

North Pacific Fishery Management Council
Steller Sea Lion Mitigation Committee Meeting
October 30-November 1, 2006
Alaska Fisheries Science Center, Seattle

Minutes

The North Pacific Fishery Management Council's Steller Sea Lion Mitigation Committee (SSLMC) convened at the Alaska Fisheries Science Center in Seattle, October 30-November 1, 2006. Members attending this meeting were: Larry Cotter, Chairman, and Jerry Bongen, Julie Bonney, Sam Cotten, Ed Dersham (non voting at this meeting), Kevin Duffy, John Gauvin, John Henderschedt, Dan Hennen, Earl Krygier (State of Alaska), Terry Leitzell, Dave Little, Steve MacLean, and Art Nelson. Also attending were Bill Wilson (NPFMC Staff), Kristin Mabry and Melanie Brown (NMFS AK Region Staff), Doug DeMaster and Lowell Fritz (AFSC Staff), and members of the public.

Chairman Cotter introduced the SSLMC to the agenda (attached) and two items were added: a presentation from Dr. DeMaster on killer whale predation data, and an overview by John Gauvin on the status of work by the Experimental Design Committee. The minutes from the September 12-13, 2006 SSLMC meeting were approved. Chairman Cotter and Bill Wilson provided the Committee with an update from the Council's October 2006 meeting in Dutch Harbor and a review of recent Board of Fisheries (BOF) actions. Chairman Cotter reported that the Council was interested in the SSLMC's review of the preliminary draft Biological Opinion (BiOp) chapters, and some of the issues raised in that document. Mr. Cotter noted particularly that there is concern over the preliminary findings in the BiOp that considers killer whale predation unlikely to have been a contributor to the SSL decline and unlikely to be inhibiting recovery, and the finding that fisheries are a likely contributor to the decline and a likely factor inhibiting the SSL recovery. Cotter raised these as two major issues of concern, and felt that the SSLMC concurred with this. Discussion among the SSLMC indicated a general consensus of concern in these two areas.

Chairman Cotter also reported that the BOF has recently approved a 3,000 mt pollock fishery in State waters in the Adak area; that fishery would occur in some currently-closed SSL protection areas. Dr. DeMaster reported that this action has raised some concerns with NMFS, particularly a concern that if this fishery proceeds, it would constitute a change in the baseline upon which the agency is currently consulting, and may require a new consultation. The action may also require an analysis and consultation under Section 10 of the ESA given the potential need for an authorization for take of SSLs since that authorization would not be part of the current Incidental Take Statement contained in the current BiOp. The Agency is also concerned over the potential litigation aspects of this issue. Confounding this issue is the pending Exempted Fishing Permit (EFP) application before the Agency and the Council; this also requires a consultation since it involves a pollock fishery in the same area and in some areas currently closed to pollock trawling as a SSL protection measure. Dr. DeMaster outlined some of the options the Agency is considering for possible action. The Committee discussed ramifications of the BOF action and some of the alternatives the Agency is considering. Additional meetings and discussions among the BOF and the Agency will likely continue to clarify such issues as total tonnage of pollock that would be allowed under the combined State fishery and the EFP fishing activity, and the start dates for the BOF fishery. These activities, and additional consultations, will likely affect the ongoing FMP level consultation, shifting the schedule for completion of the draft BiOp into the future. Additional updates on these issues will be brought to the Council in December.

Killer Whale Predation

Dr. DeMaster presented a set of data that summarize the potential levels of killer whale predation on SSLs and other marine mammals in the North Pacific. These data are based on bioenergetics modeling work by Dr. Terrie Williams and her colleagues at the University of California at Santa Cruz and by Dr. Paul Wade and his colleagues at the National Marine Mammal Laboratory (NMML). A handout was provided. Essentially, the two sets of data are two models of potential levels of predation on SSLs, based on the numbers of transient killer whales believed to occur in the North Pacific, and the magnitude of this removal from the wSSL population annually relative to other sources of SSL mortality. The data conclude that the annual mortality of SSLs from killer whales under the Williams model is a range of 1853 to 5096 SSLs and under the Wade model is a range of 587 to 1627 SSLs. The SSLMC asked questions and discussed these data in light of conclusions reached in the preliminary draft chapters of the BiOp and in light of their understanding of the numbers of transient killer whales present in the region, the percentage of their diet that is comprised of SSLs and other marine mammals, and killer whale migratory behavior. Dr. DeMaster noted that the Agency believes that up to 25% of the annual mortality of wSSLs could be caused by killer whale predation, not enough to be a major contributor to the decline and lack of recovery but certainly a possible factor. The degree to which the Agency believes this predation is inhibiting recovery is still under review.

Proposal Ranking Tool (PRT) – SSC Comments

Chairman Cotter introduced the main topic for this SSLMC meeting: continued work on the Proposal Ranking Tool or PRT. The PRT was presented to the Council's SSC in Dutch Harbor, and the SSC minutes will be addressed by the SSLMC during this meeting this week. John Gauvin noted that we now have data on bycatch of other SSL diet items and how we might include these data in the PRT. The SSC was silent on this issue, and the SSLMC likely will consider these data in evaluating proposals, but outside the PRT.

Bill Wilson recapped the SSC comments. Some of these comments are observations and do not require a response, while others are more substantive and the SSLMC agreed should be considered by the SSLMC and the model adjusted accordingly. The SSC noted that this PRT is a tool that can be used to judge proposals, although it is but one of many other tools the SSLMC may use. The SSLMC concurs and has already identified a number of additional tools or sources of information it may use to evaluate proposals.

The SSC comments were reviewed briefly and the following comments were made:

SSC Comment #1. The SSLMC agrees that the PRT will help compare proposals and combinations of proposals.

SSC Comment #2. The Structural Adjust feature in the model is a confusing part of the AHP procedure, and the SSLMC agreed to run proposals and score them with and without the Structural Adjust. This will be a way to test how it affects proposal scores. The Committee discussed being consistent in evaluating proposals – either use this feature or not, but be consistent. Dr. Hennen expressed that this feature may be an artifact of the way the AHP procedure is constructed and that the Structural Adjust could affect one proposal more than another. The SSLMC will run proposals both ways.

SSC Comment #3. The SSLMC agrees it should revisit the issue of ranking a proposal that might affect distance zones around sites and numbers of sites. For example, a proposal that might affect the 0-3 n mi zone around a single SSL site versus another proposal that might affect the 0-3 n mi zone around many SSL sites could be ranked the same; currently any activity in 0-3 n mi is treated equally. The SSLMC will revisit this part of the model. The SSLMC also agrees to sensitivity test the model and to be sure scorings reflect Committee members' intents (and common sense).

DRAFT

SSC Comment #4. This asks for more rationale for how the SSLMC constructed this model and the elements in the hierarchy that were chosen and the weightings given each element in this hierarchy. The SSLMC agreed to develop this rationale.

SSC Comment #5. The SSC suggested that the SSLMC consider the number of SSL sites in a region and perhaps weight impacts on a region that contains more SSLs or SSL sites differently than in an area that contains fewer SSLs or SSL sites. The SSLMC noted that it has discussed this previously, and did not find a justifiable reason to weight such regions as being more or less sensitive. This will be discussed further. The SSC suggestion for investigating data on special or more sensitive SSL sites will be followed as well; the SSLMC suggested that given the lack of data range wide for the wSSL, it might be able to consider such data outside the model.

SSC Comment #6. Fishing rate can be considered an indicator of potentially adverse effects on the SSL prey field (high catch rate, prey reduced accordingly, less food for SSLs), but it also can be considered an indicator of little effect (lots of prey, high catch rate, therefore lots of food available to SSLs). The SSLMC agreed to discuss this further, but suggested that no resolution to this dilemma will be likely unless we obtain input from PR or discuss this further with pollock stock assessment biologists at the AFSC.

SSC Comment #7. The Committee agrees that PR should review the PRT. A report will be provided to PR as soon as it is completed.

SSC Comment #8. The SSLMC recognizes the non-alignment of fishery management area boundaries with SSL census boundaries. The SSLMC consciously has chosen to rank proposals in terms of how they might affect SSL census areas, as opposed to areas receiving TAC allocations, to better provide a tool for evaluating potential impacts on wSSL population subunits. Data on regional SSL trends are summarized by SSL census region. Additional consideration of this issue will occur in this meeting.

SSC Comment #9. The SSLMC will re-look at the node structure of the PRT.

SSC Comment #10. The SSLMC discussed this at length. The Committee previously considered adding more than two seasons to the model, but because of lack of more refined data by subseason agreed to stay with summer and winter. While a third season encompassing the sensitive period of time, spring, when females are just beginning to wean juveniles, are pregnant and about to deliver pups, and are about to become pregnant, the SSLMC felt that their previous scorings of importance of the summer season included this consideration. The SSLMC also felt that they would require additional data to justify adding a third season, and additional time to reconfigure the structure of the model.

The SSC also provided two additional comments, one suggesting caution in interpreting small differences in scores that might come from comparing proposals using the PRT, and another expressing caution in over weighting proposals that might provide a "management bonus". The latter issue will be considered by the SSLMC, but outside the PRT process. The SSLMC agrees with the SSC's first comment and will be cautious in evaluating scores developed for proposals evaluated using the PRT.

Experimental Design Committee

Mr. Gauvin summarized the discussions that this Committee had several months ago. Essentially, the Committee is stymied at this time and does not have a good suggestion for how to proceed further. The issue is how to design a study that will tease out the effects of fishing on SSLs. A previous idea to monitor nursing female attendance patterns (length of time away from a pup while foraging) in areas where fishing occurs, and does not occur, realistically cannot be developed further. No substantive pollock, cod, or Atka mackerel fisheries occur in such areas (requires fishing during spring and summer months). Other ideas were explored that might be applied to the Atka mackerel fishery, but a suitable measure of effect on SSLs could not be developed. The AI pollock EFP concept is good, but it measures effects on the prey field, not direct effects on SSLs. Using this approach (hydroacoustic surveys of biomass before and after fishing) on Atka mackerel won't work because of its lack of a swim bladder. There may be potential for some kind of experiment involving pollock in the GOA, but this requires more

work and discussion; needed is a pollock fishery in the GOA in an area where nursing SSLs can be monitored. The Committee thought doing an experiment in the AI region would be better, to get into areas where SSLs are not responding as well as hoped, but most approaches to monitoring SSLs directly would involve a large scale telemetry project, which is unlikely to be approved in the current climate of concern over tagging SSLs (to wit, the Humane Society litigation). There was some discussion on using any new pollock fishery in the AI as a basis for an experiment since pollock have not been fished in the AI region for 6 or more years; i.e., could a SSL response be measured during and after this AI pollock fishery occurs to compare with SSL data collected during these past years of no pollock fishing.

Preliminary Discussions and Overview of the PRT

The SSLMC was provided an overview of the PRT based on the PowerPoint presentation given to the SSC, AP, and Council at the October meeting in Dutch Harbor. During this presentation, the SSLMC discussed the model in general terms, revisiting the rationale behind its main structure. The PRT is designed to evaluate a proposal in terms of potential effects on SSLs. The SSLMC determined that this issue could logically be broken down into two main questions: effects of fishing on SSLs directly (by either affecting their food sources or SSLs themselves), or effects of fishing on the prey field. The SSLMC acknowledged that the model could be structured in other ways, but that these two main questions are the most important issues related to fishery effects on SSLs. Those two main elements are weighted about 60:40, although the structural adjust feature in the model revises these proportions to 75:25 (which is presented on the summary graphic in the PowerPoint presentation given to the SSC).

The Committee discussed these proportions. The higher weighting on effects on SSLs is due partly to SSLMC concerns over fishery effects on the *needs* of SSLs – space around sites to forage, food that may vary by season and region, and how many sites occur in a region, among other variables. The effect on SSLs also includes potential effects on SSL access to fish. Dr. DeMaster indicated that this model structure and its ranking of the relative importance of fishery effects are in agreement with the current BiOp, because it answers the question: are fish available to SSLs in terms of localized depletion and overall abundance, with localized depletion being a more important consideration. The Committee discussed how this part of the model addresses how fishing may affect SSLs through disturbance or SSL foraging near sites, and thus addresses competition for prey.

The Committee generally reaffirmed the main structure of the model and the higher weighting for a proposal's potential effects on SSLs. The SSLMC reexamined the main structure of the model

Fishery effects on the prey field. This hierarchy includes three elements: season, % TAC, and duration. Season addresses when a fishery occurs and recognizes that SSLs have different sensitivities to changes in their prey field that may occur within or between seasons. A season element occurs in another part of the PRT, but for different reasons, and thus the PRT does not place double emphasis on season. For future evaluation of proposals, Julie Bonney and John Henderschedt will develop for the SSLMC a data set that describes the actual fishing periods for each fishery in the GOA and BSAI by species and subregion; these data will allow the SSLMC to compare actual fishing periods with the current regulatory periods. The element % TAC is intended to capture seasonal shifts in the removal of prey species and magnitude. Duration addresses length of a fishery as a result of a proposal. The SSLMC believes that fisheries of short duration (less than 3 days) are of less concern since SSLs are not sensitive to such short interruptions in prey availability; this was concluded in the 2000 BiOp also. That conclusion noted that SSLs need to feed constantly, but can withstand interruptions in their prey field for up to 10 days before suffering nutritional problems, and thus disturbance of prey fields for a period of time greater than 10 days would be considered adverse. The SSLMC noted that in many fisheries, removal of prey is likely followed by an immediate replenishment of prey from adjacent areas, and thus considering the removal of

fish an adverse impact on SSLs may not accurately depict what occurs in the environment. However, the SSLMC also noted that we do not have a model for determining how fishing affects a prey field.

The SSLMC noted that the PRT does not provide a means to score a proposal in terms of its potential beneficial effects on SSLs or their prey. That kind of evaluation will occur outside the PRT. The SSLMC noted that the PRT considers elements that can be regulated – quota, season dates, and spatial closures. The SSLMC also noted that cooperatives can be beneficial by slowing a fishery, reducing removal rates, etc. – this is another element in fishery management that is not contained in the PRT but can be considered by the SSLMC outside the PRT.

Sensitivity of SSLs to fishing – spatial/temporal. This part of the PRT has three elements: site type, proximity, and % of sites. Site types are from the current list of known SSL rookeries or haulouts, by season, based on NMML survey data and the list provided to NMFS PR for the current consultation. The SSLMC adopted this list as it is the most current knowledge of SSL use of terrestrial sites throughout the range of the wSSL available. The SSLMC discussed how to address a proposal that might affect multiple sites, and how an effect on one site might be compared with an effect on multiple sites. This is addressed in the % of sites element. The proximity element relates to site type and number of sites, since a fishery may differentially affect SSLs depending on how close the activity is to a SSL site. The SSC raised an issue in their comment #3 – the current PRT rates equally an impact on one site and an impact on many sites. The SSLMC revoted on this issue and acknowledged there is logically a difference in impacts on few sites versus impacts on many sites. More detail is provided later in these meeting minutes.

Sensitivity of SSLs to fishing – diet composition. This part of the PRT includes season, subregion, and target species. There is an obvious season component to fishery effects on species that are important in a SSL diet. The importance of pollock, cod, or Atka mackerel to SSLs varies with season based on available scat data. Those data were used by the SSLMC in placing fishery effects on SSL diet in a seasonal context. Season also is partly based on the SSL breeding and nursing phenology; more discussion on this seasonal element is in a later part of these minutes. Regions are from the NMML SSL census data base; the SSLMC acknowledges that fishery effects should be evaluated in regions important to SSL population trends, and that there are known regional differences in SSL diet based on scat analysis. A Pribilof Islands region is included to allow the PRT to evaluate proposals for changes in SSL sites there. Generally, the main Bering Sea is included in the eastern Aleutian Islands area as this SSL subregion is closest in geographic terms and in terms of potential dietary composition. Amak Island is part of the eastern AI region.

The SSLMC discussed at length the importance of all elements in a SSL diet, not just the three target species that were addressed in the current BiOp and current regulations. For example, salmon in the central GOA are very important seasonally but are not regulated by the Council. Arrowtooth flounder are important as well, and are regulated by the Council, but are abundant now and not targeted heavily. The SSLMC will use the data provided by Dr. Sarah Gaichas at the AFSC for a proposal that might have bycatch of elements in the SSL diet that are not the three main target species subject to current regulation.

PRT Rationale and Response to SSC Comments

The SSLMC spent the remaining meeting time on an extensive review of the PRT and to develop statements of rationale for how it has been developed. Kristin Mabry presented a PowerPoint overview of the PRT to orient the Committee to its features and hierarchy. Ms. Mabry developed summary data sheets showing the Committee's previous scorings of each element in the hierarchy. These data were broken down into the three main parts of the PRT: effects on the prey field, effects on SSLs (spatial/temporal), and effects on SSL diet. These data sheets were handed out and provided a roadmap for the SSLMC's work the next two days. To orient the reader of these minutes to the model hierarchy,

DRAFT

the SSLMC agreed to review and discuss the PRT from the bottom of the hierarchy up to the top, and look at each of the three main parts of the model separately. This model structure is as follows:

Effects on Prey Field

- Season Affected by the Proposal
 - Summer (within this season)
 - Winter (within this season)
 - Summer to Winter Shift
 - Winter to Summer Shift
- % TAC involved in the Proposal
 - 1-5%
 - 6-10%
 - >10%
 - No Change
- Duration of the Fishery Resulting from the Proposal
 - Shorter
 - Longer
 - Same

Effects on SSLs in a Temporal and Spatial Context

- SSL Site Type Affected by the Proposal
 - Summer Rookery
 - Summer Haulout
 - Summer Other
 - Winter Rookery
 - Winter Haulout
 - Winter Other
- Proximity to Site Involved in the Proposal
 - 0-3 n mi
 - 3-10 n mi
 - 10-20 n mi
 - 20+ n mi in Critical Habitat
 - 20+ n mi Outside CH
- Number of Sites Affected by the Proposal
 - 1-10% (of the sites in the region)
 - 11-25%
 - 26-50%
 - 51-75%
 - 76-100%

Effects on SSL Diet Composition

- Season of Year the Proposal May Affect
 - Summer
 - Winter
- Subregion the Proposal Will Affect
 - E GOA
 - C GOA
 - W GOA
 - E AI/Bering Sea
 - C AI
 - W AI
 - Pribilof Islands
- Target Fishery Involved in the Proposal

DRAFT

Pacific cod
Pollock
Atka mackerel

Public Comment

Chairman Cotter asked for public comment on several occasions. One comment was provided. Dave Fraser raised a question about the correlation between % TAC and proximity. The SSLMC discussed % TAC which means adding TAC or shifting TAC. Fishing in zones, or proximity, is scored independently. This issue was discussed later in the meeting. The SSLMC also rescored the model ranking of effects in zones around SSL sites relative to number of sites affected (the “Fraser argument”).

Detailed PRT Review

Effects on SSLs in a Temporal/Spatial Context

Number (Percent) of Sites Affected by a Proposal

The Committee started its review of the PRT at this node in the hierarchy – the lowest level in the spatial/temporal part of the model. The main hierarchical element, Effects on SSLs in a Temporal and Spatial Context, addresses how a proposal might affect SSLs by impacting areas near their terrestrial sites. SSLs may be differentially sensitive to fishery effects depending on the site type (rookery, haulout – each of which may have different concerns depending on season, so there is a seasonal component in this element), by how close the fishing activity might be to a site (using the distance zones developed in the 2001 BiOp and its 2003 Supplement), and the number of sites affected by the fishing activity.

Starting with number of sites affected, the SSLMC felt that the model should evaluate a proposal in terms of how many sites it could impact. The SSLMC acknowledged that the SSL census regions contain varying numbers of haulouts and rookeries, and thus a specific numerical hierarchy may not be appropriate but a percentage of the sites in a region may be more appropriate. Thus, this criterion perhaps should be differentially weighted for the percent of SSL sites affected, with a higher score (more impact) for larger numbers of sites and a lower score (less impact) for fewer (small percentages).

The Committee discussed at length the effects of impacting one or a few sites in the 0-3 n mi zones versus impacting a larger number of sites in the 0-3 n mi zones (or other geographic zones around sites). This was an issue raised by the SSC and by the public – as previously scored, the model gave equal weight (same level of impact) to a proposal that affected a zone around a SSL site where there might be a few sites affected or many sites affected (the Fraser argument). While the SSLMC felt that *any* disturbance in the 0-3 n mi zone would be of highest concern regardless the number of sites involved, they acknowledged that logically there should be higher concern for fishing in multiple sites as opposed to fishing in a single site or a few sites. Thus the SSLMC revoted to rank as higher impact a proposal that might affect a higher percentage of sites in a region, and lower impact a proposal that might affect a lower percentage of sites in a region.

Proximity of Fishing to SSL Sites

This element relates to how a fishery might affect food sources that occur near SSL sites. The SSLMC discussed how this could also relate to disturbance of SSLs, but this is not the meaning for this element. Proximity is more related to fisheries effects on prey rather than disturbance. The SSLMC has previously considered anthropogenic effects on SSLs, but determined that these impacts are very minimal and are addressed in the annual List of Fisheries process under the MMPA and disturbance is not an element that can be regulated. The five categories under proximity are the zones identified in the 2001 BiOp and its

DRAFT

2003 Supplement. These zones also relate to available telemetry data and the relative importance of distance from sites based on SSL occurrence. The SSLMC noted a lower score (on a data sheet provided several meetings ago) was placed by NMML on areas outside CH, and Lowell Fritz acknowledged that, based on telemetry data, there is not a lot of difference in usage by SSLs between CH outside 20 n mi and non-CH outside 20 n mi, but these data are based on juvenile animals (telemetry). Mr. Fritz acknowledged that the foraging areas outside CH may have been undervalued to some extent; Mr. Fritz indicated he would increase the importance of foraging area from what was previously provided. The SSLMC revisited the scoring of this element; three members changed their rankings on the 20+ n mi CH and 20+ n mi non-CH elements.

Site type

The SSLMC revisited the definitions of the six categories, noting these are based on numbers of SSLs using a site, by season, as well as differences in type of use such as breeding activity or maternal attendance. In general, zones closest to sites are scored higher, particularly the 0-3 and 3-10 n mi zones. The SSLMC discussed at length the potential difference in concern over summer versus winter, considering particularly SSC comment #10. For summer haulouts, animals may range further and there may be more equality between zones because of distance of use. NMML scientists would not devalue summer haulouts because they are used by juveniles and females; some SSL biologists believe that comparing usage of sites in summer with winter is very difficult. Winter haulouts have females with young pups and also pregnant females. The SSLMC discussed possibly increasing the value of winter haulouts. Dr. Ken Pitcher suggested that summer haulouts should be of lower value in the PRT. Mr. Fritz, however, felt that all SSL sites are relatively equally important, although he acknowledged that perhaps, as Dr. Pitcher suggested, a third season, spring (April and May), might help differentiate what is likely a more sensitive season compared with the rest of summer. Earl Krygier noted that winter haulouts and rookeries are being used more because females are attending their young throughout the winter months so these sites may be more important than summer haulouts.

The SSLMC has previously had the mindset that distance away from a site may be ranked different in sensitivity to fishing if it is an activity that occurs in winter versus summer and if it is an activity that occurs at a haulout versus a rookery. There is a synergism between season and site type that is recognized in the structure of the PRT. For example, activity in 10 – 20 n mi at a summer rookery may be of less concern because female foraging is more restricted to 0 – 3 or 3 – 10 n mi because these nursing females do not tend to forage further away from dependent pups; an activity in 10 – 20 n mi, however, at a winter rookery could be of more concern because the female is not as tied to shore in winter, forages further to acquire food, and thus could be more affected further away from shore.

The SSLMC asked: are we moving back to the hypothesis that winter may be more important? In general, summer is important for juveniles, and winter is important for reproductive females. It is difficult to choose an importance level for season. If the natality study is accurate, then winter and spring are more important for late term pregnant females. Dr. Pitcher's concern is the need to protect reproductive females.

The SSLMC discussed SSL concern #10 further. Some believe the SSC was asking for a rationale for seasonal weightings rather than recommending changing the model structure by adding a season. The main question seems to be: is it more important to restrict fishing around one kind of site versus another kind of site? This is the question that was used for the previous committee voting on proximity for season and site. A winter rookery and a winter haulout are the same thing biologically and should be ranked the same. The site type summer rookery was ranked the most important.

DRAFT

The SSLMC attained no consensus resolution to differing opinions on seasonal importance. The Committee felt that adding a third season might be a good idea but it likely would not appreciably change the results of scoring proposals. The SSLMC does not have sufficient data to judge which season is more important. The SSLMC also noted that the structurally adjusted weightings between summer and winter haulouts are greater than the numbers on the spreadsheet. The SSLMC also discussed whether the trade offs between the amount of work needed to change the entire structure of the model, given the relatively small increment of expected performance of the model, would merit taking that action. In general, the Committee thought that the substantive amount of work to add a third season would not improve the model performance all that much. Thus, based on these discussions, the SSLMC decided to leave the seasonal portion of the model as is.

Detailed PRT Review Effects on SSL Diet Composition

Target species

This element addresses how important pollock, cod, or Atka mackerel are in the diet of SSLs, relative to other elements in their diet. The model is structured to acknowledge the synergism among season, region, and prey species. The SSLMC previously scored the importance of the three main target species by answering this question (this is an example specific to pollock in the eastern GOA): how important is pollock in the diet of SSLs in the eGOA in summer relative to all elements in its diet in that region and season, based on available diet data and recognizing the limitations of the scat sampling in accurately characterizing the SSL diet; this also recognizes the limitations of the frequency of occurrence metric as accurately characterizing the number and size of prey items in the scat samples.

The SSLMC revisited their rationale for scoring this question. The issue of including species other than the three target species received considerable discussion. Most felt that excluding recognition that SSLs prey on other items than the three target species is greatly misleading and a measure of the importance of other diet items should be accommodated in the PRT. Scat data used in the SSLMC's evaluation of target species, and other species, are summarized in Table 3.21 (included in the PRT report and being used in the ongoing consultation). The SSLMC also based their discussions and scoring on the diet presentations from scientists during past SSLMC meetings.

The target species category recognizes the current fisheries regulated for SSL protection; these are the species identified to be of concern in the 2001 BiOp. The SSLMC has some concerns over how to interpret the data contained in Table 3.21. Do these data reflect SSL preferences, and thus selection, or just the availability of prey? To what extent are SSLs opportunistic in dietary selection? Do these data accurately characterize the importance of items in scat to SSL nutrition? Size of prey items is an issue; sand lance are very small fish and a SSL must consume many to attain the equivalent of a single cod or pollock or greenling or salmon. Frequency of occurrence measures how often an item occurs in a sample; to what degree is this accurately indicative of prey availability or prey selection? And some species important to SSLs may not have hard bony parts that occur in scat.

The SSLMC struggled with alternative ways to measure the importance of the three target species relative to the whole SSL diet. Scat data may be the best proxy available for identification of SSL diet. The SSC comment #6 is also an issue the SSLMC discussed at length. Harvest rate could indicate abundant fish for SSLs after fishing ceases, or it could also mean lower abundance because of high fishery removals. The SSLMC did not resolve this apparent contradiction. Spreading out the harvest is an approach to addressing part of this issue.

DRAFT

The SSLMC agreed to add another category to the target species element: “other”. This would give the Committee four choices when voting on the importance of various elements in the SSL diet. This also would provide a “modifier” to the scores for pollock, cod, and Atka mackerel based on the level of importance of other species, relative to these three, in the SSL diet, by region and by season. Some SSLMC members argued that, because of the way the model works such that it sums to 1.0 the scores for all four categories, the “other” category would reduce the value of the other big three species when some think that the big three are not as important as other species in the diet. Committee members indicated this is a desirable result of adding the “other” category. Therefore, the SSLMC changed the structure of the model to accommodate an “other” cell for each of the areas in each of the seasons.

The Committee discussed whether to vote on the (now) four categories, or perhaps just use the data in Table 3.21 in the model by calculating proportions of each diet element. The SSLMC argued against this idea and felt that committee members should be able to vote their interpretations of the Table 3.21 data; this feature in the PRT process is why the AHP procedure is being used by the SSLMC – to seek expert opinion from a group of knowledgeable individuals.

Also, the committee felt that this is not a straight math equation based on just frequency of occurrence in scat. Members will use their judgment to determine how to score. The Committee acknowledged that voting on three species and “other” reduces the importance of the three species scores. There are no scat data on the Pribilofs so the previous scoring of the importance of pollock, cod, and Atka mackerel for the Pribilofs was based on SSLMC best judgment and consideration of data for the eastern AI and knowledge of central Bering Sea fisheries. With “other” included, the SSLMC revoted this element in the PRT hierarchy and retained the previous scoring of the big three for the Pribilofs, each reduced proportionally to allow for a 20% score for “other” in this region.

Subregion

This element is part of the above discussion and each region remains the same as previously weighted. The Committee did recognize that some could argue that one region containing more SSL sites or a larger number of SSL pups or nonpups could be considered more important than another region containing fewer. The draft revised SSL Recovery Plan recommends a criterion for recovery that requires that no two adjacent SSL census regions experience a decline in abundance over a 15 year period of time (wSSL downlisting criterion). Given this statement and the rationale for it as described in the draft Recovery Plan, the SSLMC previously acknowledged that all regions (SSL census regions) should be considered of approximately equal importance. The Committee could find no justifiable way to rank one region more “important” than another. The Pribilofs region is ranked slightly lower, principally due to the considerably fewer SSLs using this area because it is near the furthest north extension of the wSSL range.

Season

Again, season is part of the above discussion. This category and its elements remain scored the same.

Detailed PRT Review Effects on the Prey Field

Duration

The concept of duration is related to rate of fishing. As stated in the last meeting minutes, this term is related to intensity of harvest (amount and time) and addresses localized depletion concerns. Less harvest in a longer time frame is less likely to result in localized depletion, and this would be considered a longer duration fishery. The SSLMC discussed how better to evaluate a proposal in terms of how it might

DRAFT

lengthen or shorten a fishery, or shift fishing timing without changing length. Rate of harvest of fish may be a better metric, and the SSLMC reviewed data from the 2001 BiOp and its 2003 Supplement (Figure III-7, weekly catch of pollock) showing rate of fishing in the BSAI for pollock during the years 1996-2002. However, the SSLMC; did not feel that including a metric for rate of fishing would be any better than the current duration element. Some suggested removing duration and addressing this outside the PRT. Mr. Henderschedt noted that duration is an artifact left over from extensive discussions and debates in previous meetings for how to address a proposal that could increase the length of a fishery – just what would this mean to SSLs? In a sense, duration is a proxy for removal rate and for gear type. The SSLMC decided to leave duration as currently scored in the PRT as a qualitative ranking of effects of a proposal on a fishery's harvest removal rate. More discussion of duration is provided above in these minutes.

% TAC

This category relates to whether a proposal seeks to add quota to a status quo fishery or will result in a greater percentage of TAC being fished in a season or area than is currently fished under status quo. This element in the PRT that addresses seasonal shift in prey is discussed above in more detail. The SSLMC decided not to change this element or scoring.

Season

This category was discussed previously as well (above). It relates to whether a proposal would result in shifting harvest within a season or from one season to another.

The three elements above are considered together in the PRT. The SSLMC previously ranked each element based on the question (using an example of a proposal that would shift harvest from winter to summer and affect the duration of the fishery): if a lot of TAC (> 10%) is shifted from winter to the summer, and the fishery results in a duration that is shorter than it currently is, then how large an effect would this be on the prey field?

The SSLMC did not change scores or debate these elements further.

Completion of the PRT

The SSLMC discussed remaining tasks to be accomplished before the PRT is ready for another SSC review. These include:

- Review the model as reconfigured and rescored and concur with scorings of all elements (reality check)
- Review the written rationale and justification of the PRT prepared by staff for accuracy and completeness
- Run tests with and without the Structural Adjust calculation of a proposal score and discuss
- Run sensitivity tests to view proposal scores from changes in ratings of various elements
- Rerun the proposals tested in the previous version of the PRT (GOA proposals for Puale Bay and Marmot Island) and discuss differences in output
- Describe process for how a proposal will be entered into the model
- Discuss how to address status quo
- Review and approve minutes of this SSLMC meeting
- Review and approve report on PRT as revised based on this SSLMC meeting

DRAFT

Chairman Cotter has appointed two committees to complete additional tasks. One committee will develop a process for how proposals will be input to the PRT. This group includes Sue Hills, Dan Hennen, and Doug DeMaster. Another committee will work on the process for evaluating proposals including the PRT, particularly how to apply “status quo” to the model; this committee also will compile the other kinds of data and information that would be considered “outside the model”; this group includes Dan Hennen and John Henderschedt. Another committee appointed at the last meeting is preparing data that show the dates of actual fishing periods based on recent fishery performance and relate those to the regulatory periods; this group includes Julie Bonney and John Henderschedt. Kristin Mabry and Bill Wilson will staff these committees as appropriate.

Next SSLMC Meeting and Adjourn

The SSLMC felt it needed time to address the above issues and agreed to schedule another meeting for January 8 and 9 in Anchorage. After this work is completed, the SSLMC felt it could be presented to the SSC for a final review. Mr. Wilson will likely give the SSC an update on the PRT at the December Council meeting.

The SSLMC also noted that when the draft BiOp is completed, the Committee will require considerable time to review this document and to discuss conclusions reached and the rationale for those conclusions. This meeting will occur at the AFSC so the Committee has access to data and the scientists who have conducted much of the SSL research.

The meeting adjourned at 3:30 pm.

DRAFT

North Pacific Fishery Management Council
Steller Sea Lion Mitigation Committee Meeting
Alaska Fisheries Science Center
October 30, 31, November 1, 2006

Purpose: Refine and finalize Proposal Ranking Tool (PRT). Review and incorporate SSC comments on PRT, as appropriate.

AGENDA (as amended)

October 30 - 8:30 AM – 5:00 PM

1. Introductions and Opening Remarks, Announcements, Agenda Approval (Cotter)
2. Minutes of Last Meeting (Wilson)
3. Update on Council Meeting in Dutch Harbor (Wilson, Cotter)
4. Review and Discuss Board of Fisheries Actions on October 14-15 (Cotter, Wilson)
5. Update on Consultation and BiOp (Wilson, Cotter)
6. Killer Whale Predation Update (DeMaster)
7. Review SSC Comments on Proposal Ranking Tool (PRT) (Wilson)
8. Experimental Design Committee Report (Gauvin)
9. Discuss and Revise PRT per SSC Comments, As Appropriate

October 31 – 8:30 AM – 5:00 PM

10. Continue Work on PRT

November 1 – 8:30 AM – 5:00 PM

11. Conduct Sensitivity Tests of PRT
12. Develop Text for Referencing PRT Hierarchy and Prepare PRT Report for SSC
13. Discuss Committee Meeting Schedule
14. Action Items, Closing Remarks, Adjourn (Cotter)

Public comment periods will be provided during the meeting.

Contact Bill Wilson at the Council offices if you have questions: 907-271-2809 or bill.wilson@noaa.gov