Appendix F
Focus Group Meeting Summary Report

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NATIONAL MARINE FISHERIES SERVICE STELLER SEA LION AND NORTHERN FUR SEAL RESEARCH EIS FOCUS GROUP MEETINGS SUMMARY REPORT

AUGUST 2006

NATIONAL MARINE FISHERIES SERVICE
IN COOPERATION WITH
URS CORPORATION

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INTRODUCTION

NMFS initiated preparation of an EIS for research on Steller sea lions and northern fur seals in the fall of 2005. The Permits Division in the Office of Protected Resources (PR1) is working in cooperation with the Grants Program Office in the Alaska Region and URS in Anchorage to prepare the EIS that will support issuance of grants and permits facilitating research on Steller sea lions and northern fur seals.

On May 26, 2006, the U.S. District Court in the District of Columbia ruled that NMFS violated the Administrative Procedure Act by acting arbitrarily, capriciously, and contrary to law by failing to prepare an EIS prior to its issuance of permits and permit amendments for research on Steller sea lions. (Civil Action No. 05-1392 (ESH)) The Court ordered the contested permits and permit amendments be vacated and required NMFS to prepare an EIS. This vacate order affected six permit holders and resulted in a halt of all research directed at SSL in the wild.

The EIS project team identified two mechanisms to develop a reasonable range of alternatives and take a hard look at the effects of research under these alternatives, as required by NEPA. One was to distribute a questionnaire to permit holders and applicants, followed by phone or in person interviews with URS project team members. The other was to hold a series of focus group meetings with various stakeholder groups, as indicated below.

- Researchers – Seattle, WA
- Non-governmental organizations and other government agencies – Silver Spring, MD
- North Pacific Fisheries Management Council and North Pacific Research Board – Anchorage, AK
- Native Groups – Anchorage, AK

This report presents discussions held during the focus groups meetings and highlights issues related to the EIS. It should be noted that these notes summarize comments and suggestions, but do not imply agreement to those comments and suggestions. Please see attached agenda, power point presentation and handouts for reference. Based on this report and any subsequent comments received from these groups on alternatives, URS and NMFS will be finalizing the alternatives for the Draft EIS tentatively schedule to be released in December 2006.

SUMMARY OF FOCUS GROUP MEETINGS

RESEARCHER FOCUS GROUP MEETING – SEATTLE, WA (JULY 24, 2006)

Meeting Participants (please see sign-in sheet in Appendix B): Andrew Trites, Sharon Melin, Tamara Faris, Steve Insley, Tom Gelatt, Brian Fadely, Lorrie Rea, Shannon Atkinson, Don Calkins, Markus Horning, John Bengtson, Lowell Fritz, Lianna Jack, Donna Willoya, Dan Ito, Rolf Reem, Shawn Carey, Ray Howard, Karin Holser, Jon Isaacs*, Anne Southam*, Rich Kleinleder*
* Indicates EIS Project Team

Issues Discussed:
General Comments on the EIS

- It seems that the major question is what 'impact' are we focusing on? Are we focusing on impacts to the individual marine mammal or the population? MMPA and ESA say we should focus on population.
- As a programmatic document, the specific details in the alternatives do not necessarily 'bind' NMFS in the future because they could be used as 'proxies' for analysis. In other words, specific take levels under the chosen preferred alternative would not necessarily be binding but could be used for analysis while the general philosophy of the alternative is what the agency takes action under.
- The EIS must be clear on the definition of intrusive. Refer to the permitting definition of intrusive. Intrusive is defined as breaking the skin or inserting through an orifice.[1]
- The EIS should be clear to specify differences between the use of anesthesia by intubation versus gas anesthesia with a mask.
- Should new technique developments be a separate row in the alternative table?
- The EIS should have a separate table to show what techniques are parallel (i.e., what methods or activities are connected).
- There will be elements common to all alternatives, such as issues related to humaneness (AWA laws) of procedures. The EIS should provide the legal setting as background for what is common to all alternatives, in other words, what boundaries the agency must operate within.
- The EIS alternatives should address issues related to PR1 superceding the authority of field crews to use techniques or drugs that have been approved under and IACUC process. If a technique or drug has been approved by an IACUC process, it should be acceptable under a permit.
- Should the permit process be part of the alternatives in the EIS?
- The EIS is not the place to get into changes to the permit process.

[1] Note that the full regulatory definition of intrusive research is "a procedure conducted for bona fide scientific research involving: a break in or cutting of the skin or equivalent, insertion of an instrument or material into an orifice, introduction of a substance or object into the animal's immediate environment that is likely either to be ingested or to contact and directly affect animal tissues (i.e., chemical substances), or a stimulus directed at animals that may involve a risk to health or welfare or that may have an impact on normal function or behavior (i.e., audio broadcasts directed at animals that may affect behavior)." 50 CFR 216.3

- Permit process may be discussed in an implementation section or chapter of the EIS.
- Coordination among researchers is not an issue and does not need to be part of any of the alternatives.

Scope of the EIS

NFS research is built into these alternatives and are almost held hostage to boundaries of SSL research in the alternatives. Can we separate these better in the alternatives? [*EIS project team responds that this is possible*].

- Are we including captive animal research into this EIS? *[EIS project team responds No. Only temporary captivity of animals is considered in this EIS.*][2]

NMML's Role in this EIS

- NMFS needs to provide clarification on who can comment and when so that these comments are put into the record. Conflicting information from Protected Resources in Silver Spring has been confusing as to NMML's role in this project and when NMML comments can or should be made.
- Why should we provide comments for the record and what should be our approach in submitting these comments? Should we provide a joint letter from researchers or individual letters?
- *[EIS team notes that under NEPA, submitting comments does not equate to voting.]* [3]

Cooperating Agencies

- Are there any cooperating agencies for this project? EIS project team responds No, there are no cooperating agencies.
- The Alaska Sea Otter and Steller Sea Lion Commission (TASSC) has asked NMFS PR1 for cooperating agency status but has not yet received a response.
- There are existing Co-Management Agreements with St. Paul and St. George in the Pribilof Islands; due to these agreements, these tribes should be considered for cooperating agency status.

Range and Structure of Alternatives

- Flexibility needs to be built into this EIS. It will be hard to predict future techniques to be used in research.

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[2] At this time, NMFS is processing permits for research on permanently captive ESA-listed marine mammals under Environmental Assessments and does not anticipate the need for an EIS to evaluate the environmental impacts of that type of activity. Since these animals are not intended to be returned to the wild, we have determined the impacts to be limited to the animals that are the subject of the permit, with the action area limited to the facility in which the animals are held.

[3] To further clarify, the EIS project team adds: As a researcher or interested member of the public, NMML staff are welcome to submit individual letters during public scoping expressing their personal concerns, making clear they are personal concerns and do not necessarily reflect the views of the agency. However, the appropriate forum for NMML staff to submit comments as part of the agency will be during the internal NMFS review process.

- The current structure of the alternatives may not be the best because it focuses on the impact to the individual (refer to attached diagram provided by NMML).
- The structure of alternatives mixes levels of impacts in an unnecessary way (impacts individuals vs. population). Using the priorities listed in the Recovery or conservation Plans is not the best structure because they do not translate (as implied by current structure) into level of impact.
- Can or should we add an Alternative 6 that would mean only money and statutes were binding the amount and nature of potential research?
- The Status Quo Alternative (4) should actually be placed before Alternative 3 on the continuum (see new table provided by NMML) as Alternative 3 includes more research than is currently conducted under status quo.
- *[The EIS project team notes that in a NEPA setting we must look at the full range of alternatives including no action, reduced take, status quo and increased take. The analysis of impacts AND how the alternatives meet mandates, will be provided in Chapter 4.]*
- Can we use the alternative titles proposed in the table provided by NMML? (see attached handout in Appendix C).
- *[The EIS project team responded that they recognize that the current alternative titles could be better phrased and will continue to work on re-titling the alternatives for the Draft EIS based on comments from all of the Focus Group Meetings.*]
- Alternative 1 should be called 'No Action Moratorium' or 'No Action Phased Out Research'.
- The Recommended Research Program (refer to NMML handout attached) means what is recommended in the SSL and NFS Recovery and Conservation Plans. Status quo is currently at the low end of permitted activities because of budget and does not necessarily represent where we should be for research. The SSL and NFS Recovery and Conservation Plans provide a 'Recommended Research Program' which we should have as an alternative.
- Some examples for Recommended Research include intentional lethal take - collection of moribund individuals.
- There are existing permits for intentional lethal take of California sea lions (moribund individuals) to look at disease screening etc. This should be allowed for SSL and NFS.
- Researchers also need the ability to continue proposed research despite other projects that have already reached the level of take due to incidental mortality. This is a challenge under the status quo that should be changed.
- Beyond the issues raised in the lawsuit, NMFS must do a good job at considering alternatives that are appropriate. For example, if someone wants to develop a new technique, statutory criteria requires researchers to determine if it is going to adversely impact the population or the species and requires it be conducted in the most humane way possible.

<u>Discussion of Alternative Matrix</u>

- Scat collection should be a separate row.

- The current alternative matrix is a little vague. We need another table to show specifically what types of activities fall under the major row headings in the current matrix.
- In the alternative tables, instrument attachment and insertion should be broken out separately into external versus internal.
- Some things are missing from the table that are not listed in the SSL Recovery or NFS Conservation Plans such as 'basic' research conducted by some of the university researchers (e.g., analysis of biomechanics or hearing). The current structure of the table misses these types of activities because it does not include activities that may not be listed as priorities in the Plans (e.g., Priorities 1, 2, 3 or otherwise).

SSL Recovery Plan and NFS Conservation Plan Research Priorities

(This discussion relates to the priorities identified in the species' plans listed in the implementation schedule of each of those plans; see handouts in Appendix A).

- Priority 3 issues (identified in the SSL Recovery Plan and NFS Conservation Plan) need to be stated in Alternatives 4 and 5.
- Wording is critical as far as how these alternatives are compiled. The alternative titles imply Priority 2 has higher level of impact.
- Differentiating the alternatives according to research priorities listed in the Recovery and Conservation Plans may not be best approach because it may not relate, as it implies, to level of impact.
- Alternatives 2 and 3 don't cut it for accomplishing or meeting Priority 1 and 2 goals outlined in the SSL Recovery and NFS Conservation Plans.
- Under ESA – Priorities 1, 2 and 3 are necessary for the recovery of the species. Alternatives 2 and 3 should include Priority 3 activities but varied among the alternatives according to the specific activities chosen to address those priorities

Preferred Alternative

- Alternative 5 would be the researcher's choice but it is at the extreme end so it is hard to argue for. How is the preferred alternative chosen for the Final EIS?
- [*The EIS project team responded that the preferred alternative can be chosen from those presented as-is in the document or it can be a mix and match of components from all the alternatives if the agency chooses.*]

Status of New Permits/ Vacated Permits

- Will researchers have to re-apply for new permits next summer? We are hoping that when the EIS is complete, permits that were vacated by the court could be re-instated.
- Another researcher responded that NMFS PR1 has indicated that researchers need to be prepared to write new proposals to be submitted in spring 2007; permits that were vacated would not be re-instated as-is.][4]

[4] Note that anyone who wants a permit or amendment to a valid permit (as in not vacated or expired) or LOC under the GA will need to submit an application. NMFS will notify all researchers of the deadline by which applications must be submitted for research proposed for summer 2007. Anyone who currently has a valid permit or LOC and does not require changes (such as wanting an extension of the expiration date, changes in research methods, a new permit to replace an expiring one, etc.) does not need to submit an application to continue work under that valid permit or LOC. All research that has been permitted on these species, including that vacated by the court order or revoked pursuant to an enforcement settlement

Institutional Animal Care and Use Committee and Animal Welfare Act

- Institutional Animal Care and Use Committee (IACUC) and Animal Welfare Act (AWA) related issues should be kept separate from this EIS. The nexus between these laws and NMFS permits needs to be clarified.
- Alternative 3 – A centralized IACUC is very dangerous – particularly for private groups because this may result in conflicting direction between the NMFS IACUC and private institutions' IACUC.
- Is there a way to simplify the agency's review process by accepting an IACUC review by another organization if there is such a group? Otherwise a proposal could undergo an IACUC review from the agency if there wasn't already such a review.
- Different funding cycles specific to private or university groups may be problematic if there is a centralized IACUC.

Impact Analyses and Criteria

- Missing in the table are the criteria for each of the actions or tools. What is the impact of each of these tools?
- [*The EIS project team responded that significance criteria and the results of the analyses will be presented in Chapter 4 of the EIS. We will need some assistance from the research community and others in determining the criteria for the analyses.*]
- Potential Biological Removal (PBR) should not be used to analyze these alternatives; we need to discuss this in the EIS. The EIS needs to explain what PBR is and how it should be used. PBR has been misinterpreted by the Humane Society of the United States (HSUS) in their lawsuit.
- PBR in an endangered stock is the number below which you will NOT retard recovery to a certain extent. This equals 0.006 of the population for SSL.
- [*The EIS project team responded that they are attempting to develop some kind of metric to measure impacts related to mortality.*]
- A good threshold to use in analysis for SSL is 3% of N_{min}. This is the threshold below which you would expect the population to recover. NMML will provide the EIS project team with a paper and other information on this topic.
- [*The EIS project team stated that we have to analyze cumulative impacts in this EIS so we need a metric or way of analyzing cumulative impact that includes incidental mortality as well as sub-lethal effects.*]

New Techniques and Future Research

- It will be very important to address the development of new techniques in the EIS. For example, a permit for an experimental technique could require controlled validation to test its effectiveness. It's important to include this issue because

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agreement, and any research proposed in applications, including those that were returned, is being included for analysis in the EIS. Further, URS has conducted interviews with researchers to get information on the types of research they are doing or would like to do. This also will be included for analysis in the EIS. If researchers anticipate wanting to do things not already permitted or requested in applications submitted to NMFS, they need to let URS or NMFS know immediately. Researchers also need to provide URS with complete information to ensure the analysis in the EIS and related section 7 documents will cover the activities for which they need a permit.

some techniques may, in the long term, reduce impact on species and stocks because the new technique may provide more valuable or better information on the species resulting in less impact to many animals.

- Criteria under the MMPA should be the basis for new technique development or permitted research activities in the EIS.
- The 'developmental category' for research can be very broad; the EIS project team should take caution as to how this is defined such as with the use of new drugs by vets and how they can be tested.
- Where will the EIS analyze new techniques researchers had proposed in amendments to permits (vacated or not) that were submitted to PR1 before the lawsuit?[5]
- These proposed amendments should be included in the Status Quo alternative analysis.

[5] The EIS will include a discussion and analysis of all of the research techniques proposed in applications received for permits, including those that were pending at the time of the court order and those described by researchers during the interviews with URS.

NON-GOVERNMENTAL ORGANIZATIONS AND OTHER AGENCIES FOCUS GROUP MEETING – SILVER SPRING, MD (AUGUST 3, 2006)

Meeting Participants (please see sign-in sheet in Appendix B): Serda Ozbenian, Jennifer Gannett, Sharon Young, Steve MacLean, Mike Gosliner, Steve Leathery, John Hansel, Andrew Wright*, Tammy Adams*, Ann Garrett*, Mike Payne*, Jon Isaacs*, Anne Southam*
* Indicates EIS Project Team

General Comments on the EIS

- NMFS should not treat northern fur seals with less precaution than Steller sea lions in the EIS because of the similarity in the concerns regarding potential research impacts and the status of the population. The structure of an alternative could be different for the two species within the same alternative.
- What if Congress allocates money to a specific activity or entity that is not covered in the EIS?
- [*The EIS project team responded that a supplemental EIS on that money may be necessary in this case. Congress could also possibly exempt that money from NEPA. We will address this issue somehow in the EIS.*]
- As far as administration of the program (i.e., permit process), what do we need to know in this EIS to be able to sign off on permits in the future?
- What about consequences of exceeding takes? Will this be addressed in the EIS?
- What are the legal risks for not issuing permits for certain research activities? In other words, is there a danger in not issuing a permit and then getting sued because someone interprets MMPA and ESA differently? How will NMFS deal with this? What about the issue of treating northern right whales differently than SSL or NFS? Will this be a problem?

Range and Structure of Alternatives

- The titles for Alternatives 2 and 3 indicate that we understand the level of effect. Should we talk about the criteria we'll use to analyze the alternatives? When do we do this?
- What is appropriate as a formal tool in an alternative and what is more appropriate as part of implementation of the alternative?
- [*The EIS project team notes that the titles of the alternatives are intended to convey a range of level of precaution.*]
- The terminology used for the alternative titles should be evaluated because they are somewhat suggestive.
- The MMC staff find the current alternatives confusing. There may be better ways to package or bundle this so the tools in the alternatives can be mixed and matched. It is good to hear that mixing and matching is a possibility.
- Will there be another opportunity to comment on the potential mix and match alternative?
- [*The EIS project team responded that right now, another review of draft alternatives before the Draft EIS is released is not built into our schedule. The current schedule considers getting researchers out next summer (2007) which is very aggressive.*]

- Can there be two preferred alternatives because this involves both SSL and NFS?
- [*The project team responded that the preferred alternative could be a mix and match alternative of components in other alternatives.*]
- Is there a way to quantify these alternatives in terms of something like PBR? In terms of thresholds instead; using the thresholds to drive the alternative philosophy for example?
- With regard to NFS research, you should pay particular attention to frequency and intensity across research alternatives.
- What about the idea of some kind of cap, not only for take but other activities? So for example, research to be approved would have to fit under this cap.
- This brings up allocation issues. Who is going to get their allocation, and who is not? What are your caps based on? Localized areas, population level, sub-population level?
- Cap concept is a derivative of the cumulative impact concept under NEPA. This is going to be an issue under these alternatives.
- What kind of caps are you talking about?
- [*The EIS project team responded that they were referring to caps on permitted levels of activities.*]
- We have concerns over the use of Section 7 within the alternative framework.

<u>New Techniques and Future Activities</u>

- We need to build in enough flexibility into this EIS because of how variable future funding and level of activities may be.
- [*The EIS project team stated that under at least one of the alternatives new techniques could be permitted on either a surrogate species or different stock.*]
- With regard to the concept of using more intrusive techniques to gather more valuable information, isn't this covered under the current amendment process?
- In the lawsuit, the issue was that new techniques were just approved without a very good assessment of what their effects would be. We need to bring this issue out into the public arena as far as evaluating new techniques that may be used.
- [*The EIS project team stated that our intent is to try to deal with this in the EIS. There would be stipulations for future research.*]

<u>Species Recovery Coordination Team (SRCT)</u>

- The idea of a Species Recovery Coordination Team (SRCT) needs to be inclusive of people outside the permit process (in other words, not permittees). A representative from the conservation community needs to be on this team.
- What is the function of the SRCT? Would this team be responsible for reviewing permits from an independent review process? Or is this group made up of the researchers themselves?
- A CIE review could help provide some independent perspectives on research activities. However, coordination among the researchers themselves is also critical.
- Should this SRCT be part of the NEPA process? Should this be part of the alternatives?
- Does the SRCT get at the effects of research? It does address the lawsuit concerns but how does it evaluate effects of research?

SSL Recovery Plan and NFS Conservation Plan Research Priorities

(This discussion relates to the priorities identified in the species' plans listed in the implementation schedule of each of those plans; see handouts in Appendix A).

- We are concerned that the tool categories presented in the alternatives may be putting barriers around your alternatives. By setting up the alternatives based on Priorities listed in the Recovery and Conservation Plans, are we allowing enough flexibility? Should we reconsider the use of the 'priorities' as the structure for the alternatives?

Impact Analyses and Criteria

- [*The EIS project team stated that we will need feedback on the criteria we use for analyzing the alternatives when we finalize the alternatives.*]
- Is there going to be a look at the effects of research?
- [*The* EIS project team *responded that our definition of affect may be different. In other words, impact on individuals is very important in addition to impact on populations.*]
- Sub-lethal or delayed effects are an important issue and should be addressed in the EIS.
- Criteria used to evaluate alternatives must be stated up front.
- If research follows the Recovery or Conservation Plans, we would assume there could be cumulative positive effects as well, not just negative.
- Could we adapt the Section 7 approach to risk analysis to evaluate the alternatives?
- Yes, but Section 7 Consultation would not provide a definitive answer for each separate activity or alternative, only the preferred alternative.
- Numbers need to be tied to spatial and temporal distribution as well as the actual activity.
- These numbers, as a ratio or percentage of population, must also take the baseline into account. In other words, whether the population is in a decline or an increase.
- We are concerned with how the evaluation of sample size was evaluated for marking (e.g., branding). How was sample size determined?
- Jeopardy is established by the status of the species AND the environment in which they live in. This evaluation is more of a qualitative approach but addresses sub-lethal effects whereas metrics such as PBR only look at lethal effects.
- One of the concerns is that we don't have a good understanding of what is going on after researchers leave or finish their activities. There is a minimal amount of monitoring the effects of research. Not all of the research has been sufficiently reviewed to determine whether the impacts were necessary to achieve the research goals.
- There are some different standards being applied by the agency now. For example, there are PBRs for NFS and western SSL but there is no PBR for northern right whales.
- What level of detail will the alternatives go in to in the EIS? For example, are things like hot branding part of the alternatives? Or are they used as criteria for defining what is humane or not, etc.?

NORTH PACIFIC RESEARCH BOARD (NPRB) AND NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL FOCUS GROUP MEETING – ANCHORAGE, AK (AUGUST 10, 2006)

Meeting Participants (please see sign-in sheet in Appendix B): Diana Evans, Bill Wilson, Clarence Pautzke, Steve Davis, Ann Garrett*, Tammy Adams*, Mike Payne*, Anne Southam*, Rich Kleinleder*, Jon Isaacs*
* Indicates EIS Project Team

General Comments on the EIS

- NPRB will be making decisions about funding new marine mammal research in April 2007. Is this schedule possible given this EIS?
- [*The EIS project team responded that PR1 is planning discussions with researchers about the type of information that will need to be included in their new proposals so as to cover potential new activities.*]
- Can the NPRB put an advisory note in request for proposals (RFPs) for upcoming research on marine mammals to alert researchers that work on SSL or NFS may have to wait until after the permits are approved after the ROD is issued in 2007?
- What time period will this EIS cover?
- [*The EIS project team responded that we hope that it will cover permits for up to ten years. We are trying to build flexibility into this document by including future research activities.*]
- Is there a statement summarizing the types of research being done and why? Is this in the SSL Recovery Plan?
- Who will be issuing the ROD?
- [*The EIS project team responded Dr. Bill Hogarth is the agency official who signs the ROD. There will be a 30-day cooling off period after the ROD is issued before any permits can be issued.*]
- [*Section 7 Consultation would begin with the PDEIS in October 2006 (tentatively).*]
- Will the vacated permits be re-instated after the ROD?
- [*That would be up to the Court to re-authorize those permits. It may be faster to just begin a new permit process by submitting a new application. .*][6]
- [*The EIS project team noted that researchers who want permits as quickly as possible after the ROD is signed are advised to follow the EIS process and look at the alternatives so they are aware of any necessary changes to their proposals before applying for new permits.*]
- How is this NEPA process linked to the existing northern right whale research?
- [*The EIS project team responded that there is a separate EIS for northern right whales that is currently underway by PR1.*]

Purpose and Need

[6] In addition, a new permit application gives researchers the opportunity to make changes to their activities as needed since they were first issued in 2002 or 2005, whereas a court order likely would not.

- Is there a Purpose and Need (P&N) statement for the EIS? The P&N should focus on the status of the species and the regulatory context. The P&N needs to be succinct but followed by a section that summarizes the important issues or questions that will be analyzed later in the document.
- *[The EIS project team responded that the Notice of Intent (NOI) stated the P&N which included the regulatory context and why these species must be studied.*]
- This EIS could take the opportunity of providing a clear outline of what it is we are doing by all this research and the millions of dollars at stake if we do not do this research (i.e., commercial fishing). If we did not have certain kinds of data, the Council could/ would have to be more conservative in fisheries management. There is a high cost associated with funding research programs not only related to better understanding the species to promote recovery but to also allow other actions to continue such as commercial fishing.
- Is it appropriate in this EIS that one of the needs is that research must be done so that other activities such as commercial fishing can continue?
- SSL data are currently being used to refine management measures in the Council process and if we didn't have information about these species from the current research, we would not have as much knowledge about them to properly manage commercial fishing. There are conservation issues that certain research needs to address. This context needs to be placed up front in the EIS document.

Range and Structure of Alternatives

- Will you be identifying a preferred alternative in the DEIS?
- [*The EIS project team responded that this has not been determined.*]
- You may want to do so in order to avoid getting comments on alternatives that are not likely to be chosen as a preferred alternative.
- Do not forget about the grant process in this EIS. Under the No Action Alternative, grants that do not require permits could be issued.
- Will the permit process be included in the EIS alternatives?
- There is value of having a discussion of proposed changes to the permit process so the public would understand the potential implications of these changes on the permit process.
- A Center for Independent Expert (CIE) review of a research techniques manual should be under all alternatives (i.e., an element common to all alternatives).
- Should this be an option in an alternative at all? Or should it be part of implementation?

SSL Recovery Plan and NFS Conservation Plan Research Priorities

(This discussion relates to the priorities identified in the species' plans listed in the implementation schedule of each of those plans; see handouts in Appendix A).

- Recently, the comment period on the 2006 Draft SSL Recovery Plan was extended until September 1, 2006. What if the SSL Recovery Plan has major changes before we finalize this EIS? Is it a good idea to tie the alternatives so heavily to the Conservation and Recovery Plans?
- [The EIS project team responded that this is not likely to be an issue. Whether you use the existing Recovery or Conservation Plans or the new draft Plans, we're focusing on research techniques in this EIS more than anything.]

- Using the Recovery and Conservation Plan Priorities (listed in the implementation schedules of the Plans) in the alternatives is confusing. It may be better to use different descriptions.

Impact Analyses and Criteria

- A question was raised about 'humane methods' used in research.
- [*There is a statutory requirement related to 'humaneness' which requires researchers to justify their research techniques by explaining why available techniques that would result in less pain, stress or suffering would not fulfill the study objective.*]
- Where in the EIS will you discuss issues such as 'fluorescent paint is less effective than hot branding' for marking because of 'said' reasons for meeting specific research needs?
- Could the EIS discuss the range of techniques used to answer the same research questions and in this discussion provide information on the advantages and disadvantages of these research techniques (e.g., similar to the QA papers (Appendix F) in the Alaska Groundfish PSEIS).
- [*The EIS could expand Appendix E of the SSL Permit EA to include a discussion on the 'effectiveness' of research techniques.*]
- [*Under MMPA, the burden is on the applicant to justify techniques chosen for research.*]
- What metrics will be used for analysis?
- [*The EIS project team stated that Potential Biological Removal (PBR) or the total number of animals that die from research is only one element of our cumulative effects analysis. We continue to develop our methodology for analysis.*]
- One key element to your evaluation criteria should tie all this to the P&N and why we're doing research. Tie results of your alternatives analysis to the overarching scientific questions that are driving the research.
- Should we base the alternatives on the research activities themselves and how those activities meet the needs of the major research questions?

NATIVE TRIBES AND ORGANIZATIONS FOCUS GROUP MEETING – ANCHORAGE, AK (AUGUST 10, 2006)

Meeting Participants (please see attached sign-in sheet in Appendix B): Don Bremner, Monica Riedel, Karen Pletnikoff, Steve MacLean, Margaret Williams, Lianna Jack, Peggy Osterbeck, Mike Miller, Max Malavansky, Andy Malavansky, Mike Payne*, Tammy Adams*, Ann Garrett*, Jon Isaacs*, Steve Davis, Taylor Brelsford*, Anne Southam*, Rich Kleinleder*
* Indicates EIS Project Team

General Comments on the EIS

- We are concerned that the permitting requirements might trickle down to the Native community resulting in Native subsistence harvest requiring some kind of permit. This should not be a result of this EIS.
- [*The EIS project team assured the group that it is not NMFS intent in the EIS to institute permit requirements for subsistence activities. The EIS is solely about research.*]
- [*The EIS project team asked are there different research questions that should be asked than are currently being addressed by research today? Are there different techniques that could be used to answer new questions or questions that are already on the table regarding SSL or NFS?*]
- Why are NFS in this EIS?
- *[The EIS project team responded that the dramatic decline in the NFS population raises similar questions to the SSL decline and research techniques used are similar between the species. The agency is trying to be proactive by including NFS in this EIS.*]
- Has something changed in the level of funding to make us think that the NFS Conservation Plan would be implemented when there is currently not much funding? Are we bogging down the EIS process by including NFS?
- [*The EIS project team responded that including NFS in this EIS is an attempt by the agency to avoid future lawsuits and provide more flexibility for future research should more funding become available.*]
- Has the Native community considered an exception for their research under the MMPA?
- Yes, this has been considered but it has not been done.
- This might be a good approach to think about for future research activities that could separate Native research activities from other research.
- The Native community is interested in better education and outreach with NMFS over the long-term.
- A techniques manual could be useful for determining a reasonable sample size for requested activities. It could help bring the requested number of permitted takes and the actual number of takes closer together.
- Natives are in a paradox in that we are brought to the table because of this lawsuit which was based on incorrect information. If this is really about the science of survival of the species, anything below Alternative 4 does not address the decline of the species. We should not have a loss of customary and traditional rights as a

result of this lawsuit. Native concerns and perspectives were missing in the court order.

- Who drafted the NFS Conservation Plan?
- The Pribilof Islands have been very involved in developing the NFS Conservation Plan. NMFS works very closely with these communities on NFS research. There are other research groups that study the animals that do not coordinate very much with the communities. Max and Andy are leaders for coordination on NFS research for the St. George Tribe. Aquilina Lestenkoff is the leader for coordination on NFS research for the St. Paul Tribe.
- The EIS must be readable and digestible for all readers.

Project Schedule

- How will this project schedule affect the research schedule? And how will it affect other entities such as NPRB or other groups that might fund research?
- [*The EIS project team responded that NMFS has been coordinating with the research community to make sure future activities are covered in this EIS.*]
- Perhaps groups such as NPRB could 'condition' their RFPs such that proposed research on NFS or SSL would be 'on hold' until the ROD is issued.
- What is the probability that the NMFS PR1 office will be able to actually process all of these permits given this aggressive schedule in trying to get researchers out in the field next summer? Is this realistic?

Range and Structure of Alternatives

- What about an Alternative 6 that encourages more collaboration with the Native community by incorporating Traditional Knowledge (TK) in research more than is portrayed in the current alternatives? These alternatives seem to focus on Western science.
- Could we incorporate local TK as part of research activities in the alternatives rather than in a stand alone alternative?
- Incidental take by commercial fisheries should also be in these alternatives similar to the way subsistence harvest is accounted for (e.g., with regard to using tissue samples from subsistence harvest for research).
- The southeast Alaska populations, especially for SSL, should be treated differently in the alternatives.
- There are some things that need to be common across alternatives such as incorporating TK. Tissue collection using subsistence harvested animals should be common across alternatives.
- What other types of Native activities can be common across alternatives?
- We really need to have Native activities defined well in the EIS alternatives. From a Native perspective, English words that refer to specific activities in the lawsuit do not adequately capture the Native perspective. It is important to make sure the Native perspective is captured in the EIS.
- The use of Priorities from the Recovery and Conservation Plans is not logical when considering intrusiveness; some Priority 3 activities are less intrusive than some Priority 2 activities. The Priorities listed in the Plans also seem to be oriented towards level of funding and the value of the information obtained for the level of funding granted.

- By naming these alternatives 'Minimal Impact' and 'Reduced Impact' you are pre-supposing the impact of these alternatives.
- [*The EIS project team responded that the names of the alternatives are going to be changed in recognition of this.*]
- We need to add more description of the types of activities that will be allowed under each alternative.
- There are no choices in choosing Alternatives 1, 2, or 3.
- Researchers can only do what is funded. Funding is a critical element of all these alternatives which is why it is important to analyze the full range of alternatives.

Impact Analyses and Criteria

- What is more likely and less likely to have an impact on residents and subsistence harvesters? Slight impacts that end up having a cumulative effect should be an important part of this analysis.

Coordination and Interaction with Native and Rural Communities/ Co-Management Agreements

- Not everyone has the same opportunity under co-management agreements. In other words, not every tribe has a co-management agreement to facilitate collaboration and coordination. The co-management agreements do not take into account community involvement on a broader level, or those communities that do not have such agreements.
- Could samples taken from subsistence harvested animals be covered under the University of Alaska (UAF) Alaska Marine Mammal Tissue Archival Project? This is currently being done under the UAF Archival Project.
- [*The EIS project team noted that this kind of coordination with UAF is not in the control of the PR1 Office. It is up to of each of the researchers to work with Native communities to get samples from subsistence harvested animals..*]
- Does the UAF archival program qualify under this research permit program?
- [*The UAF archival program permit is not a part of the EIS because that permit does not involve authorizing "takes" of live animals. The continuation of that project is not dependent on the EIS*].
- St. George does require a Memorandum of Agreement (MOA) with researchers they work with currently.
- The Aleut Marine Mammal Commission (AMMC) Sentinel Program trains observers for harbor seal research out in the Aleutians. This kind of program could be used for SSL and NFS research.
- Native groups from different parts of the country have different techniques or approaches. A single "representative" on the SRCT could not speak for all Native communities.
- Emphasize what is already in place for harbor seals in cooperation with ADF&G using the Sentinel Program. Could this be used for SSL and NFS research?
- The biosampling program for harbor seals has been in place for many years now.
- The EIS should place emphasis on analyzing potential social impacts; cross cultural impacts to the Native community.
- The AMMC Sentinel Program for monitoring species could be used as a model for monitoring effects of research under alternatives in this EIS.

- The Harbor Seal Commission is funded by NMFS and is made up of a collaborative group of researchers including UAS, ASLC, AMMC, and others. There are a total of 35 research projects on harbor seals and 2 of them involving Alaska Natives were rated among the best of these 35 programs. Under this program, this collaborative group comes together once a year to review the research in light of the Co-Management Plan for harbor seals.
- Does this kind of collaboration occur under the Co-Management Agreements for NFS?
- No formal group has been formed yet and no NFS Co-Management Agreement Research Plan has been developed.
- Coordination with the Native community should fall under the permit and grant process. Perhaps any involvement with a Native community where research occurs or that could be affected by a research program would require a permit or authorization from that community?
- Isn't this already built into the Co-Management Agreements and the by-laws that implement this agreement?
- Co-Management Agreements work very well for those communities that have them. What about those communities that do not have those types of agreements? Can we apply the structure of a Co-Management Agreement to other communities that could be affected by these research projects?
- A protocol for interacting with rural communities should be developed and used as a standard by researchers. This protocol would include how much lead-time to give the community and a description of what activities they will be doing there rather than just showing up, permit in had, stating what they will be doing as often happens now.
- The National Science Foundation funded an effort in 1994-1995 called 'A Compilation and Summary of Ethical Principles for Arctic Research' that could be used as a model for developing protocols for informing local tribes and organizations on SSL and NFS research.
- AMMC is in the process of finalizing Co-Management Agreements with NMFS on SSL and other species. Research Plans are part of this draft agreement. What we have found is that other entities want to come out and do research. In some cases we have already started doing this.
- Local communities and organizations need to be informed as to what research is already taking place in Alaska on marine mammals and to let these communities know when researchers are coming in.
- The SRCT could also be used as a research 'clearing house' that could help inform rural Alaskan communities as to what research is being prioritized and when their communities may be affected in an attempt to avoid duplication and facilitate communication among communities and researchers.
- Upfront involvement and communication with the Native community is encouraged. The judge that ruled on the SSL permits did not understand the Native perspective when this ruling was made. Cross cultural education must be part of these alternatives so that the Native perspective is captured up front rather than after the fact. We should include research activities that incorporate Native TK. The Native perspective has to be part of the social impact analysis in Chapter

4 of the EIS and alternatives should protect Native customary and traditional uses which must be clearly presented. There must be Native representatives on the SRCT as part of the up front process. There should be no presupposing of findings and impacts as are indicated in the current titles of the alternatives. We cannot let 'outsiders' define our rights and our environment.

APPENDIX A
MEETING POWER POINT AND HANDOUTS

SSL NFS Research EIS Focus Group Meetings
Summary Report
August 2006

Agenda
Steller Sea Lion and Northern Fur Seal Research EIS
Focus Group Meeting

I. Introduction
   a. Purpose of the Focus Group Meeting
   b. Project Background
      i. Purpose and Need of the EIS
      ii. Legal Requirements and Setting: Status of the HSUS Lawsuit and Implications for the EIS
      iii. Overall Project Schedule
   c. Ground Rules
II. Draft Alternatives
   a. Presentation of Alternative Approaches and Philosophy
   b. Review of Alternative Tables
   c. Discussion
III. BREAK
IV. Continued Discussion on Alternative Tables
V. Wrap Up
   a. Follow-Up to this Meeting (Minutes)
   b. Schedule for Additional Focus Group Meetings
   c. Next Steps

Environmental Impact Statement on Steller Sea Lion and Northern Fur Seal Research

Focus Group Meeting
Seattle, WA
July 24, 2006

Office of Protected Resources
NOAA Fisheries

Welcome and Introduction

Moderator:
Jon Isaacs, URS

Focus Group Agenda

- Introductions
- Meeting Purpose
- Background on NEPA Process
- Legal Requirements and Setting
- Proposed Project Schedule and Implications
- Discussion Ground Rules
- Discussion of Alternatives
- Next Steps in the Process

Focus Group Locations

- July 24 – SSL and NFS Researchers -Seattle, Washington
- Early August – NGO's, Governmental Agencies - Silver Spring, Maryland
- Mid-August – Alaska Native Groups, North Pacific Fishery Management Council -Anchorage, Alaska

Focus Group Meeting Purpose

- Present the NEPA and Legal Context of Construction of Research Alternatives
- Present the Alternative Framework and Range of Alternatives to Stake Holder Groups
- Get Feedback and Suggestions Regarding Finalizing Alternatives for Analysis in the DEIS

Intent of a Programmatic EIS

- NEPA compliance for federal programs during initiation or re-evaluation
- Tiered document to simplify, for reference by, NEPA compliance
- Broad look at issues and alternatives
- Policy guidance for future management actions

The NEPA Process

Intent of the SSL/NFS Research EIS

- Comply with NEPA
- Address the Issues Raised in the HSUS Lawsuit and Subsequent Court Ruling
- Facilitate NEPA Compliance for Research Grants and Permits
- Prepare a Thorough and Legally Defensible EIS that can Allow Research Next Year

NEPA DOES NOT: Dictate the decision to be made by NMFS.

The NEPA Process

Purpose and Need of the Proposed Action

- Why the Agency is Proposing a Specific Action
- Purpose and Need should have a Basis in Statutory Mandates and Regulatory Requirements
- Purpose and Need should be Clear and Convincing
- The Range of Alternatives Considered must meet the Purpose and Need

The NEPA Process

What is the Purpose of this Proposed Action?

- NMFS awards grants to assist in funding of activities identified by Congress or NMFS as important for management of protected species
- Purpose of issuing permits is to provide an exemption to MMPA and ESA prohibitions on "takes" for conduct of bona fide scientific research and enhancement activities

The NEPA Process

What is the Need for this Proposed Action?

- Facilitate research needed to identify, evaluate or resolve conservation problems for the species
- Information from authorized research is needed by NMFS to:
  - Prevent harm and avoid jeopardy or disadvantage to the species
  - Promote recovery
  - Identify natural and anthropogenic factors limiting the populations or stocks
  - Identify reasonable actions to minimize impacts of human activities
  - Implement conservation and management measures

The NEPA Process

Legal Requirements and Setting

- The EIS must comply with NEPA
  - NEPA requires that an EIS evaluate a reasonable range of alternatives that meet the purpose and need
- The EIS must relate to Fulfilling Statutory Mandates re: Recovery and Conservation Plans
- The EIS must address the issues raised during scoping
- The EIS must be cognizant of the issues raised in the HSUS lawsuit and the court ruling

The NEPA Process

Legal Requirements and Setting

- The EIS must be cognizant of the issues raised in the **HSUS lawsuit** and the court ruling
  - NMFS inappropriately dismissed alternatives
  - NMFS did not consider full spectrum of alternatives
  - NMFS failed to consider alternatives to the research methodologies that were being evaluated
  - NMFS did not show evidence of coordinating research and results so as to minimize the effects of research

The NEPA Process

Legal Requirements and Setting

- The EIS must be cognizant of the issues raised in the HSUS lawsuit and the court ruling
  - "…the plaintiff's contention that the defendants failed to give adequate consideration to potential alternatives to the proposed research appears to provide further justification for a remand."
  - "… a temporary moratorium on all Steller Sea Lion Research was not considered further…in the EA
  - "…the option of authorizing only non-intrusive research was similarly summarily rejected…."
  - "Since NMFS will have to prepare an EIS, it will have opportunity to consider, among other things, … available alternatives to the proposed research activities."

The NEPA Process

Proposed Project Schedule

- Finalize Alternatives – end of August 2006
- Preliminary Draft EIS – end of October 2006
- Release Draft EIS – December 2006
- Public comment period for Draft EIS – January 2007
- Prepare Final EIS – March 2007
- ROD, estimated completion – May 2007

Alternatives Discussion

Discussion Ground Rules

- Patience
  - we are all working towards a defensible yet expeditious EIS
- Constructive comments and solutions
  - Everyone here has expertise and knowledge
- No accusations or personal attacks
- Be aware of time limits
  - We have limited time today, be as concise as possible and avoid debates
  - I will limit unproductive comments

Alternatives Discussion

Alternatives Approach and Philosophy

- Alaska Groundfish Management EIS provides model for complex policy-based alternative structure
- Preferred Alternative may not be identified until after DEIS comment period, "Mix and Match" from all alternatives
- Range of alternatives must anticipate multi-year permits and research that might be proposed
- Covering the range of potential activities under alternatives is intended to make future NEPA compliance more routine

Alternatives Discussion

Alternatives Carried Forward for Analysis

- Alternative 1 – No Action: No New Permits or Amendments
- Alternative 2 – Minimal Impact Approach: Priority 1 Research Only
- Alternative 3 – Reduced Impact Approach: Priority 1 and 2 Research Only
- Alternative 4 – Status Quo: Existing Research Programs
- Alternative 5 –Expanded Research Approach

Alternatives Discussion

Alternative 1 – No Action: No New Permits or Amendments

- NEPA requirement for analysis, look at consequences of no further action
- Existing permits would run their course, no new amendments, no new permits
- Minimum stock assessment requirements under MMPA and ESA
- Research that does not require take permits could occur

Alternatives Discussion

Alternative 2 – Minimal Impact Approach: Priority 1 Research Only

- Priority 1 Research Only from revised draft SSL recovery plan and NFS conservation plan
- SSL Recovery Plan
  - estimate abundance trends with aerial surveys
  - adaptive management plan for fisheries
- NFS Conservation Plan
  - Population trend, feeding ecology, vital rates, habitat issues
- Aerial Survey and Adaptive Management Emphasis

Alternatives Discussion

Alternative 3 – Reduced Impact Approach: Priority 1 and 2 Research Only

- Priority 1 and 2 Research Only from revised draft SSL recovery plan and NFS conservation plan
- SSL Recovery Plan (see handouts)
- NFS Conservation Plan (see handouts)
- Aerial Survey and Adaptive Management Emphasis; most of current intrusive research allowed under one permit (per n. right whale)
- Formalized coordination/review processes (SRCT & CIE), overall research plans, and procedures manuals

Alternatives Discussion

Alternative 4 – Status Quo: Existing Research Programs

- Research activities justified under objectives of revised draft SSL recovery plan and NFS conservation plan
- Pre-court order level of activities, existing approved permits
- Current permit/grant review processes, voluntary coordination, individual research proposals, individual IACUC reviews

Alternatives Discussion

Alternative 5 –Expanded Research Approach

- Research activities justified under objectives of revised draft SSL recovery plan and NFS conservation plan
- Expand the types of research allowed (sex, age classes), more intrusive research to maximize value of data obtained
- Increase scope and intensity of research on NFS
- Anticipate future research activities over the planning horizon
- Additional features/activities that may require regulatory changes (duration of permits)

Alternatives Discussion

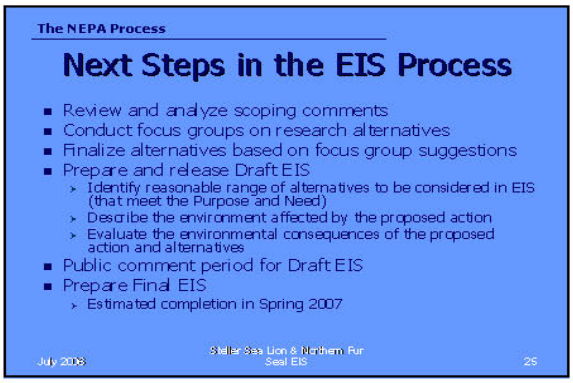
Review of Alternatives Tables

- What do the Alternatives Contain?
  - Research Activities
  - Permit and Grant Process
  - Oversight and Evaluation
- Variables
  - Levels of take not currently an alternative component: could be held at a maximum acceptable constant, varied by alternative, and/or used as an impact indicator
  - Processes that are linked to determining or reducing impacts could be held constant (rather than variable) for all action alternatives

Alternatives Discussion

Additional Discussion and Questions

- See tables


The NEPA Process
Next Steps in the EIS Process
Review and analyze scoping comments
Conduct focus groups on research alternatives
Finalize alternatives based on focus group suggestions
Prepare and release Draft EIS
Identify reasonable range of alternatives to be considered in EIS (that meet the Purpose and Need)
Describe the environment affected by the proposed action
Evaluate the environmental consequences of the proposed action and alternatives
Public comment period for Draft EIS
Prepare Final EIS
Estimated completion in Spring 2007
July 2006
Steller Sea Lion & Northern Fur Seal EIS
25

2.2 Alternatives Carried Forward for Analysis

Five alternatives will be carried forward for analysis of environmental consequences in this EIS. These alternatives represent a reasonable range of research granting and permitting options that fulfill the purpose and need for the federal action as described in Chapter 1. The general policy of each alternative is described below and examples of the specific numbers and kinds of takes permitted under each alternative are listed in Table 2.1.

2.4.1 Alternative 1 - No Action: No New Permits or Amendments

The No Action alternative, which must be considered in an EIS according to CEQ regulations, would only allow research activities on SSLs and NFSs that are currently authorized under existing permits (i.e. those that have not been vacated by the 26 May 2006 court order) until the permits expire (see Section XX for a list and summary of existing permits). No new permits would be issued to replace these permits as they expire, nor would existing permits be amended to allow modifications in research activities, sample sizes, or objectives. Grant monies administered by NMFS that have already been awarded would be allocated according to existing contract stipulations. No new grant applications would be processed to fund research activities on SSL and NFS that require permits.

When the existing permits expire, all research activities that require a permit would have to cease. Any research on SSL or NFS would have to be conducted under conditions that do not require permits. This restriction would prevent most of the recent research activities from continuing but may allow use of remote sensing techniques and scat collection if researchers only landed on vacant haulouts and rookeries. It may also include aerial surveys and behavioral observations conducted at distances and conditions that are not likely to result in takes (and therefore would not require permits). This alternative would therefore allow researchers to monitor the populations and collect information pertinent to their recovery using only techniques that do not disturb the animals. This policy of not issuing new permits, amendments, or grant monies for research related takes would be applicable to both SSL and NFS.

2.4.2 Alternative 2 – Minimal Impact Approach; Priority 1 Research Only

The policy of this alternative would be to issue permits and provide grant support to qualified individuals and institutions to conduct *bona fide* research related to the highest priority recovery actions described in the Draft Revised Recovery Plan for SSL (SSL Plan) and the Draft Revised Conservation Plan for NFS (NFS Plan). To minimize the cumulative impacts on SSL and NFS, no permits would be issued for lower priority research activities. Under this alternative, NMFS would not issue research permits for any activities that did not contribute substantially to the information needs of the highest priority recovery actions as described in their respective plans.

SSL, Western DPS
The SSL Plan identifies 78 substantive actions needed to achieve recovery of the Western DPS but highlights three actions that are especially important:

- Maintain current fishery conservation measures,

- Design and implement an adaptive management program to evaluate fishery conservation measures,
- Continue population monitoring and research on the key threats potentially impeding sea lion recovery.

All recovery actions were prioritized into three categories in the SSL Plan Implementation Schedule (NMFS 2006, pp 157). Priority 1 was defined as "an action that must be taken to prevent extinction or to prevent the species from declining irreversibly in the foreseeable future". Priority 2 was defined as "an action that must be taken to prevent a significant decline in species population/habitat quality or some other significant impact short of extinction". Priority 3 was defined as "all other actions necessary to provide for full recovery of the species". Only two recovery actions received the Priority 1 designation and were described as follows:

1) *Estimate abundance trends for pups and non-pups via aerial surveys*. Conduct surveys biennially at trend sites, and at least every four years at all rookeries and haulouts in the western DPS using aerial survey techniques with medium format photogrammetry, which allows for counting pups as well as non-pups. Information from trend sites forms the basis of the stock assessment reports.
2) *Design and implement an adaptive management program for fisheries, climate change, and predation*. The mechanisms by which different threats affect sea lions can be similar, as are the responses that sea lions exhibit to these different threats. This represents a fundamental difficulty in identifying which threats are impeding recovery and which mitigation measures would be effective. Due to the uncertainty in how fisheries affect Steller sea lions and their habitat, and the difficulty in extrapolating from individual scientific experiments, a properly designed adaptive management program should be implemented. This type of program has the potential to assess the relative impact of commercial fisheries and to better distinguish the impacts of other threats (including killer whale predation). This program will require a robust experimental design with replication at the proper temporal and spatial scales with the appropriate levels of commercial fishing as experimental treatments. It will be a challenge to construct an adaptive management plan that meets the requirements of the ESA, is statistically sufficient, and can be implemented by the commercial fisheries. Acknowledging these hurdles, we must make a significant effort to determine the feasibility of such a program.

The SSL Plan distinguishes between "improvisational approaches to management" and genuine "adaptive management" that develops, in advance, a plan that covers all contingencies, optimizes the trade-offs among experimentation, risk, and action under uncertainty (NMFS 2006, Appendix 3). A key component of an adaptive management plan is that it describes the optimization rationale and management path that will be chosen in response to each possible outcome of the experiments and monitoring, including damage control for the eventuality of experiments with unfavorable outcomes.

The information needs for implementing an adaptive management plan are not clear at this time and would depend greatly on how the effects of the experimental treatments on SSL are measured. Since different treatments would take place in many areas and over many years, the number of different oceanographic and environmental variables that could affect the experiments would be huge. The central issue in developing the adaptive management plan would be to determine how the experimental treatments are evaluated, thereby serving as the basis for adaptive management decisions. One

approach would be to monitor and account for all the environmental variables over time and space and attempt to separate the effects of the given experimental treatments from other factors. This would require a wide range of scientific investigations, including intrusive research on SSL to measure their nutritional and physiological responses to different conditions. An alternative approach would be to use population trends as the primary measure of response and not attempt to track all the other variables or physiological responses.

Although the approach taken by the adaptive management plan cannot be determined ahead of time, for the purposes of assessing the effects of research activities in this EIS, it will be assumed in this alternative that the adaptive management plan will only be based on population trend responses. Under this alternative, NMFS will only issue permits and provide grant support for population trend monitoring by aerial surveys (consistent with the other Priority 1 recovery action in the SSL Plan) and Level B disturbance from other non-intrusive research and monitoring activities. This will allow for the analysis of an essentially minimal impact, no intrusive research alternative that is still consistent with the highest priorities of the SSL Plan and NMFS regulatory imperative to conduct regular stock assessments. An adaptive management plan that took the other approach would likely allow essentially the same types and scope of research as is conducted under the status quo conditions and these effects will be analyzed under Alternative 4.

Under this alternative, no permits would be issued or grant funds allocated for research activities on the Western DPS that did not directly support the two priority 1 recovery actions. This means that many of the recent research activities that involved capturing, restraining, sampling, and disturbing Western DPS sea lions on their haulouts and rookeries would not be permitted or funded. This alternative would allow for continued census surveys and behavioral observations that do not have the potential to cause injury to animals. Scat collection would be allowed but only from unoccupied rookeries and haulouts. Tissue samples would be allowed from animals that have been taken legally for subsistence harvest or found dead due to other causes. Observers and remote sensing equipment would need to be placed at times and in such a manner as to minimize disturbing animals, especially at rookeries.

SSL, Eastern DPS

Regarding the Eastern DPS, the SSL Plan recommended the initiation of a status review to consider removing the Eastern DPS from the List of Threatened and Endangered Wildlife. Given the long-term increasing population trend and lack of significant conservation threats, the SSL Plan concludes the primary recovery imperative is to develop a post-delisting monitoring plan to ensure re-listing is not necessary after removal. Key components of this plan relative to research activities have not been prioritized in the SSL Plan but would likely include population trend monitoring, genetics research to refine population structure, monitoring terrestrial habitat threats, monitoring for unusual mortality events that may be related to contaminants or other human factors, and monitoring of fishery management plans to ensure they stay consistent with sea lion requirements.

To be consistent with the minimal impact approach described above for the Western DPS, research permits would be issued and grant funds allocated only for projects that directly related to the post-delisting monitoring plan. Permits and grant funds for intrusive

research on Eastern DPS sea lions would be limited to the collection of genetic samples if non-intrusive methods were not available.

NFS
The highest priority conservation actions described in the NFS Plan that contain field research components are the following:

- Monitor and manage subsistence harvest
- Identify and evaluate illegal harvests
- Basic studies on fur seal feeding ecology
- Determine impact of fisheries
- Monitor male and pup abundance at Pribilof Islands
- Estimate pup survival
- Evaluate marking and resighting program
- Study vital rates
- Behavioral/physiological studies
- Comparative studies between Pribilof animals and other islands
- Conduct oceanographic and fishery surveys in relation to essential fur seal habitat
- Reevaluate carrying capacity

Under this alternative, research permits would be issued and grant funds allocated only for projects that directly related to these highest priority recovery actions. Intrusive research activities would be allowed only if they were consistent with the requirements of the MMPA for *bona fide* research, NMFS implementing regulations, and with the Co-management research plans developed with the Pribilof Island Aleut Communities.

2.4.3 Alternative 3 – Reduced Impact Approach; Priority 1 and 2 Research Only

Under this alternative, NMFS would issue permits and provide grant support to qualified individuals and institutions to conduct *bona fide* research activities that are designated as Priority 1 and Priority 2 in the Draft Revised Recovery Plan for SSL and Draft Revised Conservation Plan for NFS. To reduce the number of permitted takes and cumulative impacts on SSL and NFS relative to the baseline conditions, NMFS would take several steps to consolidate and formalize the various review processes that research proposals undergo, improve the coordination and communication between different research groups, and establish standardized procedures for field work.

Under this alternative, NMFS would establish new administrative positions and processes to consolidate and formalize coordination, assessment, and communication of all research activities involving SSL and NFS. These research oversight functions would not replace NMFS Grants Office and Permits Division responsibilities or processes but would be structured to address granting and permitting issues at the same time as they address the scientific value of proposals. These new personnel and formal processes would supply the Grants Office and Permit Divisions with the pertinent information they need about each proposal at the same time. The separate decision-making processes for grants and permits, including NEPA analyses, could therefore take place simultaneously and in consultation with each other.

For the purpose of this EIS alternative, the new research oversight function will be conducted by the "Species Research Coordination Team" (SRCT). The makeup of the SRCT and its physical location would have administrative and budgetary implications beyond the scope of this EIS and would therefore be determined at a later date. However, in order to fulfill the broad scope of duties described in this alternative, the SRCT would probably need to include representatives from NMFS research, grants, and permit offices as well as representatives from other research agencies and institutions, Alaska Native co-management councils, and the Marine Mammal Commission.

For the purposes of this alternative, it is assumed that the SRCT would deliberate on the appropriateness of the proposed research projects with regards to the conservation and management of SSL and NFS and serve as a clearinghouse for information about all aspects of research on these species. SRCT reviews would be conducted at least annually and would be adaptive to the results of previous studies, changing population trends, changing management information needs, and the development of new research methodologies. The SRCT would address questions about the appropriateness of particular proposals pertinent to the granting and permit processes, including but not limited to:

- Determining whether proposed research activities are consistent with the goals and objectives of the Priority 1 and 2 actions listed in the species' respective Recovery and Conservation Plans and whether they provide data essential to conservation management of the species.
- Prioritizing the proposed research activities according to their ability to test crucial hypotheses and/or provide useful data for conservation measures.
- Assessing and determining the most effective methods currently available to provide the necessary data to accomplish the research objectives, explicitly weighing tradeoffs between sample size and risk to individual animals.
- Creating a "best practices" or "state-of-the-art" procedures manual for fieldwork that specifies the least risky methods available to acquire different types of data (with risk being measured by the potential for adverse effects on individual animals and the overall level of disturbance to the haulout/rookery). This fieldwork procedures manual would be reviewed and approved by the Center for Independent Experts, an independent agency established at the University of Miami to provide independent peer-review of NOAA Fisheries resource science. This manual would then serve to direct the choice of methods used by different research activities. It could be updated and revised to incorporate new, less risky techniques as they are developed and validated.
- Establishing field monitoring procedures that would be necessary to measure the effects of research activities on the animals disturbed. The results of these monitoring efforts will be used to modify future proposals and procedures as necessary to reduce the impact of research activities on the species.
- Developing a fully coordinated research plan and program (elements of which are conducted by separate agencies, institutions, and researchers) that results in less redundancy of effort, less double counting of takes by researchers working collaboratively but under separate permits, and fewer non-essential research programs. The SRCT would determine, before summer field season, which research should be conducted at particular places and times in order to maximize cooperative and collaborative research and logistical opportunities while minimizing impacts on particular rookeries and haulouts.

For all proposals for research on live animals, including those that involve capture, handling, or physical contact with animals, or activities that could otherwise harm or materially alter the behavior of an animal under study, the Animal Welfare Act requires an Institutional Animal Care and Use Committee (IACUC) to review all procedures to ensure the safe and humane treatment of animals. Although individual institutions currently use IACUCs to review their proposals, there is no central IACUC that reviews all the different research proposals for the species. The creation of a central IACUC would require new administrative and budgetary support but would complement the SRCT approach to standardizing minimum impact procedures. For the purpose of this EIS alternative, it will be assumed that a central IACUC would be created and would work in conjunction with the SRCT. Once the overall research objectives and methods have been determined by the SRCT, the central IACUC could review all proposals that require capture and handling of animals. The type of information provided in the central IACUC review would be crucial for the grant and permit decision-making processes, especially for activities involving the most intrusive research activities.

Another management tool that could be used to minimize potential impacts of intrusive activities would be to incorporate all proposals that require handling of animals into one permit. All researchers wishing to participate in these types of intrusive activities would have to be listed as Co-Investigators and work under the conditions of this one permit. This would ensure the highest degree of coordination amongst researchers for intrusive activities and promote the use of standardized and minimal impact methodology. For the purpose of this EIS alternative, it will be assumed that all research activities that require capture and handling of animals would be authorized under a single permit.

The SRCT reviews would be used to inform the granting and permitting processes in terms of getting complete information and adequate justification from applicants, and would be treated as part of the public NEPA process regarding research. The SRCT review meetings would therefore be open to the public and would include specified times for public comments as well as specified periods for written comments. Minutes from these meetings would be made available in written format as soon as possible and would be used as official records supporting granting and permitting decisions and NEPA analyses.

SSL, Western DPS
The SSL Plan ranked recovery actions for the Western DPS into three priority classes, as described above in section 2.4.2. Under this alternative, NMFS would administer grants and issue permits only for research activities contributing to the top two priorities for recovery of the Western DPS.

The formal SRCT review process outlined above would address the need to optimize sampling sizes and research designs such that key scientific information is acquired while the cumulative impact from research activities is minimized. If a proposed technique or research design requires a larger sample size than can reasonably be achieved, grant money would not be awarded and the permit application would be denied. If a new technique for research on the Western DPS is developed that requires field testing to determine its feasibility and data return rate in order to calculate an appropriate sample size, the technique must first be tested, including an assessment of adverse effects, using animals from the Eastern DPS or a surrogate species.

SSL, Eastern DPS
The SSL Plan did not prioritize specific recovery actions for the Eastern DPS but concludes that the primary recovery need is to develop a post-delisting monitoring plan in support of a status review to remove the Eastern DPS from the list of threatened species. Key components of this plan are outlined above in section 2.4.2.

Under this alternative, grants and research permits would be issued only for projects that directly related to the post-delisting monitoring plan. As is the case for the Western DPS under this alternative, only one permit would be issued for intrusive research on Eastern DPS sea lions and the same criteria pertaining to optimized research design and sample sizes would be used. Development of new research techniques intended to be used for the Western DPS could be permitted on the Eastern DPS if the research results supported the post-delisting monitoring plan. Otherwise, surrogate species would need to be used for experimental purposes.

NFS
In the NFS Plan, the conservation actions with the two highest priorities include those listed under Alternative 2 plus most other research activities (Table XX).
Under this alternative, grants and research permits would be issued only for projects that directly related to these highest priority conservation actions. The same provisions regarding the optimization of intrusive research efforts that applied to SSL would also apply to NFS.

2.4.4 Alternative 4 - Status Quo: Existing Research Programs

The existing grant and permit process is flexible in that it can accommodate changes in funding level, management priorities, scientific interests, research techniques, population status, and threats to the populations' recovery. Under the status quo process, summarized in Chapter 1, permits are issued to qualified individuals and institutions to conduct research according to the scope and methods requested in their applications with permit restrictions and mitigation measures required by the MMPA, ESA, and NMFS implementing regulations. Other than these statutory and regulatory permit restrictions, the only limitation that is placed on SSL permit issuance under the status quo process is that proposed research programs have impacts at a level below that which would jeopardize the continued existence of the species or result in adverse modification of critical habitat (ESA Section 7 review). This alternative could therefore be seen as maximizing the collection of scientific data given existing legal requirements for permitting, including avoiding causing jeopardy.

The scope of research activity conducted under this alternative depends substantially on the amount of funding that is available. Funding for SSL research peaked from 2000-2004 due to special congressional appropriations. Research funding has decreased since that time and is not expected to reach those levels again in the foreseeable future. For the purposes of this EIS, the amount of funding and therefore research effort on SSL will be assumed to have reached peak levels under the most recently completed permits (2002-2006). The average number, types, and distribution of takes allowed by those permits will be used for the analysis of effects of this alternative. For NFS, the number, types, and distribution of takes allowed by permits and requested in recent applications will be used for the analysis of effects under this alternative. This may not represent a

peak research effort for this species, for which funding levels have recently increased. Peak research levels for NFS will be affected by future population trends and congressional funding.

Under the status quo alternative, new permits would be issued for the same type and scope of research as occurred under SSL permits prior to a court order that vacated most of them in May 2006. It would also include all other existing permits for research on SSL and NFS that were not affected by that order. New permits would be issued to replace permits as they expire such that the levels and types of research activities would continue to the extent that funding allowed.

New requests for permits and amendments to existing permits would be considered on a case-by-case basis and would be granted as long as the researchers were qualified to do the work, the research was bona fide as defined under the MMPA and justified through reference to the SSL or NFS Plan objectives, the project had a reasonable chance of succeeding, and it passed Section 7 review. Thus, the types of activities for which permits are issued would not be determined by their relationship to priority items in the SSL or NFS Plans. Under this alternative, each new permit requested would be evaluated separately during Section 7 consultation against the baseline of impacts from whatever permits were in effect at the time of the request. Permits would only be denied if it were determined that issuance would exceed the jeopardy or adverse modification threshold when impacts were added to existing research and other activities in the baseline at the time the application was received.

SSL
The Status Quo Alternative would include the type and scope of research activities described in Table XX along with a suite of procedures and mitigating factors that are typically attached as conditions of the permits. These conditions include stipulations for notification, coordination, and reporting of specific project information to NMFS (see Appendix XX for a complete description of mitigation measures and "best practices" that were included in the research permits vacated by the May 2006 court order). Most of the research activities involved animals from the Western DPS although some permit holders specified the location of work to be "all of Alaska". The population or location of work conducted, as listed in the most recent permits, is described in Table XX.

NFS
The type and scope of research activities on NFS under the Status Quo Alternative are described in Table XX. Procedures and mitigating factors are also typically attached as conditions of these permits which are issued under the authority of the MMPA (see Appendix XX).

2.4.5 Alternative 5 – Expanded Research Approach;

This alternative would provide the greatest amount of granting support that congressional appropriations allow and issue all requested permits for research regardless of how those proposed activities are prioritized in the species' Recovery or Conservation Plan, provided that they meet all permit issuance criteria and would not jeopardize the continued existence of the species. This alternative would require changes to existing regulations that would loosen permit issuance criteria to allow

certain permit activities such as an increase in the use of certain invasive procedures, as described below.

Under this alternative, emphasis would be placed on the value of the information to the recovery of the species and less on the risk to individual animals. For example, under the current permits, intentional lethal takes of SSL or NFS have not been authorized, although some projects involve collection of tissue samples from legal subsistence harvests. Under Alternative 5, more intrusive research techniques could be authorized that had a greater risk of serious injury to individuals or sensitive age/sex classes if the agency determined the information was critical to the eventual recovery of the species. We will assume under this alternative that the amount of research and takes permitted will increase relative to the status quo, including the potential for lethal takes.

Under the MMPA regulations (50 CFR 216.41), if the lethal taking of depleted marine mammals is proposed the applicant must demonstrate that: (i) Non-lethal methods for conducting the research are not feasible; and (ii) For depleted, endangered, or threatened species, the results will directly benefit that species or stock, or will fulfill a critically important research need. Alternative 5 would allow use of lethal take or increase the use of certain invasive procedures even though non-lethal or less invasive methods are feasible. For example, permits could allow increased use of new techniques on endangered populations even where non-ESA listed surrogate species are available, and increased intrusive research on pregnant or lactating females.

The scope of research permitted for SSL and NFS would be increased under Alternative 5 relative to status quo. Sample size and age/sex classes chosen for research activities could be expanded.

Table 2-X - Comparison of SSL NFS EIS Research Alternatives **(DRAFT)**

		Alternative 1 – No-Action[1]	Alternative 2 - Minimal Impact Approach; Priority 1 Research Only	Alternative 3 - Reduced Impact Approach; Priority 1 and 2 Research Only	Alternative 4 - Status Quo: Existing Research Programs	Alternative 5 - Expanded Research Approach
Research Activities	Aerial surveys	- Only allowed at high altitude such that disturbance is unlikely and no permit or authorization is required	- Biennial at all rookeries and trend sites as needed for stock assessment and trend analysis associated with adaptive management plan - Standardized techniques and flight mitigation measures	- Biennial at all rookeries and trend sites as needed for stock assessment and other critical research - Standardized techniques and mitigation measures as determined by Species Research Coordination Team (SRCT) and Center for Independent Experts (CIE) approved procedures manual	- Annual or Biennial at all rookeries and trend sites as needed for stock assessment and other justified research -Quarterly at some sites as specified by research design proposal - Various techniques and flight mitigation measures	- Survey frequency determined by stock assessment requirements and other research needs - Various techniques and flight mitigation measures
	Land & Vessel Observations	- Only allowed at distances and conditions such that disturbance is unlikely and no permit or authorization is required	- Only if supports top priority objectives, with mitigation to minimize impact	- Standardized techniques and mitigation measures as determined by SRCT and CIE-approved procedures manual	- Procedures as specified by research design proposal, indeterminate sample size allowed for justifiable research purposes - Mitigation measures specified by applicant, plus those required by law	- Same as Alternative 4 Status Quo but with changes to regulations for permit mitigation (restrictions and requirements)
	Disturbance Incidental to Other Research	- Only allowed at distances and conditions such that disturbance is unlikely and no permit or authorization is required	- Allowed with mitigation measures	- Allowed with mitigation measures	- Allowed with mitigation measures	- Same as Alternative 4 Status Quo but with changes to regulations for permit mitigation (restrictions and requirements)
	Capture & Restraint	- No permits, authorizations, or grants issued	- Not allowed for Western DPS - Allowed for Eastern DPS and NFS for top priority recovery needs only, with "best practices" mitigation	- Logistics, timing, and location of research teams coordinated by annual SRCT review - Minimum but sufficient sample size to make meaningful progress on top 2 recovery/conservation priorities - Standardized techniques and mitigation measures as determined by SRCT and CIE-approved procedures manual - Central IACUC review of all capture and handling procedures - Assume fewer animals affected than Alt 4	- Sample sizes constrained only by budget and ESA Section 7 considerations -Logistics, timing, location, procedures & sample size determined by research proposal design - Mitigation measures specified by applicant, plus those required by law -Performed by PI, CI, or persons under their direct supervision	- Same as Alternative 4 Status Quo -Performed by PI, CI, or persons under their direct supervision
	Tissue Sampling	- No permits, authorizations, or grants issued	- For Western DPS SSL, tissue samples permitted on specimens from legal subsistence harvests and scat collection allowed from vacant haulouts	- Central IACUC review of all sampling procedures - Standardized techniques and mitigation measures as determined by SRCT and CIE-approved	- Tissue types, procedures, age class, sample size, and sex/age classes determined by research proposal design - Mitigation measures specified by	- Same as Alternative 4 Status Quo -Performed by PI, CI, or persons under their direct supervision

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		Alternative 1 – No-Action[1]	Alternative 2 - Minimal Impact Approach; Priority 1 Research Only	Alternative 3 - Reduced Impact Approach; Priority 1 and 2 Research Only	Alternative 4 - Status Quo: Existing Research Programs	Alternative 5 - Expanded Research Approach
			- Same as above for Eastern DPS SSL and for NFS - Anesthesia administered and intrusive procedures conducted on NFS by PI, CI, or persons under their direct supervision	procedures manual (including criteria for administering anesthesia)	applicant, plus those required by law - Anesthesia administered and intrusive procedures conducted by PI, CI, or persons under their direct supervision	
	Temporary & Permanent Marking	- No permits, authorizations, or grants issued	- Not allowed for Western DPS - Allowed for Eastern DPS and for NFS for top priority recovery needs only, with "best practices" mitigation	- Standardized techniques and mitigation measures as determined by SRCT and CIE-approved procedures manual (including criteria for administering anesthesia) - Central IACUC review of all marking procedures - Additional hot branding only permitted if tied to rigorous, funded, resighting programs and optimum sample size analysis - Use of less risky alternative techniques encouraged	- Marking needs, techniques, & sample sizes determined by research proposal design - Mitigation measures specified by applicant, plus those required by law - Anesthesia administered by PI, CI, or persons under their direct supervision	- Marking needs, techniques, & sample sizes determined by maximum contribution to vital rate data (life history information) - Mitigation measures as required by law - Only qualified practitioners administer anesthesia
	Instrument Attachment & Insertion	- No permits, authorizations, or grants issued	- Same as above	- Central IACUC review of all handling and surgical procedures - Standardized techniques and mitigation measures as determined by SRCT and CIE-approved procedures manual (including criteria for administering anesthesia)	- External and internal instrument specifications, attachment or insertion techniques, and sample sizes determined by research proposal design - Mitigation measures specified by applicant, plus those required by law - Anesthesia administered and intrusive procedures conducted by PI, CI, or persons under their direct supervision	- Maximize sample size for conservation and management objectives - External and internal instrument specifications, attachment, and insertion techniques determined by research proposal design - Experimental techniques considered for all stocks - Mitigation measures as required by law - Only qualified practitioners administer anesthesia and conduct surgery
	Other Procedures	- No permits, authorizations, or grants issued	- Same as above	- Same as above	-Types of procedures, age/sex class, & sample size determined by research proposal design - Mitigation measures specified by applicant, plus those required by law - Anesthesia administered and intrusive procedures conducted by PI, CI, or persons under their direct supervision	- Maximize sample size for conservation and management objectives -Types of procedures and age/sex class determined by research proposal design - Mitigation measures as required by law - Only qualified practitioners administer anesthesia and conduct surgery
	Transport & Temporary Captivity	- No permits, authorizations, or grants	- Same as above	- Minimum but sufficient sample size to make meaningful progress	- Research design specifications, transport methods, and holding	- Maximize sample size for conservation and management

		Alternative 1 – No-Action[1]	Alternative 2 - Minimal Impact Approach; Priority 1 Research Only	Alternative 3 - Reduced Impact Approach; Priority 1 and 2 Research Only	Alternative 4 - Status Quo: Existing Research Programs	Alternative 5 - Expanded Research Approach
		issued		on critical conservation objectives - Central IACUC review of all handling, transportation, and husbandry procedures as well as captive facility conditions - Standardized techniques and mitigation measures as determined by SRCT and CIE-approved procedures manual - Assume fewer animals affected than Alt 4	facility criteria specified by applicant (but must be compliant with AWA and APHIS regulations) - Mitigation measures specified by applicant, plus those required by law - Qualified veterinary support for all operations - Health screening prior to release back into the wild	objectives - Mitigation measures as required by law - Qualified veterinary support for all operations - Health screening prior to release back into the wild
	Incidental Mortality	- No permits, authorizations, or grants issued	- Not allowed for Western DPS - Permitted number not to exceed 5% of PBR for Eastern DPS or Section 7 jeopardy assessment, whatever is lower - Actual number of incidental mortalities monitored on real-time basis. - If actual number of mortalities exceeds 5 SSL from all activities in a given year, all related research must stop immediately until procedures are reviewed - Permitted number not to exceed 5% of PBR for NFS	- Permitted number not to exceed 10% of PBR for all stocks or Section 7 jeopardy assessment, whatever is lower - Actual number of incidental mortalities monitored on real-time basis. - If actual number of mortalities exceeds 8 SSL from all activities in a given year, all related research must stop immediately until procedures are reviewed and re-approved by the SRCT and central IACUC	- For SSL, permitted number based on researcher estimates of potential take but must be below jeopardy threshold as determined by Section 7 assessment - Actual number of incidental mortalities monitored on real-time basis. - If actual number of mortalities exceeds 10 SSL from Western DPS from all activities in a given year, all related research must stop immediately until procedures are reviewed - For NFS, permitted number based on researcher estimates of potential take but cannot have significant adverse impact on species or stock (per MMPA)	- For SSL, permitted number based on researcher estimates of potential take but must be below jeopardy threshold as determined by Section 7 assessment - For NFS, permitted number based on researcher estimates of potential take - Intentional lethal takes considered for critical information needs
Permit and Grant Process	Number and Duration of Permits	- No permits, authorizations, or grants issued	- One permit for intrusive activities (Eastern DPS, NFS, or surrogate species only) - Permit duration up to 2 years	- One permit each for SSL and NFS stocks for intrusive activities, others wishing to participate must work under that permit - Permit duration up to 3 years	- All qualified applications considered - Duration up to regulatory maximum of 5 yrs	- Duration of permits could be extended pending regulatory change
	Amendments	- No amendments issued	- No major amendments allowed - Minor amendments considered	- Major and minor amendments considered on case-by-case basis	- Major and minor amendments considered on case-by-case basis	- Same as Alternative 4 Status Quo
	Review Requirements (for applications and for research)	- Annual review of existing permits, authorizations, and grants until they expire - Annual review of research activities that have not been issued permits or authorizations to ensure lack of takes	-Review consistent with current statutes and regulations - Biennial review of all field techniques and mitigation measures used -Annual review of grant and permit compliance - Revocation of permit for non-compliance	- SRCT coordinates the scientific evaluation and approval of research proposals in support of the grant and permitting review processes. - SRCT review informs Section 7 & MMC review - SRCT coordinates field logistics to minimize spatial and temporal overlap of research activities	- All applications & major amendments subject to full statutory and regulatory processes, including Section 7 & MMC review - Review of grant and permit compliance through annual and special permit holder reports - Revocation of permit for non-compliance	- Same as Alternative 4 Status Quo

		Alternative 1 – No-Action[1]	Alternative 2 - Minimal Impact Approach; Priority 1 Research Only	Alternative 3 - Reduced Impact Approach; Priority 1 and 2 Research Only	Alternative 4 - Status Quo: Existing Research Programs	Alternative 5 - Expanded Research Approach
				- Proposals must be consistent with CIE-approved procedures manual - Review of grants and permit compliance through annual reports		
Oversight and Evaluation	Monitoring	- Monitoring of effects of research activities	- All fieldwork must include funded program for independent monitoring commensurate with duration of effects	- All fieldwork must include funded program to monitor effects of research activities	- Some research teams monitor effects of their procedures where practicable -All permits require post handling and disturbance monitoring for serious injury and mortality	- Same as Alternative 4 Status Quo
	Reporting[2]	- For existing permits and authorizations, reports required pursuant to terms and conditions of the permit/ authorization, MMPA, and NMFS regulations - For research conducted without a permit, periodic outreach to researchers to determine level of activity	- Future grants and permits depend in part on compliance with publication requirement of NMFS regulations at 50 CFR 216.41(c)(1)(ii)	- Permit holders report Incidental mortality to NMFS within 72 hrs - SRCT publishes annual Technical Memorandum or similar report describing successes and difficulties in using research particular techniques - Future grants and permits depend on compliance with publication regulations	- In addition to annual reports required of all permit holders, permit holders report incidental mortality to NMFS within 72 hrs - Results of research required by regulations to be made available to public in a timely fashion	- Same as Alternative 4 Status Quo
	Coordination & Review	- Same as above	- Strict limits on where and when research conducted - Annual assessment of progress towards addressing Recovery or Conservation Plan objectives	- Strict limits on where and when research conducted; oversight by SRCT - Annual SRCT assessment of progress towards addressing Recovery or Conservation Plan objectives	- Permit conditions include requirement for researchers to coordinate their activities with others doing similar work on the same species and/or in the same area or seasons to avoid unnecessary duplication of research and adverse effects on the animals	- Same as Alternative 4 Status Quo

[1] For alternative 1, research would be conducted according to terms and conditions of valid permits until the permits expire. As permits expire, or if additional research is desired, it would be conducted according to the limitations set forth for each activity in the table.

[2] - Note for all Alts, MMPA and NMFS regulations (50 CFR 216.38) require permit holders to submit reports; NMFS determines how often and in what format and specifies in permits. For the GA, reporting req. are at 50 CFR 216.45

TABLE 5. NORTHERN FUR SEAL IMPLEMENTATION SCHEDULE

				Est. Fiscal Year Costs					
	Task		Task	(thousands of $)					
Plan Task	Number	Priority	Duration	FY 1	FY 2	FY 3	FY 4	FY 5	Comments
1. Identify/eliminate causes of human-related mortality									
1.1 Marine Debris									
disentanglement	1.1.1	2	Ann.	75	75	75	75	75	
debris removal and surveys	1.1.2	2	Ann.	20	20	20	20	20	
laboratory and field debris studies	1.1.3	3	Tri.		40			40	
statutes, regulations, education, enforcement	1.1.4	2	Ann.[2]	10	10	10	10	10	
Determine marine debris sources	1.1.5	2	Ann.	10	10	10	10	10	
1.2 Monitor incidental take									
observer programs	1.2.1	3	Ann.[2]	20		20		20	
review observer data	1.2.2	2	Ann.[2]	15	10		10		
1.3 Evaluate harvests and harvest practices									
monitor and manage subsistence harvest	1.3.1	1	Ann.	75	50	55	60	65	
Develop & implement harvest sampling program	1.3.2	2	Ann.	15	15	15	15	15	
compile and evaluate existing data	1.3.3	2	1 yr	30					
identify and evaluate illegal harvests	1.3.4	1	Ann.	10	10	10	10	10	
2. Assess and avoid adverse effects of development									
Tribal consultation & Co-management agreements	2.1	1		200	220	245	270	300	
Advise the relevant action agencies and industries	2.2	1	Ann.						existing staff work
Review plans and make recommendations	2.3	1	Ann.						existing staff work & NEPA
Conduct studies to quantify effects	2.4	2	Per.	25	75	50		50	costs depend on development
Undertake conservation or management measures	2.5	2	Ann.	?	?	?	?	?	costs depend on projects

				Est. Fiscal Year Costs					
	Task		Task		(thousands of $)				
Plan Task	Number	Priority	Duration	FY 1	FY 2	FY 3	FY 4	FY 5	Comments
2.6 Assess and monitor pollutants									
compile and evaluate existing data	2.6.1	1	1 yr	20					
evaluate environmental pollutant exposure	2.6.2	2	Per.	50		50			every fifth year
evaluate carcass salvage programs	2.6.3	3	Per.	25				25	every fifth year
oil spill response plans	2.6.4	2	Per.	10		10		10	
2.7 Fur seals/fisheries/resources									
fur seal feeding ecology	2.7.1	1	Ann.	200	220	245	270	300	
evaluate pelagic fur seal sampling	2.7.2	3	Per.[3]		150				every fifth year
report fishery interactions	2.7.3	2	Ann.	20	20	20	20	20	
determine impact of fisheries	2.7.4	1	Per.	100	100	150	200	200	concurrent studies with fisheries
3. Monitor trends and essential habitat									
3.1 Monitor changes in the fur seal population									
analyze fur seal teeth	3.1.1	2	5 yrs	35	25	25	25	25	
monitor male and pup abundance at Pribilof Islands	3.1.2	1	Ann.	85	10	85	10	85	
estimate pup survival	3.1.3	1	Ann.	25	25	25	25	25	
evaluate marking & resighting program	3.1.4	1	5 yrs	100	25	25	25	25	
study vital rates	3.1.5	1	Per.		100	110	120	130	Resighting and retagging annually
behavioral/physiological studies	3.1.6	1	Per.	50	55	60	65	70	
comparative studies on other islands	3.1.7	1	Ann.	150	165	180	200	220	
predation studies	3.1.8	2	Per.	150		150		150	
Promote joint research	3.1.9	2	Ann	15	15	15	15	15	
3.2 Improve assessment of disease effects									
compile and evaluate existing data	3.2.1	2	Per.	20				20	
determine and mitigate disease effects	3.2.2	2	Ann.		25	15	15	15	long-term monitoring

				Est. Fiscal Year Costs					
	Task		Task			(thousands of $)			
Plan Task	Number	Priority	Duration	FY 1	FY 2	FY 3	FY 4	FY 5	Comments
manage introduced species	3.2.3	2	Ann.						Existing staff work
3.3 Monitor essential habitat									
compile and evaluate available habitat use data	3.3.1	1	1 yr	50			50		
conduct oceanographic and fishery surveys	3.3.2	1	Tri.		200			200	
3.4 Identify and evaluate natural ecosystem changes									
Reevaluate carrying capacity	3.4.1	1	1 yr		75			75	
Continue Sentinel program	3.4.2	2	Ann	75	85	95	105	120	
compile and evaluate existing data	3.4.3	1	5 yrs	25	50	25	50	25	
select appropriate environmental indices	3.4.4	2	5 yrs			50	50	50	
physiological/survival studies	3.4.5	2	5 yrs			50	50	50	
ecosystem modeling	3.4.6	2	5 yrs			50	50	50	
4. Implement Plan									
Conservation Plan Coordinator	4.1	1	Ann				50		Update Plan in FY 4
Education & Outreach Programs	4.2	2	Ann	25	25	25	25	25	
International Conservation	4.3	2	Ann	20	15	15	15	20	
Enforce Regulations	4.4	3	Ann	50	50	50	50	50	
Total costs ($K)[4]				1810	1975	2040	1970	2620	
Inflation Adjustment (7% of total)					138	142.8	137.9	183.4	

Priority: 1– highest, 2 – moderate, 3 –lowest
[1] Triennial
[2] Annual Periodic as needed
[3] Periodic as needed

E. Recovery Action Implementation Schedule

The Implementation Schedule that follows outlines actions and estimated costs for the recovery program for the western DPS of Steller sea lion, as set forth in this recovery plan. It is a guide for meeting the recovery goal and criteria outlined in this plan. This schedule indicates action priorities, action numbers, action descriptions, duration of actions, the parties potentially responsible for actions (either funding or carrying out), and estimated costs. Parties believed to have authority or responsibility for implementing a specific recovery action are identified in the Implementation Schedule. When more than one party has been identified, the proposed lead party is indicated by an asterisk (*). The listing of a party in the Implementation Schedule does not require the identified party to implement the action(s) or to secure funding for implementing the action(s). Priority numbers are assigned as described below, which follow the NMFS interim Recovery Planning Guidance.

Priority Number

Priority 1 - An action that must be taken to prevent extinction or to prevent the species from declining irreversibly in the foreseeable future.

Priority 2 - An action that must be taken to prevent a significant decline in species population / habitat quality or some other significant impact short of extinction.

Priority 3 - All other actions necessary to provide for full recovery of the species.

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
1. BASELINE POPULATION MONITORING									
1.1.1 Estimate trends for pups and non-pups via aerial surveys	1	NMFS	annual	*250*	*250*	*250*	*250*	*250*	M
1.1.2 Monitor population trends in the Pribilof Islands (particularly the Walrus Island rookery) via aerial surveys or land-based counts	2	NMFS	annual	*50*	*50*	*50*	*50*	*50*	M
1.2.1 Continue to estimate survival, fecundity, and immigration/emigration rates through a branding/resight program	2	NMFS, ADF&G	annual	*1,000*	*1,000*	*1,000*	*1,000*	*1,000*	M
1.2.2 Promote cooperative pup branding/resight programs in Russia	2	NMFS, Russia	annual	*500*	*500*	*500*	*500*	*500*	M
1.2.3 Develop an age-structured population model using medium format photos from aerial surveys	2	NMFS	1 yr	*20*					M
1.2.4 Determine pregnancy and parturition rates	2	NMFS	annual	*30*	*30*	*30*	*30*	*30*	M
1.3.1 Examine the effects of season, age, and sex on	2	NMFS	annual	*500*	*500*	*500*	*500*	*500*	M,F,EV

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
body condition									
1.3.2 Develop improved indices of health, body condition, and reproductive status using chemical methods (e.g., hematology serum chemistries, and endocrine monitoring)	2	NMFS	10 yrs	*250*	*250*	*250*	*250*	*250*	M,D/P
1.4.1 Develop improved live capture techniques for general research needs	2	NMFS	5 yrs	*250*	*250*	*250*	*250*	*250*	M,D/P
1.4.2 Develop improved non-lethal sampling techniques to assess health	2	NMFS	5 yrs	*200*	*200*	*200*	*200*	*200*	M,D/P
1.5 Develop an implementation plan	2	NMFS	1 yr with biennial updates	***50***		***10***		***10***	M
TOTAL – ACTION 1				***3,100***	***3,300***	***3,040***	***3,030***	***3,040***	
2.1 Maintain critical habitat designations	3	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	F,EV
2.2 Protect rookery and haulout sites (terrestrial habitat)	3	NMFS, USFWS, BLM, USFS	1 yr with 5 yr updates	*5*					DVT,IS,DR
2.3.1 Collect and analyze scat samples and stomach contents to determine prey consumption	2	NMFS	annual	*400*	*400*	*400*	*400*	*400*	F,EV
2.3.2 Develop stable isotope and fatty acid methodologies to assess prey consumption	2	NMFS	annual	*150*	*150*	*150*	*150*	*150*	F,EV
2.3.3 Deploy instruments to obtain finer scale data on sea lion foraging habitat	2	NMFS	annual	*500*	*500*	*500*	*500*	*500*	F,EV
2.3.4 Evaluate all information on sea lion foraging areas and develop a description of foraging needs	2	NMFS	2 yrs with updates	*200*	*200*				F,EV
2.4.1 Assess the relationships between oceanographic features and sea lion foraging ecology	2	NMFS	2 yrs	*125*	*125*				F,EV
2.4.2 Examine the influence of ecosystem variability on non-commercial prey species as an index to sea lion carrying capacity	3	NMFS	5 yrs	*300*	*300*	*300*	*300*	*300*	F,EV
2.4.3 Distinguish how natural and anthropogenic factors influence marine ecosystem dynamics and subsequently sea lion population dynamics	2	NMFS	5 yrs	*500*	*500*	*500*	*500*	*500*	F,EV
2.5.1 Determine the physiological diving	3	NMFS	5 yrs	*500*	*500*	*500*	*500*	*500*	F,EV

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
capabilities and evaluate how this limits the ability to forage successfully									
2.5.2 Determine the energetic costs of foraging to sea lions	2	NMFS	5 yrs	*1,500*	*1,500*	*1,500*	*1,500*	*1,500*	F,EV
2.5.3 Assess the nutritional value of prey by species, season, and area including digestibility and overall value to sea lions	2	NMFS	3 yrs	*150*	*150*	*150*			F,EV
2.5.4 Develop an energetics model to investigate the interrelationships…and sea lion growth, condition, and vital rates	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	F,EV
2.6.1 Improve groundfish stock assessment surveys to determine seasonal and inter-annual patterns of prey abundance, distribution, and movement at scales relevant to sea lions	2	NMFS, ADF&G	annual	*1,500*	*1,500*	*1,500*	*1,500*	*1,500*	F,EV
2.6.2 Assess competition for prey with sympatric consumers (e.g., gadids and flatfish, fur seals, harbor seals, other marine mammals, and seabirds)	3	NMFS	5 yrs	*250*	*250*	*250*	*250*	*250*	F,EV
2.6.3 Utilize groundfish fishery observer data to assess the spatial-temporal distribution of the fishery	2	NMFS, ADF&G	annual	*20*	*20*	*20*	*20*	*20*	F
2.6.4 Assess effectiveness of sea lion closure zones around rookeries and haulouts using small-scale experiments	2	NMFS, ADF&G	3 yrs	*750*	*750*	*500*			F, DVT
2.6.5 Assess the response of sea lions to changes in prey distribution and availability	2	NMFS	5 yrs	*200*	*200*	*200*	*200*	*200*	F,EV
2.6.6 Evaluate and implement appropriate fishery regulations to protect foraging habitat and prey resources for sea lions	2	NMFS, ADF&G	annual	*2000*	*2000*	*2000*	*2000*	*2000*	F
2.6.7 Explore the use of ecosystem based (multi-species) stock assessment models to set fishery catch limits to ensure adequate prey resources for a recovered sea lion population	2	NMFS, ADF&G	5 yrs	*60*	*60*	*60*	*60*	*60*	F,EV
2.6.8 Design and implement an adaptive management program for fisheries, climate change, and predation	1	NMFS, ADF&G	3 yrs dev. 10 yrs impl.	*500*	*500*	*500*	*200*	*200*	F,EV,KW
2.6.9 Prepare a habitat conservation plan under	2	ADF&G	3 yrs	*100*	*100*	*50*			F

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
section 10 of the ESA for fisheries authorized by the State of Alaska									
2.6.10 Consider and implement conservation measures in herring and salmon fisheries in Alaska as appropriate	2	ADF&G	annual	*200*	*200*	*200*	*200*	*200*	F
TOTAL – ACTION 2				***10,110***	***10,105***	***9,480***	***8,780***	***8,780***	
3.1.1 Monitor and evaluate incidental take in commercial fisheries through observer and self-reporting programs	3	NMFS, ADF&G, USCG	annual	*500*	*500*	*500*	*500*	*500*	IT
3.1.2 Monitor and evaluate incidental take in non-commercial fisheries	3	NMFS, ADF&G, USCG	1 yr	*300*					IT
3.2.1 Monitor intentional take via shoreline surveys for carcasses near suspected conflict 'hotspots' and by encouraging reporting of illegal shooting through NMFS's Enforcement hotline	3	NMFS, ADF&G, USCG	annual	*250*	*250*	*250*	*250*	*250*	IS
3.2.2 Reduce threat of illegal shooting by developing and promoting use of non-lethal deterrents for commercial fisherman	3	NMFS	2 yrs	*300*	*300*				IS
3.3.1 Develop and promote non-lethal means of deterring sea lions from hauling out on docks	3	NMFS, USCG	2 yrs	*100*	*100*				DVT,IS
3.3.2 Continue to publicize "No feeding" regulations in harbor areas and keep active programs for notification and enforcement	3	NMFS, USCG	annual	*50*	*50*	*50*	*50*	*50*	DVT
3.4.1 Publicize and enforce existing no-transit areas to minimize vessel and aircraft disturbance of rookery sites	3	NMFS, USCG	annual	*20*	*20*	*20*	*20*	*20*	DVT
3.4.2 Review and revise existing Marine Mammal Approach Guidelines and provide to charter operators and other mariners to minimize disturbance at haulouts	3	NMFS	annual	*25*	*25*	*25*	*25*	*25*	DVT
3.5.1 Coordinate research efforts to reduce potential for unnecessary or duplicative research-related take	3	NMFS	Annual	*25*	*25*	*25*	*25*	*25*	DR
3.5.2 Monitor and minimize unintentional take	3	NMFS, USCG	5 yrs	*200*	*200*	*200*	*200*	*200*	DR

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
TOTAL – ACTION 3				***1,770***	***1,470***	***1,070***	***1,070***	***1,070***	
4.1.1 Conduct epidemiological surveys	2	NMFS	5 yrs	*250*	*250*	*250*	*250*	*250*	D/P
4.1.2 Develop and implement methods for parasite evaluations	2	NMFS	5 yrs	*50*	*50*	*50*	*50*	*50*	D/P
4.1.3 Develop and implement methods to test immune system functioning	2	NMFS	5 yrs	*25*	*25*	*25*	*25*	*25*	D/P
4.1.4 Evaluate causes of mortality by examining dead and live animals of all age and sex classes	2	NMFS	10 yrs	*50*	*50*	*50*	*50*	*50*	all
4.1.5 Develop disease management plans	2	NMFS	2 yrs	*30*	*30*				D/P
4.1.6 Develop an unusual mortality events (UMEs) management plan	2	NMFS	2 yrs	*50*	*50*				D/P,DVT,IT
4.1.7 Develop models to simulate disease impacts on energetics, physiology, abundance and demographics	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	D/P
4.2.1 Design a contaminant research and management plan	2	NMFS	2 yrs	*30*	*30*				T
4.2.2 Collect samples from free-ranging sea lions and environmental 'hotspots'	2	NMFS	5 yrs	*200*	*200*	*200*	*200*	*200*	T
4.2.3 Examine blood and tissue samples for evidence of contaminant-linked endocrine effects	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	T
4.2.4 Modeling contaminant impact and effect	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	T
4.3.1 Understand predator life histories, biology, and ecology – captive work	2	NMFS	5 yrs	*400*	*400*	*400*	*400*	*400*	KW
4.3.2 Determine killer whale diets	2	NMFS	5 yrs	*300*	*300*	*300*	*300*	*300*	KW
4.3.3 Develop methods to obtain samples from live killer whales	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	KW
4.3.4 Expand the stranding network	2	NMFS	2 yrs	*25*	*25*				KW, M
4.3.5 Determine killer whale distribution and behavior across the North Pacific	2	NMFS	5 yrs	*500*	*500*	*500*	*500*	*500*	KW
4.3.6 Estimate numbers of killer whale ecotypes in time and space	2	NMFS	5 yrs	*500*	*500*	*500*	*500*	*500*	KW
4.3.7 Develop models to simulate predation rates based on killer whale energetics and abundance and Steller sea lion demographics	2	NMFS	5 yrs	*100*	*100*	*50*	*50*	*50*	KW

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
TOTAL – ACTION 4				*2,910*	*2,910*	*2,725*	*2,725*	*2,725*	
5.1 Reduce damage to sea lions and their habitat from discharges of pollutants by developing preventive measures	2	NMFS, USCG	5 yrs	*25*	*25*	*25*	*25*	*25*	T
5.2.1 Reduce discards of debris (e.g., trawl web, packing bands)	2	NMFS, USCG	5 yrs	*100*	*100*	*100*	*100*	*100*	E
5.2.2 Cleanup derelict gear and beached debris	3	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	E
5.3.1 Continue and expand the Alaska stranding network to increase coastal coverage and community involvement in monitoring sea lion mortality	2	NMFS, ADF&G	5 yrs	*100*	*100*	*100*	*100*	*100*	all
5.3.2 Survey selected areas for dead stranded animals	2	NMFS	5 yrs	*50*	*50*	*50*	*50*	*50*	all
5.3.3 Expand tissue sampling efforts to improve the information obtained from dead sea lions	2	NMFs	5 yrs	*100*	*100*	*100*	*100*	*100*	all
5.3.4 Monitor the incidence and impact of entanglement in marine debris	2	NMFS	5 yrs	*100*	*100*	*100*	*100*	*100*	all
5.4 Effectively administer the Steller sea lion recovery program by continuing to provide a recovery coordinator staff position	2	NMFS	annual	*850*	*850*	*850*	*850*	*850*	all
5.5 Improve sea lion conservation by consulting with the State of Alaska on actions that are likely to adversely impact Steller sea lions	2	NMFS, ADF&G	annual	*250*	*250*	*250*	*250*	*250*	F,IT,IS,E,DVT
5.6.1 Encourage and facilitate public reporting of sea lion observations	3	NMFS, ADF&G	5 yrs	*50*	*50*	*50*	*50*	*50*	M
5.6.2 Publicize current conservation efforts and protective measures	3	NMFS	annual	*50*	*50*	*50*	*50*	*50*	all
5.7.1 Manage subsistence harvests and evaluate the efficacy and accuracy of using retrospective subsistence harvest surveys	2	NMFS, ADF&G	annual	*150*	*150*	*150*	*150*	*150*	SUB
5.7.2 Support Alaska Native subsistence use information programs	2	NMFS, ADF&G	annual	*75*	*75*	*75*	*75*	*75*	SUB
5.7.3 Analyze carcasses from subsistence harvest to assess age, body condition, and other relevant information to ensure safety of carcasses for human	2	NMFS	annual	*100*	*100*	*100*	*100*	*100*	D/P,T

Plan Task	Priority	Responsible Parties	Task Duration	Fiscal Year Costs ($K)					Threats*
				FY 1	FY 2	FY 3	FY 4	FY 5	
consumption									
5.7.4 Document local knowledge and cultural science (Traditional Ecological Knowledge - TEK) pertaining to sea lions to better understand changes in sea lion movement (local and seasonal), feeding patterns and prey, seasonal haulouts, predation and ecosystem dynamics	2	NMFS	2 yrs	*100*	*100*				all
5.8 Improve the effectiveness of research for Steller sea lion recovery by instituting a "fast track" process for expediting NMFS research permits for Steller sea lions.	2	NMFS	2 yrs	*100*	*100*				all
TOTAL – ACTION 5				*2,300*	*2,300*	*2,100*	*2,100*	*2,100*	
TOTAL – ALL ACTIONS				***20,190***	***19,815***	***18,415***	***17,705***	***17,715***	***93,840***

* IT=incidental take by fisheries; SUB=Alaska native subsistence harvest; IS=illegal shooting; E=entanglement in marine debris; D/P=disease and parasitism; T=toxic substances; DVT=disturbance from vessel traffic and tourism; DR=disturbance from research; KW=killer whales; EV=environmental variability; F=competition with fisheries

APPENDIX B
MEETING SIGN-IN SHEETS

SSL NFS Research EIS Focus Group Meetings
Summary Report
August 2006

NMFS – URS
STELLER SEA LION AND NORTHERN FUR SEAL RESEARCH EIS
FOCUS GROUP MEETING
July 2006
SIGN-IN SHEET

URS

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FOCUS GROUP MEETING
July 2006
SIGN-IN SHEET

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NGO's / Other Agencies

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July 2006
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Natives

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APPENDIX C
DRAFT NMML PROPOSED ALTERNATIVE STRUCTURE

SSL NFS Research EIS Focus Group Meetings
Summary Report
August 2006

Table 2-X - Comparison of SSL NFS EIS Alternatives.

				Alternative 1 - No action	Alternative 2 - Reduced research program	Alternative 3 - Status quo research program	Alternative 4 - Recommended research program	Alternative 5 – Enhanced research program
	Relative environmental impact		Action	No direct impacts (but likely indirect impacts)	Low impacts	Medium impacts	High impacts	Highest impacts
Research Activities	On species	Endangered						
		Threatened						
		Depleted						
	On populations/ stocks	Endangered						
		Threatened						
		Depleted						
	On individuals	Non-invasive						
		Invasive						