coverage." Pendleton also mentioned that he has a manuscript summarizing the observations of flashers in the mouths of Steller sea lions; there are about 500 records from the last 5 years. He suggested adding the flasher data to the SAR. Barrett-Lennard inquired whether or not these data are getting reported, and Pendleton responded that these data are going to the AKR and believes they are going into the stranding database. Lowell Fritz remarked what he was not sure where those data are being sent, but agrees that it is a gap in the data.

Barrett-Lennard commented that there should be enough good population data on Steller sea lions that the default Rmax of 12% for pinnipeds should not be necessary; an actual Rmax for this population should be developed. Mathews inquired whether or not there is an existing publication that calculates an Rmax that could be used. Barrett-Lennard questioned whether the model accounts for pup mortality; Fritz responded that his understanding was that the model was set as if the population were stable, not including pup mortality. Pendleton commented that it would make sense to use the British Columbia Rmax for the eastern Steller sea lions since they are all part of the same group. Eagle commented that Headquarters received a letter from the states of Washington and Oregon requesting that the eastern Steller sea lion stock be delisted. Beth recommended that Rmax (observed) of 13% should replace Rmax (theoretical) of 12% based on the paper on Steller sea lions in British Columbia.

Steller sea lion - western

Lowry suggested that the criteria list should probably be included in the status of the stock section, not the habitat section. Pendleton mentioned that he likes the Management Implications section that the USFWS included in their SARs. Lowry inquired with Fritz whether or not anyone looks at the telemetry haul out data and how it affects population counts. Fritz responded that these data have been looked into a bit and that there is a huge CV associated with these data. Suydam suggested that NMFS should use data

calculated abundance estimates, not direct counts, and investigate the feasibility of using correction factors from telemetry data instead of direct counts, if available. Pendleton recommended reporting both the calculated abundance estimate from telemetry data with correction factors and report the direct counts to see how they differ.

Fritz commented that it has only been since 2004 that an influx of moms and pups have been observed at Gray's Rocks in Prince William Sound; pup counts have remained flat for the last 10 years at this location. Matkin inquired whether this affects the stock boundary. Fritz added that there are some shared haplotypes; NMML plans to do a late June survey instead of early June to see if there is a difference in counts. Gauvin remarked on this "leaky border"; whether there is a decline, flat line, or slight increase, it may be important enough to look at the data. Gauvin suggested monitoring both early June and late June movements over time, as this movement can really affect the trend for both the eastern and western stocks. Fritz commented that data since 1990 suggest that the easternmost haulouts in the western stock range tended to have higher counts if surveyed earlier in the season; those in the northern southeast region had lower counts. There are not enough data to tease out the movements; time and resources are limited to conduct full surveys early and late. Gauvin inquired whether there was genetic mixing, to which Fritz responded affirmatively.

Gauvin inquired about the "flashers" and whether there was a way to tell the difference between recreational flashers and commercial gear. Suydam suggested adding in distribution of stocks on the maps, not just rookery locations. Gauvin also suggested not making such a strong statement regarding the potential for the eastern stock accounting for the change in the population trend, and questions the pertinence of the details of the buyout details on the SARs.

Northern fur seal

Lowry expressed concern about the use of the 4.5 expansion factor for estimating abundance of Northern fur seals; this is an issue that has been commented on repeatedly over the years. Lowry remarked that conversations with Ian Boyd suggest that this expansion factor cannot be used because of new data on changes in pregnancy rates. Lowry also commented on the fur seal counts on Bogoslof. Many people view the increased counts on Bogoslof resulting from a movement of seals from the Pribolofs to Bogoslof; however, one gets a different picture if viewed in a different light. There have been resights of tags from the Pribilofs on Bogoslof. The number of fur seals on St. Paul has clearly gone down, the population on St. George is stable, and Bogoslof is going up. Lowry remarked that this trend is less worrisome than if the numbers in all areas were going down. Lowry also suggested clarifying Table 7 in the SARs by indicating that these are the totals of the most recent surveys up to this year instead of the total per year.

Harbor seal – Southeast Alaska

Mathews commended the agency for using the introductory caveat paragraph on the harbor seal SARs; however, noted that the "new" data are not so new anymore. Mathews also suggested additional language regarding the SRG's input on the current stock division. The terms "current" and "recent" should be avoided in the SARs, and a few new references were suggested.

Mathews posed a question to the group, inquiring whether precautionary text should be added in the PBR section regarding Glacier Bay at this time, or whether this remark should be delayed until stock structure is defined. Suydam agreed that it would be acceptable to include a statement backed by the SRG if there is evidence that the Glacier Bay harbor seals are behaving differently. Eagle recommended cleaning up the 2007/2008 statement regarding funding pending for observed fisheries; this was not done. Lowry inquired about whether subsistence effort has been reduced, and whether subsistence data were all collected in the same manner. Mathews responded that she believed subsistence effort has remained consistent. Mathews was not sure if changes in subsistence numbers were due to changes in the availability of seals or changes in effort or interest in hunting. Pendleton added that the data from surveys need to be updated; data are out there, and they should be used in the SAR. Pendleton agreed to provide Allen and the SRG with data from the southeast Alaska harbor seal counts.

Harbor seal – Gulf of Alaska

Pendleton noted that the estimates for the Gulf of Alaska harbor seal abundance are based on data from 1996; more recent data are available and should be used. Surveys are conducted every 5 years, and trend estimates have been updated; there is currently a positive trend. Mathews recommended not changing Rmax on this stock since it is not contiguous with other stocks. Lowry provided additional editorial comments and noted that the subsistence levels went up, suggesting the subsistence hunt effort is spurious.

Harbor seal – Bering Sea

Pendleton mentioned that there are also newer data for a population estimate for this stock and agreed to provide a table with estimates. The SRG noted that they are very much looking forward to the definition of new harbor seal stocks, and they encourage and support all efforts to make this happen. Eagle inquired whether the SRG is content with the "status of the stock" statement that states casually that commercial fishing mortality is unknown, but that it is not believed to be anywhere near PBR level, so the stock is not considered strategic. The SRG thought this statement was fine; Lowry suggested recording documented takes vs. PBR by comparing fishing effort and observer coverage with percentage of PBR that known takes encompass.

AT1 killer whales

Matkin presented on his confidence level assessment of the individual components and the overall SAR, which was determined to be an interesting exercise for review, as well as minor editorial comments. Straley commented on a couple of additional publications to cite, including one by Barrett-Lennard noting that there are two reproductive females in the stock that are aging. Straley also inquired about a statement regarding a single mortality due to ship strike. Matkin responded that this event involved a whale with an AT1 haplotype, not a member from the AT1 population. That event was an AT1/Eastern Aleutians stock member, not an AT1 stock member. Lowry also commented that the "status of the stock" statement regarding zero mortality needs to be fixed.

Pacific white-sided dolphin

Straley noted that the SAR for the Pacific white-sided dolphin has remained unchanged and uses old data. Mathews noted that there is some new information in Dahlheim et al (2008) on this species. Straley commented that Pacific white-sided dolphins are occasionally sighted in inshore waters, but these are very brief episodes, unlike what is seen in British Columbia where they stay longer in inshore waters. Barrett-Lennard confirmed that Pacific white-sided dolphins are seen quite regularly in the inshore waters of BC, and added that photo-identification studies are being conducted. Straley inquired whether NMFS intends to conducted any studies on Pacific white-sided dolphins; Allen responded that she was not aware of any plans for research on this stock.

Harbor porpoise – Southeast Alaska

Mathews inquired as to why the southeast Alaska harbor porpoise survey data from 1993 and 1997 cannot be compared. Pendleton responded that this is due to the differences in the design of the study. Mansfield commented that the Yakutat gillnet fishery was observed from 3 years; those data are currently being analyzed, and a report will be available soon. Matkin added that the southeast Alaska and Gulf of Alaska harbor porpoise stocks represent another good example where it would be good to report which fisheries are known to have takes historically, which fisheries could potentially have unobserved takes, and the observer coverage for these fisheries. Straley commented that the methodologies of the surveys were confusing, and the trends were confusing. Straley also mentioned that the statement regarding an unconfirmed report of a harbor porpoise in a net should be removed. Mansfield added that in the past couple years, about 5% of the fisheries throughout the stock's range had observer coverage, not just Yakutat. There is a report in progress, and added that there were takes in both years. Eagle noted that classifying the stock as strategic seems reasonable, but the specific reasons defined in the SAR seem inconsistent with the MMPA. Mathews agreed to work with Allen on changing the language to clarify why the stock is considered strategic. Straley recommended that it would be advantageous to replicate the aerial surveys for southeast Alaska harbor porpoises because currently the two surveys cannot be compared, and therefore, trends cannot be determined. Eagle added that Mansfield's report may serve as justification for setting the stock at strategic. Barrett-Lennard inquired as to whether there is an increase in the potential for mortalities. Matkin responded that the fisheries have changed, and the SAR includes dated information on Copper River; however, harbor porpoise movements are unclear. Barrett-Lennard summarized that harbor porpoise are a concern; it is known that these animals are getting taken in fisheries, especially in southeast Alaska. The SARs do not seem to reflect the reality of the situation; we know there are fishery takes, and we know this is a problem. Pendleton suggested that harbor porpoise may be a good test case for extrapolating fisheries take data. **The SRG made the recommendation that harbor porpoises are an understudied species, and they need more attention.**

Harbor porpoise – Gulf of Alaska/ Bering Sea

Suydam noted that more sightings of harbor porpoises have been recorded in the Chukchi Sea over the last 3 years. He will confirm that these sightings can be reported in the SARs. Table 31 should be removed since there were no recorded takes.

Humpback whale – central North Pacific

Straley commented that based on the results of SPLASH, it seems appropriate to break up the existing humpback whale stocks into more stocks. If this is done, trans-boundary stocks will have to be considered. Eagle inquired whether or not the amount of time an individual spends in a specific area (SEAK vs. NBC) can be determined. Calambokidis responded that the SEAK/NBC estimate is around 3,000 individuals; Straley's estimate for northern SEAK of around 1,000 animals seems consistent with SPLASH findings. Eagle also noted that NMFS should work with BC researchers to obtain entanglement data. **Barrett-Lennard noted that there is a full-time person working on a stranding database and fisheries interactions of marine mammals in BC: as recommended previously, NMFS should contact this individual.** BC primarily has people monitoring when whales are seen entangled, not necessarily measuring incidental take. **Barrett-Lennard recommended that NMFS contact DFO, Canada to find out whether there is an effort to record and estimate marine mammal incidental catches.** Mansfield agreed to contact DFO regarding getting fisheries observer data and entanglement data. **Mathews recommended that NMFS include Northern BC in the SARs.** Matkin encouraged Wade and NMFS to break out humpbacks into feeding areas and calculate an abundance estimate and PBR level for these smaller units. Straley commented that this approach already seems to have been done in the central North Pacific SAR. Calambokidis noted that the Pacific SRG is gradually breaking out humpbacks into feeding areas, and this may have already been done. It was recommended that the Alaska SRG/ AFSC contact the Pacific SRG/ SWFSC to see how they are dealing with humpbacks in light of SPLASH results. Lowry suggested putting together a working group between Alaska and the Pacific to discuss how to consider humpback feeding aggregations within the SARs. **Suydam supported Lowry's suggestion to recommend that the AK SRG and Pacific SRG form a working group with other experts to determine how SPLASH data will be considered in the SARs. The SRG recommended forming a Joint subcommittee to work with the PSRG on humpback stocks.**

Gauvin expressed interest in the fact that there are a few pot interactions with humpbacks. Given the very low level of crab fishing in SEAK and the number (albeit few) of humpback entanglements in pots, the SRG/ NMFS might want to consider the fact that the fishing industry is considering gear modifications from the sablefish longline fishery; this fishery may be switching to pot gear. If there are already numerous pot entanglements with very low levels of pot fishing in this area, the SRG and NMFS may want to consider the effects of an increase in the number of pots if the sablefish longline fishery switches to pot gear. This should also be considered for any other gear modifications in other fisheries that may switch to pot gear; pots have a lot of vertical line. Barrett-Lennard noted that more reports of entanglements in BC are in Dungeness pot gear with gray whales. Straley also noted that an excellent human interaction report came out of the SPLASH data. This report is a separate report from SPLASH, and the results should be incorporated into the SARs.

Humpback whale – western North Pacific

Straley inquired as to whether the Russian feeding area will have a stock or a subunit. Calambokidis responded that the Commander Island whales got pooled with the Bering Sea in SPLASH. It is unclear what the various feeding areas are under the western stock. Straley inquired whether the stock should be defined as it is, or whether it should be broken out into feeding areas. Lowry inquired about the utility of having a central and western stock. Straley responded that it seems as if the shift from central and western stocks to feeding area stocks is being made. Mathews added that the mortality data is easier to

attribute to specific feeding areas than it is to breeding areas. Calambokidis commented that the smaller unit will always be more sensitive; it is the more conservative strategy to define stocks by feeding area instead of wintering area. Lowry suggested incorporating SPLASH data, but keep stocks defined as they are for now. A Joint subcommittee should be considered to discuss how to handle stocks, especially since humpbacks are up for review next year. Straley added that the Bering Sea/ Aleutian Islands has a separate PBR, so PBRs should be determined for feeding groups. Lowry also suggested considering calculating a PBR for feeding area subunits, and **encouraged a status review for humpbacks.** Straley commented that the human interaction report, genetics report, and other contract reports from SPLASH should be referenced for both humpback whale SARs, and the mortality data should be updated based on the interaction report. Suydam noted that there have been recent reports of humpbacks in both the western Beaufort and Chukchi seas. Straley noted that there has been an increase in whale watching and touring that could potentially cause a problem for humpbacks. Suydam commented on a subsistence take reported in Norton Sound and requested that NMFS verify whether this was taken or washed up dead and butchered; Suydam recalled it being the latter.

Angliss noted that Wade had calculated PBR based on a population estimate using an assumed CV of 0.3, which is quite conservative, and inquired whether the SRG would recommend using a less conservative number. Pendleton inquired whether or not CVs were calculated with the SPLASH data. Wade responded that this is in the works, and added that some CVs were calculated with mark-recapture data. Pendleton questioned what the differences in estimates would be if a smaller number than 0.3 was used. Wade responded that he would calculate this, although believe there would not be much of a difference except that it could bring some groups closer to exceeding 10% of PBR. Eagle suggested not splitting hairs on abundance and PBR estimates, as these could have impacts on negligible impacts, and mortality estimates are conservative. Lowry noted that with enough explanation of the data and selected methods, it seems acceptable to use a less conservative CV.

Dall's porpoise

Matkin lead the review by commenting that his confidence in all categories of the SAR is low. Mathews inquired whether Dahlheim's paper included enough information to calculate an abundance estimate. Barrett-Lennard noted that Sue Moore had some data on Dall's porpoise sighting and questioned whether these data will be analyzed with correction factors to estimate abundance. It was unclear to Barrett-Lennard what the logic was in not estimating Nmin from Moore's surveys, and if Nmin can (and should) be calculated, then so could a PBR. Nancy Friday responded that Moore's estimates could be biased, as they may include vessel attraction. Wade added that Toshio Kasuya expressed caution with using a standard correction factor for Dall's porpoise because certain areas may vary in vessel attraction rate (e.g., nursery areas). Friday also commented that AFSC pollock surveys are also collection Dall's porpoise data, which occurred in 2008 and will again in 2010. Mathews inquired about Dall's porpoise counts from the harbor porpoise aerial surveys. Friday noted that data do exist on Dall's porpoises from Bristol Bay. **Mathews recommended encouraging NMFS to analyze Dall's porpoise data that have been collected during surveys for other species.**

Sperm whales

Straley noted that data exist on sperm whale movements and photo-id in a contract report to NPRB. Straley added that an abundance estimate for the eastern Gulf of Alaska was calculated to be approximately 120-130 individuals, although this estimate may be biased towards whales following fishing vessels. Approximately 20 biopsies were also collected, which are being analyzed by Sarah Mesnick's lab. Mathews questioned whether it is possible to do photo-id on sperm whales. Straley responded that it is feasible, but there is not much funding to support a study. Straley also noted that mortalities are reported in the SAR; however, it should be noted that these were serious injuries. Gauvin and Straley both suggested that the passive deterrents, interactions, and depredation section could be cleaned up a bit, and Straley agreed to assist with that. **The SRG noted that stock structure and population abundance data are needed for sperm whales, and recommended that NMFS put forth an effort to collect these data.**

Straley commented that Chris Lunsford from the NMFS Auke Bay lab has been going out with fishing vessels to set quotas for next year, and he expressed concern that sperm whale depredation is influencing the quota. Lunsford would like to see a better measure of depredation rate developed. Straley noted that the presence of sperm whales near a fishing vessel does not necessarily mean depredation; this is an interaction. Aaron Those is monitoring the acoustics of sperm whale clicking on fish hooked on the longline; it is assumed that clicking followed by a silent period indicates the whale successfully took the fish off the line. Mathews inquired whether or not NMFS has any plans to conduct sperm whale surveys. Angliss responded that there is funding from the Navy to conduct surveys in the Gulf of Alaska, and although these surveys are not specifically designed for sperm whales, they may be included in the sightings data. These surveys are conducted south of Cook Inlet, partially on the shelf, then off the shelf; it's a fairly small box. Straley responded that the shelf edge all the way to Kodiak would be a good area to survey for sperm whales. Wade added that it would be a good idea to survey the shelf edge and collect photo-id, biopsies, and abundance data. Smaller-scale surveys may be possible, especially if they were piggy-backing on other projects. Wade also added that Holly Fearnbach had sighted sperm whale females and calves during the pollock surveys in winter 2008 off the Aleutians. Sally Mizroch is trying to match IWC data on smaller animals with those animals that Holly sighted, although it doesn't appear that these smaller animals exist in the whaling data.

Fin whale

Matkin expressed the need for further research into the potential that 2 or more fin whale stocks exist in the North Pacific, especially based on Mizroch's findings. Matkin and Mathews added that the 4% Rmax seems reasonable based on Zerbini et al. (2006). Alex Zerbini concurred that this is a more conservative number, and supported the SRG's decision to use a more conservative estimate. Matkin stated that more information needs to be included on ship strikes of fin whales; there was one ship strike in 2007. Gauvin noted that ship strikes of fin whales could be over-reported because many unknown Balaenopterids are identified as fin whales. Gauvin added that there was also a ship strike of a fin whale that came into port on the bow of a processor vessel. NMML should contact the AKR to obtained more reports on fin whale ship strikes. Suydam commented that there has been an increase in reports of sightings of fin whales in the Chukchi Sea.

North Pacific right whale

Matkin inquired whether any attempt at a mark-recapture analysis will be made. Zerbini responded that photos are still being analyzed, but this is a future goal. Mathews recommended updating the right whale SAR to reflect the total photo-identification counts of individuals, as well as counts based on genetics data. Gauvin inquired about concerns with the designated critical habitat and the fishing industry, specifically regarding the amount of fishing effort that occurs in this area during the period that the right whales are believed to be using the critical habitat area. Fixed gear, pots, and vessel strikes are major threats to right whale on the east coast. Gauvin added that he is able to obtain haul by haul confidential fishing data for this area, which will be presented in a report that he is hoping to publish. Amy Kennedy commented that there is one photograph of a North Pacific right whale with evidence of gear entanglement from the 1980's, but the quality of this photo is very poor. Gauvin added that the SAR states that the probability of right whale entanglement in fishing gear is low due to a low density of fishing gear. Gauvin confirmed that there is not much fishing that occurs within the right whale critical habitat box in the Gulf of Alaska; however, there is a lot of fishing that occurs in the critical habitat area designated in the Bering Sea. Gauvin expanded on this further, stating that there are many locations within the Bering Sea critical habitat area where the cod longline fishery occurs, as well as the flatfish trawl fishery; pollock fishing occurs primarily along the deepest part of the shelf break, including the southwest edge of the pentagon designated as critical habitat for right whales in the Bering Sea. Gauvin added that many of the sightings of right whales in the critical habitat area occur outside of the fishing areas that also occur within the area. Gauvin included information on trawler speed, which is typically about 8-10 knots.

18) Closed session – SRG issues - membership

Gauvin mentioned that he is still considering stepping off the SRG once a replacement is found for him. Gauvin spoke with Carl F. from University of Alaska, Fairbanks regarding being an SRG member. Carl is a data manager for confidential fishing data in Bristol Bay, with a focus on North Pacific right whales. Dave Fraiser is another potential replacement to consider. Gauvin expressed that it would be helpful if data could be used to manage the fleets, however, this is limited by data confidentiality. Straley mentioned that she will reconsider her decision to step off the SRG and will get back with the SRG regarding her decision. Mathews reminded the SRG that they should consider the expertise of any members stepping off, and consider possible replacements that can fill that expertise. Lowry reminded the SRG that Brendan Kelly will soon be employed by NMFS and will no longer be able to serve as an SRG member. The question was posed as to whether Federal employees can be members of the SRG. Suydam recommended a WWF person as well as Lori Quakenbush.

Angliss reminded that SRG that in the past, the SRG sent her a list of the type of expertise they were looking for – population ecologist, geneticist, etc. Angliss then researched potential candidates and developed a list of potential members. Angliss sent the profiles of individuals out to the SRG, and the SRG made a selection. These selections were then sent to NMFS Headquarters for approval, after which an appointment letter was drafted. Gauvin noted that "unobserved" fisheries are one of the biggest holes on the SRG, and suggested it might be worth bringing in someone with expertise on fishing in state waters such as Beth Stewart. Straley added that with the increase in coastal fisheries, there will probably

be more humpback fisheries interactions, so it would be good to get a fisheries person on the SRG. Any recommendations will ultimately go to Jim Lecky (Director, NMFS F/PR) for approval.

19) Update on SPLASH: John Calambokidis

Over 500 participants from 50 organizations participated in SPLASH, a coordinated effort throughout the North Pacific. Numerous region-based studies existed, and SPLASH built on the regional efforts to conduct and ocean-wide study. SPLASH was initiated in 2003 and was modeled after YoNAH, an ocean-wide study of the North Atlantic humpback whales. SPLASH was supported by NOAA and many other organizations and involved both photo-identification and genetic studies. Over 5,000 samples were collected from known breeding and feeding areas.

Sightings were rather consistent in feeding areas; very few whales were re-sighted in other feeding areas, with the exception of southeast Alaska and northern British Columbia. Based on data collected since the 1970's, it appears there is maternally directed sight fidelity on the feeding grounds. Migratory movements of humpbacks in the North Pacific are not simple. In the Bering Sea/ Aleutian Islands, some individuals were sighted with an unknown winter breeding area; it is still unknown where this undiscovered breeding area exists.

Based on a mark-recapture analysis, the population estimate for the entire North Pacific is 18,000-21,000 humpback whales. A Hilborn model estimated an abundance of 17,500 from sightings in wintering areas and 19,000 from sightings in feeding areas. A total of 4 wintering areas and 6 feeding areas were studied. The Bering Sea/ Aleutian Islands was a difficult area to sample, thus resulting in fewer matches and a lot of data uncertainty. Several regional studies showed a 5-7% annual increase, and SPLASH results seem to support these findings.

Genetic studies were led by Scott Baker. These studies used mtDNA to investigate stocks or management units of humpback whales. A total of 27 haplotypes were found from two clades based on the analysis of 1,918 samples from 1,856 individuals. Genetic evidence supports the existence of at least 6 breeding stocks and at least 7 feeding stocks. It is believe that there is a wintering area for some whales that is currently unidentified. Results revealed very different haplotypes that will have to be considered in management, but there was no specific defining line. The overall abundance for the North Pacific is approximately 20,000 whales, suggesting that the population has increased to near a pre-whaling estimate of abundance.

Calambokidis presented the following implications of the SPLASH results for Alaska SRG:

- It is best to use distinct feeding areas as units for evaluating impacts on feeding grounds
- There are certainly more management units than those currently being defined in SARs, and possibly more than identified in SPLASH
- A finer-scale examination and analysis of all SPLASH samples would help identify management units and likely boundaries
- There may not be hard boundaries for stocks or management units, but genetics indicates a need to manage humpbacks by smaller units

Wade explained that the CV used to calculate a population estimate is typically between 0.05 - 0.2; however, he used 0.3 to be extremely conservative; using a large default gives much higher estimates than what was found in SPLASH. Eagle mentioned that now with results from YoNAH, MoNAH, and SPLASH, the time has come for a status review of humpback whales. NMFS HQ is currently in discussions regarding evaluating the status of humpback and reviewing the listing as an endangered species. Wade added that if we were to consider humpback populations during a glacial period, there is probably more diversity in coastal areas, which would be new feeding areas if glaciers no longer exist. Calambokidis added that perhaps populations were depleted by whaling, then some recovered better than others, resulting in variable genetic diversity especially if there is more mixing between populations as they recover. Barrett-Lennard mentioned that there is also a higher probability of mating when whales get to the breeding grounds. Calambokidis added that it is possible that results from photo-id suggest movements between areas, but in reality, perhaps these animals were just captured while they are passing through an area. The genetic differences are impressive, but the movement data are intriguing. Wade suggested the possibility of a Founder effect, which then experienced a bottleneck; the Revilliagididos and Hawaii whales show a very interesting genetic similarity.

Calambokidis proposed defining stocks with smaller management subunits, and inquired how this would differ from actually designating them as separate stocks. Eagle responded that this is similar to the *Tursiops* issue in the Atlantic; lumping stocks is a problem with attributing mortalities to a particular stock. Wade added that it would be easier if all serious injuries and mortalities occurred in feeding areas, takes are occurring in both summer and winter areas. Perhaps it is better to manage humpbacks on the feeding areas since more takes occur in Alaska feeding areas than on the breeding grounds. It could be advantageous to define stocks based on feeding areas because MMPA triggers specific management actions when the number of serious injuries and mortalities exceeds the PBR of a stock. By defining feeding aggregations as stocks, local impacts of serious injuries/mortalities on a stock are directly considered, and if certain conditions are met, Take Reduction Teams (TRTs) can then be developed to address the fisheries causing the serious injuries/mortalities. A TRT cannot be developed for a management subunit. Pendleton added that if one of the contributing sources (units) is small, and then a take occurs, there is a need to ensure that management measures are conservative enough to account for the rarest contributor. Wade added that it will be good to keep this in mind for the status review; some of the Asia whales do go into the Bering Sea/ Aleutian Islands area where they could potentially get entangled. Given that the Asia population is very small, a single take would have a greater affect on the Asia unit than it would on a larger unit. Pendleton noted that these takes may be rare occurrences; however, they could have detrimental effects on a small population. Straley added that population structure is still somewhat unclear; there are still some unresolved issues for certain areas, such as Prince William Sound.

Straley gave a summary of the humpback whale serious injury determinations. Humpback whale injury records were reviewed by Lowry, Matkin, Straley, Mathews, and Wynne. Straley noted that at least 50% of the humpback whales photographed do have entanglement scars. During the injury assessments, there was complete agreement in 52% of the cases. In 34% of the cases, 4 or the 5 assessors agreed, and in 14%, 3 or less were in agreement. In the cases where determinations were in agreement, this was based on the records lacking details for a positive determination, the injury was pretty straightforward, or the animal was dead. Cases identified as “CBD “ (cannot be determined) included unknown gear, unknown

location of gear on the whale, how long the animal was observed when not diving, or little information was provided but the fact that the whale was not diving implies some impediments to feeding or movement. In the cases of vessel collisions, more information is needed on boat speed and boat length to determine if injuries are serious or not. It was also suggested that input from a veterinarian would be beneficial in several cases. Pendleton inquired about the ability to identify individual whales that get injured. Straley responded that it is very easy to identify individuals in certain areas that are well-studied.

20) Update on sperm whale depredation: Chris Lunsford (presented by Jan Straley)

Jan Straley presented a summary of sperm whale depredation in the sablefish longline fishery that Chris Lunsford had compiled. The sablefish longline fishery is one of the largest fisheries in Alaska, grossing approximately 100 million metric tons annually. In 1995, an AFQ program was initiated, which recommends a quota each year for this fishery, which is primarily a hook and line fishery. Sperm whale interaction data have been recorded since 1998 in this fishery. The presence of sperm whales around fishing vessels does not necessarily mean depredation, as this fishery does occur in an area that is known to be a traditional feeding ground for sperm whales. Detecting evidence of depredation is difficult, as there are few damaged fish per set. A decline in catch may not be detectable, especially due to between-station variability or low depredation rates. A definite increase in depredation has been noted, especially in areas immediately west and east of Yakutat, although depredation is difficult to quantify. More research into depredation is needed.

Straley mentioned that no known mortalities of sperm whales have occurred in this fishery, although there have been entanglements. Japanese observers reported sperm whale interactions as far back as the 1970s. Gauvin noted that there are fewer boats now and for a longer time period; sperm whales can learn which boats to follow. Gauvin added that depredation was reported when this fishery was a year-round fishery with Japanese vessels; as the fishing season became a shorter and shorter period, there was an increase in depredation. Straley mentioned that there are continuing efforts to study sperm whale depredation.

21) Update on North Pacific right whale research: Alex Zerbini

Alex Zerbini presented on the progress of the North Pacific right whale project. Historically, there were more than 15,000 catches of right whales in the North Pacific during the 19th and 20th centuries. The motivation for current research is based on the need for better data to assess the potential impact of oil and gas development, specifically in the North Aleutian Basin Lease Area. In 2008, aerial surveys were conducted in July and August, and ship-based surveys in August and September. A total of 7,200 miles were flown over this 2 month period. Photo-identification studies revealed 7-9 individuals from photos taken during ship surveys, and 6 individuals from aerial surveys. Four of these individuals were photographed during both the ship and aerial survey efforts, resulting in a total of 9-11 individual whales identified during the 2008 season. A total of 302 sonobuoys were also deployed.

22) Discussion of SAR confidence assessment exercise

Mathews lead a discussion of the SAR confidence assessment exercise, in which the SRG reviewers rated their confidence in the data provided in each section of individual SARs, and suggested including a table of the SRG's overall confidence in individuals SARs and SAR components. Matkin stated that he liked

the idea. Lowry commented that the quality of the SAR should be obvious during the review. Allen inquired about the purpose of the table; is the intention of this table for the public to see the SRG's assessment of confidence of the SARs, or is the target audience NMML and the SRG? Mathews responded that the table would be important for both the public as well as NMML and the SRG; the SRG knows the data pretty well, and sometimes the SRG's confidence in the SAR data may not be obvious to the public. Barrett-Lennard also expressed support in this exercise. Angliss and Eagle added that there was a report on the SARs and the quality of the data presented in the SARs that was published in a Marine Mammal Stock Assessment Improvement Plan in 2004. This assessment is typically conducted annually, in which the SARs are categorized on a scale of 0-5 in order to assess how the SARs process is progressing. Eagle suggested the possibility of providing the SRG with an update of this review process at the 2010 SRG meeting. Eagle also agreed to send the most recent report to Allen for distribution to the SRG. This report and process is used as a method for justifying obtaining funding for stock assessment.

23) Summary of SRG recommendations from 2009 meeting, discussion of 2010 meeting, and closing comments

Mathews presented a summary of the SRGs recommendations to NMFS that resulted from discussions at the 2009 meeting (see Appendix ## for summary of recommendations). Mathews also lead a discussion regarding the 2010 meeting, and suggested inviting Hal Caswell to discuss estimating fishery interactions in fisheries with low or no observer coverage. Anchorage was suggested as a first choice venue option, with Seattle a second option, and the first week of February was suggested. Gauvin suggested discussing the outcome of a meeting to be held by the North Slope Borough in July to assess the effect of increased shipping in the Northwest Passage and the potential for ship strikes. Angliss provided an update on the new marine mammal parts import/ export/ possession permit in the event that SRG members might want to use NMML's permit or apply for their own import-export-possession permit. There are several new terms and conditions, including caps on samples per species; if these caps are exceeded, NMML has to cease all activity under the permit. This differs from the previous permit, which authorized an unlimited number of samples per species. Another change to the permit is the requirement that samples intended for import must have been collected under conditions consistent with the MMPA, ESA, and AWA; NMML is currently not allowing any imports under this permit until HQ clarifies this language in the permit. A third change in the parts permit is that this permit does not authorize collection of parts from strandings, which was allowed in the previous permit. Instead, authorizations are granted through Letters of Authorization obtained from the Alaska Region stranding network.

Appendix 1: 2008 SRG meeting agenda

ALASKA Scientific Review Group (SRG) MEETING

AGENDA (6 February 2009 FINAL)
Traynor Room, Building 4, NOAA WRC facility, Seattle, WA
February 10-11 (Tues-Wed), 2009

Goals: Conduct reviews of the science in 25 stock assessment reports prepared by the NMFS (23) and the FWS (2). Are any current, pertinent research results not incorporated? Consider ranking the strength of the conclusions in the SAR, as per our discussion in 2008. Discuss issues, identify critical data gaps (narrow and broad), identify letters to send, describe action items.

Bring: Copies of your stock assessment reviews (ideally in electronic format) to give/send to Dee Allen, Robyn Angliss, and Beth Mathews.

Feb. 10, Tuesday

8:30 am		minutes
1. Adoption of agenda		5
2. Adoption of minutes from January 2008 meeting		5
3. Introductions and Membership		15
4. Administration, Travel		5
5. Election of new Alaska SRG Chair		10
6. Summary of letters sent by the Alaska SRG in 2008 and responses		10
7. Follow-up from Joint SRG meeting		10
8. Update on narwhal distribution & possible SAR implications	R. Suydam	5
9:30		
NMFS, NMML:		
1. NMML research priorities & prioritization process	John Bengston	20
2. Harbor seal stock structure	Peter Boveng	15
Questions/Discussion		10
10:30-10:45 BREAK		15
11:00 NMFS, NMML (cont.):		
3. Ice seals: status review and research	Peter Boveng	20
4. Use of unmanned aircraft to study marine mammals	Robyn Angliss	5
5. Cook Inlet beluga whales	Kim Sheldon	10
Questions/Discussion		15

12:00 – 1:30 LUNCH

1:30 *FWS:*

Pacific Walrus: Petition to list & SAR updates	Suzann Speckman	20
	Questions/Discussion	15
Polar Bears: Final Rule & ESA Listing	Terry Debruyn	20
	Questions/Discussion	15

(Doug Burn, MarkUdevitz, Rosa Meehan will participate via video-conference.)

2:45-3:00 BREAK 15

3:00 Begin scientific reviews of Stock Assessments. 120

(B. Kelly and K. Wynne will not be present at the meeting, but they plan to submit written comments on selected stocks, which will be delivered by other members of the group.)

	Stock	**Primary Reviewers**		
1 .	Polar bear	Robert Suydam	(Brendan Kelly)	George Noongwook
2 .	Pacific walrus	George Noongwook	(Brendan Kelly)	Grey Pendleton
3 .	Bearded seal	Robert Suydam	Lloyd Lowry	George Noongwook
4 .	Ringed seal	Robert Suydam	(Brendan Kelly)	George Noongwook
5 .	Ribbon seal	George Noongwook	(Brendan Kelly)	Lloyd Lowry
6 .	Bowhead whale	George Noongwook	Robert Suydam	John Gauvin
7	Spotted seal	Robert Suydam	Lloyd Lowry	(Brendan Kelly)
8 .	Beluga whale, Cook Inlet	Robert Suydam	Lance Barrett-Lenard	(Kate Wynne)

5:00 Closed session discussions. 20

5:20 Closing comments and planning for day 2. 10

5:30 Adjourn for the day.

Feb 11, 2009 Wednesday, ASRG meeting, Seattle **Day 2**

8:30 Overview of day's schedule. 10

8:40-11:00* 170
Continue scientific reviews of Stock Assessments.

	Stock	Primary Reviewers		
9 .	Steller sea lion, eastern stock	Lance Barrett-Lenard	Grey Pendleton	
10 .	Steller sea lion, western stock	Craig Matkin	Grey Pendleton	John Gauvin
11 .	Northern fur seal	Lloyd Lowry	Brendan Kelly	(Kate Wynne)
12 .	Harbor seal, Southeast Alaska	Grey Pendleton	Beth Mathews	Lance Barrett-Lenard
13 .	Harbor seal, Gulf of Alaska	Grey Pendleton	Beth Mathews	Lloyd Lowry
14 .	Harbor seal, Bering Sea	Grey Pendleton	Beth Mathews	
15 .	AT1 transient killer whale	Craig Matkin	Lance Barrett-Lenard	Jan Straley
16	Pacific white-sided dolphin	Lance Barrett-Lenard	Jan Straley	
17 .	harbor porpoise, Southeast Alaska	Jan Straley	Beth Mathews	
18 .	harbor porpoise, Gulf of Alaska	Craig Matkin	Beth Mathews	
19 .	harbor porpoise, Bering Sea	Beth Mathews	*volunteer?*	

As part of our AT1 transient killer whale stock review (above), we will also address issues regarding new conditions in permits for research involving satellite and other tagging. 10

10:30-10:45 BREAK 15

(* We will take a break at this time, wherever it falls in the SAR review sequence above.)

11:00 Status of Population Levels, Abundance and Stock of Humpback Whales (SPLASH)
John Calambokidis, Cascadia Research 20
Questions/Discussion 10

11:30 Humpback whale serious injury determinations Jan Straley 10

11:40 Continue scientific reviews of Stock Assessments.

	Stock	Primary Reviewers	
20 .	Humpback whale, WN Pacific	John Gauvin	Jan Straley
21 .	Humpback whale, Central N Pacific	Lloyd Lowry	Jan Straley

12:00 – 1:30 LUNCH

1:30 – 2:45 Continue scientific reviews of Stock Assessments.

	Stock	Primary Reviewers		
22 .	Dall's porpoise	Craig Matkin	Lance Barrett-Lenard	(Kate Wynne)
23 .	Sperm whale	John Gauvin	Jan Straley	
24 .	Fin whale	John Gauvin	Craig Matkin	(Kate Wynne)
25 .	Northern right whale	John Gauvin	Craig Matkin	(Kate Wynne)

Sperm whale depredation Jan Straley 10
(Presentation in association the sperm whale stock review above.)

3:00-3:15 BREAK 15

Action items from this meeting.

Closing comments; dates, location, and topics for 2010 ASRG meeting

~ 4:30 Adjourn

Appendix 2: SRG recommendations to NMFS

1) The SRG recommends that the USFWS not release the walrus population estimate and PBR to the public in the SAR if these data are not ready, and the SRG does not support the USFWS publishing an abundance estimate, Nmin, or PBR in either the Chukchi polar bear or the walrus SARs. The SRG will send a letter to the USFWS regarding their opinion of using an abundance estimate that is questionable in the SARs; this number will be used if it is published.

2) The SRG noted that harbor porpoises are an understudied species, and they made the recommends the NMFS obtain better data on harbor porpoises for stock assessment.

3) The SRG recommends that NMFS contact DFS, Canada, to obtain data on serious injuries and mortalities (stranding database and incidental mortality data) of marine mammals in British Columbia, and that these data be incorporated into the SARs.

4) The SRG recommends that the AK SRG and Pacific SRG form a working group with other humpback whale experts to determine how SPLASH data will be considered in the SARs. The SRG recommended forming a Joint subcommittee to work with the PSRG on humpback stocks.

5) The SRG encouraged NMFS to conduct a status review for humpback whales.

6) The SRG recommends NMFS to analyze Dall's porpoise data that have been collected during aerial and ship surveys for other species.

7) The SRG noted that stock structure and population abundance data are needed for sperm whales, and recommends that NMFS put forth an effort to collect these data.

Appendix 3: List of Participants at 2008 Alaska SRG meeting

Participants:

SRG Members:
Beth Mathews (Chair)
George Noongwook
Grey Pendleton
Robert Suydam
Jan Straley
John Gauvin
Craig Matkin
Lloyd Lowry
Lance Barrett-Lennard
Dee Allen (NMFS – Executive Secretary)

Observers:
Robyn Angliss
Bob Gisiner
Bridget Mansfield
Kate Savage
John Bengtson
Suzann Speckman
Megan Ferguson
Alex Zerbini
Amy Kennedy
Nancy Friday
Kim Shelden
Paul Wade
Marilyn Dahlheim
Tom Eagle