

## **Statement of Work**

### **External Independent Peer Review by the Center for Independent Experts**

#### **Biological Opinion on the Effects of the Federal Groundfish Fisheries and State Parallel Fisheries on listed species in Alaska, including Steller sea lions**

**Scope of Work and CIE Process:** The National Marine Fisheries Service's (NMFS) Office of Science and Technology coordinates and manages a contract providing external expertise through the Center for Independent Experts (CIE) to conduct independent peer reviews of NMFS scientific projects. The Statement of Work (SoW) described herein was established by the NMFS Project Contact and Contracting Officer's Technical Representative (COTR), and reviewed by CIE for compliance with their policy for providing independent expertise that can provide impartial and independent peer review without conflicts of interest. CIE reviewers are selected by the CIE Steering Committee and CIE Coordination Team to conduct the independent peer review of NMFS science in compliance with the predetermined Terms of Reference (ToRs) for the peer review. Each CIE reviewer is contracted to deliver an independent peer review report to be approved by the CIE Steering Committee and the report is to be formatted with content requirements as specified in **Annex 1**. This SoW describes the work tasks and deliverables of the CIE reviewer for conducting an independent peer review of the following NMFS project. Further information on the CIE process can be obtained from [www.ciereviews.org](http://www.ciereviews.org).

**Project Description:** NMFS Alaska Region has issued a Final Biological Opinion (November 24, 2010) under the ESA on the effects of the current fishery management regime for federal groundfish fisheries on listed species. The main listed species of concern is the endangered western distinct population segment (WDPS) of the Steller sea lion; the threatened eastern distinct population segment (EDPS) of Steller sea lions was also considered. In addition, the effects on listed humpback whales (Central Pacific and Western Pacific populations), fin whales and sperm whales were considered. The basis for the consultation is the new information available to the agency as a result of almost 10 years of intensive research on Steller sea lions in Alaska. The new information pertains to the status of the species, population and sub-regional trends in abundance, and the impacts of the existing conservation measures as well as the prosecution of the federal fisheries and the State of Alaska parallel groundfish fisheries. The focus species for this CIE review is the WDPS of the Steller sea lion.

The review will consist of two parts: (1) conducting a desk review of the Final BiOp including information available to NMFS through up until September 3, 2010 and (2) convening as a panel to peer review new scientific information (e.g. available subsequent to issuance of the Final BiOp). During the public session of the panel review meeting, presentations addressing the scope and context of the BiOp analysis and related scientific information may also be provided from experts in environmental organizations, scientific groups, the fishing industry, and affected communities. In accordance with the predetermined terms of reference (ToRs) as specified in Annex 2, each reviewer will produce an independent peer review report consisting of two

chapters: Chapter 1 will describe findings based on the desk audit of the Final Biological Opinion and will be produced prior to the public panel session; Chapter 2 will be based on the evaluation of new scientific information presented during the subsequent panel review meeting. Each reviewer report will be delivered with the two described Chapters as a single document at the end of the review process according to the scheduling of the deliverables.

Based on the ToRs for Chapter 1, each reviewer will conduct a desk review to specifically review and comment on the scientific information and interpretation that led to the rationale and subsequent findings contained in the Biological Opinion regarding factors affecting Steller sea lion population status, their critical habitat, and recovery. In particular, the desk review will include findings regarding the effects of fisheries on Steller sea lion population status, vital rates, and critical habitat. The reviewers are asked to comment on the adequacy of the best available science and of the appropriate interpretation of that science to reach the conclusions presented in the BiOp.

Based on the ToRs for Chapter 2, each reviewer shall review, evaluate, and consider the Final Biological Opinion, its findings, and scientific and commercial information made available since issuance of the Final BiOp up to the date of the panel review meeting. In addition to the peer review tasks in accordance with the ToRs for Chapter 2, reviewers may also provide additional commentary on the science included in presentations made in the public session during the panel review meeting. The Terms of Reference (ToRs) for the scientific peer review are attached in **Annex 2**.

**Requirements for CIE Reviewers:** Three CIE reviewers shall be provided with adequate time to conduct a thorough, impartial and independent peer review in accordance with the SoW and ToRs herein. Each CIE reviewer's duties shall not exceed a maximum of 40 days to complete all tasks of the desk peer review, participate during the panel review meeting and complete their independent peer report, as described herein. CIE reviewers shall have the expertise, background, and experience to complete an independent peer review in accordance with the SoW and ToRs. The expertise of the combined CIE reviewers should include marine fisheries management, marine fish biology, ecology and stock assessments, marine mammal population biology and foraging ecology. It is desirable that one or more of the reviewers have familiarity with the standards of the Endangered Species Act section 7 in relation to conservation biology.

**Location of Peer Review:** Each reviewer shall conduct the peer review as desk review during which travel is not required and then each reviewer will participate in a panel review meeting in Seattle, Washington.

**Statement of Tasks:** Each CIE reviewer shall complete the following tasks in accordance with the SoW and Schedule of Milestones and Deliverables herein.

Prior to the Peer Review: Upon completion of the selection of the CIE reviewers by the CIE Steering Committee, the CIE shall provide the CIE reviewer information (full name, title, affiliation, country, address, email) to the COTR, who forwards this information to the NMFS Project Contact no later the date specified in the Schedule of Milestones and Deliverables. From the date when the selected CIE reviewer information is sent to the NMFS, the NMFS will be

provided five working days to solicit comments from the North Pacific Fisheries Management Council (Council) in regard to whether there are any conflicts of interest issues that may have been overlooked by the CIE selection process, as related to conflicts defined under the CIE conflict of interest conditions (see <http://www.ciereviews.org/interest.php>). After this five-day period, if there is agreement that there are no conflicts of interest issues, the NMFS Project Contact may communicate directly with the CIE reviewers in regard to all necessary peer review arrangements. The CIE Steering Committee will make the ultimate decision, based on supporting information, on the eligibility of the CIE reviewers. The CIE Coordinator and COTR must be copied on all email correspondence with the CIE reviewers during the duration of the contract to ensure all contract obligations are satisfied. The CIE is responsible for providing the SoW and ToRs to the CIE reviewers. The NMFS Project Contact is responsible for providing the CIE reviewers with the background documents, reports, and other pertinent information. Any changes to the SoW or ToRs must be made through the COTR prior to the commencement of the peer review.

Pre-review Background Documents: The NMFS Project Contact will send (by electronic mail or make available at an FTP site) to the CIE reviewers the necessary background information and reports with sufficient lead time before the peer review. In other words, a desk review can begin when the necessary information is received while the necessary reports and background documents for a panel review meeting should be sent to the reviewers about two weeks before the meeting. In the case where the documents need to be mailed, the NMFS Project Contact will consult with the CIE Lead Coordinator on where to send documents. CIE reviewers are responsible only for the pre-review documents that are delivered to the reviewer in accordance with the SoW scheduled deadlines specified herein. The CIE reviewers shall read all documents in preparation for the peer review. A list of specific background documents is provided in Annex 3.

Peer Review: Each CIE reviewer shall conduct the independent peer review in accordance with the SoW and ToRs, and shall not serve in any other role unless specified herein. **Modifications to the SoW and ToRs cannot be made during the peer review and any SoW or ToRs modifications prior to the peer review shall be approved by the COTR and CIE Lead Coordinator.** The CIE Lead Coordinator can contact the Project Contact to confirm any peer review arrangements.

Panel Review Meeting: Each CIE reviewer shall conduct the independent peer review of the scientific information presented at the panel review meeting in accordance with the SoW and ToRs and shall not serve in any other role unless specified herein. **Modifications to the SoW and ToRs cannot be made during the panel review, and any SoW or ToRs modifications prior to the panel review shall be approved by the COTR and CIE Lead Coordinator.** Each CIE reviewer shall actively participate in a professional and respectful manner as a member of the meeting review panel, and their peer review tasks shall be focused on the ToRs as specified herein. The NMFS Project Contact is responsible for any facility arrangements (e.g., conference room for panel review meetings or teleconference arrangements). The NMFS Project Contact is responsible for ensuring that the Chair understands the contractual role of the CIE reviewers as specified herein. The role of the Chair during a panel review is to facilitate the scientific presentations and discussions with a focus on the ToRs. The CIE Lead Coordinator can

contact the Project Contact to confirm any peer review arrangements, including the meeting facility arrangements.

Contract Deliverables - Independent CIE Peer Review Reports:

*Desk review:* Each CIE reviewer shall complete an independent peer review of the Final BiOp Report addressing each ToR as described in Annex 2 pertinent to Chapter 1. The desk review will be produced prior to the onset of the public panel review and each reviewer will deliver their report on Chapter 1 as a single deliverable after the panel review meeting as a single report that includes both Chapters 1 and 2.

*Scientific panel review:* Each CIE reviewer shall participate during the panel review meeting to conduct a scientific peer review subsequent to the desk review in accordance with the SoW. Each CIE reviewer shall complete and deliver the independent peer review report that includes Chapters 1 and 2 as separate sections of the report described herein, according to required format and content as described in Annex 1. Each CIE reviewer shall complete the independent peer review addressing each ToR as described in Annex 2 as specified for Chapter 2.

Other Tasks – Contribution to Executive Summary: In addition to each reviewer’s individual peer review report, CIE reviewers will provide a brief synopsis of their desk review for compilation by the Chair into an Executive Summary (see Annex I). CIE reviewers are not required to reach a consensus. In addition the Executive Summary will list briefly the findings and conclusions reached by each panelist in accordance with the ToRs.

**Specific Tasks for CIE Reviewers:** The following chronological list of tasks shall be completed by each CIE reviewer in a timely manner as specified in the **Schedule of Milestones and Deliverables**.

- 1) Conduct necessary pre-review preparations, including the review of background material and reports provided by the NMFS Project Contact in advance of the peer review;
- 2) Conduct an independent peer review as a desk review described herein in accordance with the ToRs (Annex 2, Chapter 1);
- 3) Participate during the panel review meeting in Seattle, WA during **August 1-3, 2012** to conduct an independent peer review based on the scientific information presented during the panel review meeting in accordance with the ToRs (Annex 2, Chapter 2).
- 4) No later than **August 21, 2012**, each CIE reviewer shall submit an independent peer review report, including Chapters 1 and 2 in accordance with the ToRs, addressed to the “Center for Independent Experts,” and sent to Mr. Manoj Shivlani, CIE Lead Coordinator, via email to [shivlanim@bellsouth.net](mailto:shivlanim@bellsouth.net), and Dr. David Die, CIE Regional Coordinator, via email to [ddie@rsmas.miami.edu](mailto:ddie@rsmas.miami.edu). Each CIE report shall be written using the format and content requirements specified in Annex 1, and address each ToR in Annex 2.

**Schedule of Milestones and Deliverables:** CIE shall complete the tasks and deliverables described in this SoW in accordance with the following schedule.

June 5, 2012	CIE sends reviewer contact information to the COTR, who then sends this to the NMFS Project Contact who has 5 days to confirm there are no conflicts of interest before the contract is finalized with the reviewers.
June 13, 2012	Upon finalizing the contract, the NMFS Project Contact sends the CIE Reviewers the BiOp and background documents and begins correspondence with the reviewers.
<b>July 5-19, 2012</b>	Each reviewer conducts an independent scientific peer review as a desk review (Chapter 1).
<b>August 1-3, 2012</b>	CIE reviewers participate at the panel review meeting in Seattle WA to conduct a scientific peer review (Chapter 2)
August 21, 2012	CIE reviewers prepare and submit their independent peer review reports, including Chapters 1 and 2, to the CIE Coordinator.
September 4, 2012	After the CIE Steering Committee review process, the CIE reports with Chapters 1 and 2 are submitted to the COTR
September 7, 2012	The COTR distributes the final CIE reports to the NMFS Project Contact, AFSC Science Director, and Administrator, Alaska Region.

**Modifications to the Statement of Work:** Requests to modify this SoW must be made through the Contracting Officer's Technical Representative (COTR) who submits the modification for approval to the Contracting Officer at least 15 working days prior to making any permanent changes. The Contracting Officer will notify the CIE within 10 working days after receipt of all required information of the decision on substitutions. The COTR can approve changes to the milestone dates, list of pre-review documents, and Terms of Reference (ToR) of the SoW as long as the role and ability of the CIE reviewers to complete the SoW deliverable in accordance with the ToRs and deliverable schedule are not adversely impacted. The SoW and ToRs cannot be changed once the peer review has begun.

**Acceptance of Deliverables:** Upon review and acceptance of the CIE independent peer review reports by the CIE Lead Coordinator, Regional Coordinator, and Steering Committee, these reports shall be sent to the COTR for final approval as contract deliverables based on compliance with the SoW. As specified in the Schedule of Milestones and Deliverables, the CIE shall send via e-mail the contract deliverables (the CIE independent peer review reports) to the COTR (William Michaels, via [William.Michaels@noaa.gov](mailto:William.Michaels@noaa.gov)).

**Applicable Performance Standards:** The contract is successfully completed when the COTR provides final approval of the contract deliverables. The acceptance of the contract deliverables shall be based on three performance standards: (1) each CIE report shall have the format and content in accordance with Annex 1, (2) each CIE report shall address each ToR as specified in Annex 2, (3) the CIE reports shall be delivered in a timely manner as specified in the schedule of milestones and deliverables.

**Distribution of Approved Deliverables:** Upon notification of acceptance by the COTR, the CIE Lead Coordinator shall send via e-mail the final CIE reports in \*.PDF format to the COTR. The COTR will distribute the approved CIE reports to the NMFS Project Contact and regional Center Director and will notify the Executive Director, North Pacific Fishery Management Council of availability of the report.

**Support Personnel:**

William Michaels, Program Manager, COTR  
NMFS Office of Science and Technology  
1315 East West Hwy, SSMC3, F/ST4, Silver Spring, MD 20910  
[William.Michaels@noaa.gov](mailto:William.Michaels@noaa.gov) Phone: 301-427-8155

Manoj Shivlani, CIE Lead Coordinator  
Northern Taiga Ventures, Inc.  
10600 SW 131<sup>st</sup> Court, Miami, FL 33186  
[shivlanim@bellsouth.net](mailto:shivlanim@bellsouth.net) Phone: 305-968-7136

**Key Personnel:**

Robert Mecum, Deputy Regional Administrator, NMFS Project Contact  
NMFS, Alaska Region, 709 W.9<sup>th</sup> Street, Juneau, AK 99802  
[Doug.Mecum@noaa.gov](mailto:Doug.Mecum@noaa.gov) Phone: 907-321-0506

Melanie Brown  
NMFS, Alaska Region, 709 W.9<sup>th</sup> Street, Juneau, AK 99802  
[melanie.brown@noaa.gov](mailto:melanie.brown@noaa.gov) Phone: 907-586-7006

Jon Kurland, Assistant Regional Administrator  
Protected Resources Division  
NMFS, Alaska Region, 709 W.9<sup>th</sup> St., Juneau, AK 99802-1668  
[jon.kurland@noaa.gov](mailto:jon.kurland@noaa.gov) Phone: 907-586-7638

Douglas DeMaster, Director  
NMFS Alaska Fisheries Science Center  
17109 Pt Lena Loop Road, Juneau, AK 99801  
[Douglas.Demaster@noaa.gov](mailto:Douglas.Demaster@noaa.gov) Phone: 206-399-1431

## **Annex 1: Format and Contents of CIE Independent Peer Review Report**

1. The CIE independent report (Report) shall be prefaced with an Executive Summary providing a concise summary of the findings and recommendations.
2. The Report will include two chapters. The first chapter will be based on each reviewer's independently conducted desk review. The second chapter will be based on each reviewer's independent peer review of scientific information presented at the panel review meeting, including the evaluation of the full scientific record including scientific information available after September 3, 2010.
3. The main body of each chapter shall consist of a Background, Description of the Individual Reviewer's Role in the Review Activities, Summary of Findings for each ToR, and Conclusions and Recommendations in accordance with the Terms of Reference (ToRs).
  - a. Reviewers should describe in their own words the review activities completed during the panel review meeting, including providing a brief summary of findings, of the science, conclusions, and recommendations.
  - b. Reviewers should discuss their independent views on each ToR even if these were consistent with those of other panelists, and especially where there were divergent views.
  - c. The CIE independent report shall be a stand-alone document for others to understand the strengths and weaknesses of the science reviewed. The CIE independent report shall be an independent peer review addressing each ToR.
4. The reviewer report shall include as separate appendices as follows:
  - Appendix 1: Bibliography of materials provided for review
  - Appendix 2: A copy of the CIE Statement of Work
  - Appendix 3: A list of persons and organizations participating in the panel review meeting and other pertinent information from the panel review meeting.

## Annex 2: Terms of Reference

### Background and Context:

The purpose of this independent CIE Peer Review is to evaluate a Final Biological Opinion issued by NOAA Fisheries on November 24, 2010. The Endangered Species Act (ESA) requires NOAA Fisheries to consult with federal agencies proposing actions that may affect ESA listed species. The consultation results in a Biological Opinion (BiOp) that describes the action, reviews species biology, and makes a conclusion as to whether or not the action is likely to jeopardize the continued existence of the listed species or to adversely modify its designated critical habitat. Adverse modification is determined to occur when the direct or indirect effects of an action “appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species” (FWS/NMFS 1998). The consultation process is not required to employ a “prove-disprove” or statistical evaluation process, but instead may evaluate the best available information in a “weight of evidence approach” to make a determination. The process follows the ESA statute, related regulations, and case law; with guidance to authors provided within the Endangered Species Consultation Handbook (FWS/NMFS 1998) and the Final Recovery Plan for the Eastern and Western Distinct Population Segments of Steller Sea Lion (NMFS 2008).

### Tasks specific to developing Chapter 1 (conducting the desk review):

1. Read the Final BiOp (November 24, 2010) on the BSAI and GOA groundfish fisheries; and state waters parallel fisheries for groundfish fisheries and related background documents (list of documents provided is attached) and the recovery plan. Refer to Annex 3 for listing of Final BiOp report and background documents.
2. Provide a scientific peer review and comment on the final BiOp, including scientific information available to NMFS through the end of the public comment period (Sept. 3, 2010) for the Draft BiOp, evaluate the scientific information and its interpretation that developed the rationale and the subsequent findings regarding factors potentially affecting Steller sea lion population status, vital rates, critical habitat, risk of extinction, and recovery including in particular the findings regarding the effects of fisheries on Steller sea lion population status, vital rates, and critical habitat. Address the following:
  - a. Does the BiOp thoroughly and accurately (i.e. using the best available scientific information) describe what is known about the status of the listed species?
  - b. Does the BiOp thoroughly and accurately describe what is known about groundfish fishery practices and catch statistics under the current ongoing “status quo” action, as defined in the BiOp?
  - c. While the agency is directed to evaluate the effects of the action on listed species and critical habitat, does the BiOp also adequately address alternative scientific explanations to the apparent population dynamics of the WDPS of Steller sea lion, such as (but not limited to) predation, disease, ecosystem/carrying capacity, or emigration?
  - d. Does the BiOp thoroughly and accurately assess the effects (direct and indirect) of the action on the listed species and its critical habitat?

- e. Evaluate the scientific weight of the evidence presented in the BiOp. Does the evidence provide strong, moderate or weak support for the discussion, findings and conclusions made in the document?
3. Reviewers shall evaluate the quality and completeness of the scientific and commercial information used in the BiOp analysis, and identify if the BiOp analysis is comprehensive or if there are relevant scientific or commercial data or information that were not used in the BiOp analysis.
4. Reviewers are specifically asked to evaluate the scientific basis for the nutritional stress findings of the final 2010 BiOp. Reviewers shall evaluate and comment on the strength of the linkages among fish biomass estimates, fishery removals, Steller sea lion reproductive rates, and recovery of the WDPS. Does the BiOp accurately evaluate the inter-relationships between Steller sea lion population status and trends, foraging ecology, and groundfish fisheries effects across broad geographic areas (ecosystems to highly localized regions) and temporal scales (years to seasons)?
5. Reviewers will determine if there is any additional literature, assessments, or analyses that should have been considered in this BiOp (as of the end of the public comment period for the Draft BiOp, September 3, 2010).
6. In making these evaluations, reviewers shall consider and address the following questions:
  - a. Are the findings of the BiOp contradicted by any scientific information available as of Sept 3, 2010 presented in, or omitted from, the BiOp?
  - b. As part of this consideration, reviewers shall also assess the scientific record to determine whether adequate consideration has been given to the likelihood that factors other than fishing are negatively affecting the population status, critical habitat or recovery of the WDPS including predation, changes in the ecosystem or carrying capacity, emigration, exposure to contaminants, or other factors.

Tasks specific to Chapter 2 (panel review meeting):

1. Reviewers will convene as a Panel and will conduct a scientific peer review during the panel review meeting in [TBD](#). In addition to scientific presentations regarding the BiOp analysis and related scientific information, the meeting will include presentations by experts from environmental organizations, the fishing industry, affected communities, and other agencies and institutions. The Panel will conduct the peer review in accordance with the ToRs for Chapter 2 and consider all relevant scientific information available up to the date of the Panel meeting. Refer to Annex 3 for listing of report and background documents.

2. Following the same ToR identified for Chapter 1 (above), the reviewers will reexamine the Final BiOp, its scientific record and any new information available subsequent to the issuance of the Final BiOp and may provide additional commentary on the findings they made in Chapter 1 based on scientific information that arises through the panel presentations. This re-visitation of Chapter 1 shall be part of Chapter 2 of the report. As part of this commentary the reviewers are tasked to reevaluate the scientific basis for the conclusions of the final 2010 BiOp, that fisheries are causing nutritional stress in Steller sea lions, which in turn is adversely impacting the survival and recovery of the WDPS of the Steller sea lion. The reviewers shall evaluate and comment on the strength of the relationship between fishery removals and recovery of the WDPS.
  
3. The Reasonable Prudent Alternative (RPA) presented in the BiOp (Section 8.3.4) and as implemented through an Interim Final Rule (75FR77535; December 13, 2010) may present an opportunity for an adaptive management experiment to test the response of fisheries and Steller sea lions to the fisheries closures implemented by the RPA/IFR. Reviewers will be asked to (1) comment on the utility of this opportunity, (2) evaluate the metrics identified in the BiOp (e.g., trends in Steller sea lion abundance, trends in biomass of Atka mackerel and other groundfish, etc.), and (3) suggest other metrics not described in the BiOp that could be used to evaluate the efficacy of the action in ensuring the groundfish fisheries are not likely to adversely affect the survival and recovery of western distinct population segment (WDPS) of the Steller sea lion.

### **Annex 3. Listing of documents for the CIE peer review**

#### Mandatory documents for the ‘desk’ review (Chapter 1):

National Marine Fisheries Service. November 2010. Final Biological Opinion: Authorization of Groundfish Fisheries under the Fishery Management Plans for Groundfish the Bering Sea and Aleutian Islands Management Area and the Gulf of Alaska. 472p + 224p. Available at: <http://www.alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

National Marine Fisheries Service. March 2008. Recovery Plan for the Steller Sea Lion: Eastern and Western Distinct Population Segments (*Eumetopias jubatus*). Revision. 325p. Available at: <http://www.alaskafisheries.noaa.gov/protectedresources/stellers/recovery/sslrpfinalrev030408.pdf>

L. Boyd (2010) Views expressed by Professor I.L. Boyd on the Biological Opinion Groundfish Fisheries, Bering Sea and Aleutian Islands Management Area US National Marine Fisheries Service – 8 pp. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

J. M. Maniscalco, A. M. Springer, and P. Parker (2010) High Natality Rates of Endangered Steller Sea Lions in Kenai Fjords, Alaska and Perceptions of Population Status in the Gulf of Alaska – 33 pp. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

D. Calkins (2008) Fixed Gear Marine Mammal Study, North Pacific Wildlife Consulting, LLC. NOAA Grant Number: NA07NMF4390024, April 6, 2008– 45 pp. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

#### Mandatory documents for the panel review (Chapter 2):

Bernard, D. R, S. J. Jefferies, G. Knapp, and A. W. Trites, 2011, An Independent Scientific Review of the Biological Opinion (2010) of the Fisheries Management Plan for the Bering Sea/Aleutian Islands Management Areas, October 8, 2011. 128 pp. Available at: [http://wdfw.wa.gov/conservation/steller\\_sealions/final\\_fmp\\_biop\\_ind\\_sci\\_rev\\_08oct2011.pdf](http://wdfw.wa.gov/conservation/steller_sealions/final_fmp_biop_ind_sci_rev_08oct2011.pdf)

M. Horning<sup>1</sup> and J. E. Mellish. (2012). Predation on an Upper Trophic Marine Predator, the Steller Sea Lion: Evaluating High Juvenile Mortality in a Density Dependent Conceptual Framework. January 2012 | Volume 7 | Issue 1 | e30173. Plosone.org. 10 pages. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

J.N. Waite, V.N. Burkanov, and R.D. Andrews (2012). Prey competition between sympatric Steller sea lions (*Eumetopias jubatus*) and northern fur seals (*Callorhinus ursinus*) on Lovushki Island, Russia. NRC Research Press. 18 pages. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

Demaster, D. (2011) Memorandum for Jim Balsiger regarding Results of Steller Sea Lion Surveys in Alaska, June-July 2011, December 5, 2011, Alaska Fisheries Science Center. 18 pages, Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

Trites, A.W., R. Flinn, R. Joy, and B. Battaile. 2010. Was the decline of Steller sea lions in the Aleutian Islands from 2000 to 2009 related to the Atka mackerel fishery? University of British Columbia Fisheries Centre Working Paper 2010-10. 29 pp. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

Conn, P. B. (2011). An internal review of Trites et al. 2010, NOAA/NMFS/NMML, Polar Program. February 11, 2011 3 pages. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

Demaster D. (2011) Presentation to the North Pacific Fishery Management Council of NMFS Comments on the Bernard et al. 2011 review of the 2010 biological opinion. 24 pages, Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

T. C. Y Hui. (2011). Steller Sea Lions and Fisheries: Competition at Sea? Masters Thesis University of British Columbia, March 2011. 114 pp. Available at: <http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>  
<http://www.afsc.noaa.gov/REFM/stocks/assessments.htm>

#### Additional background documents:

Fisheries of the Exclusive Economic Zone off Alaska; Steller sea lion protection measures for the Bering Sea and Aleutian Islands Groundfish fisheries off Alaska. Interim Final Rule (75FR77535; December 13, 2010). 26p. <http://www.fakr.noaa.gov/frules/75fr81921.pdf> and <http://www.fakr.noaa.gov/frules/76fr2027.pdf>

Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Areas. North Pacific Fishery Management Council. November 2011. 145p. Available at: <http://209.112.168.2/npfmc/PDFdocuments/fmp/BSAI/BSAI.pdf>

Fishery Management Plan for Groundfish of the Gulf of Alaska. North Pacific Fishery Management Council. December 2011. 128p. Available at: <http://209.112.168.2/npfmc/PDFdocuments/fmp/GOA/GOA.pdf>

North Pacific Fishery Management Council (2011) 2012 Bering Sea and Aleutian Islands Groundfish Stock Assessment and Fishery Evaluation Report. Introduction 50 pages, BSAI Pacific cod chapter: 476 pages, BSAI Atka mackerel chapter: 1156 pages. BS pollock chapter: 168 pages, Aleutian Islands pollock chapter 258 pages. Available at: <http://www.afsc.noaa.gov/REFM/stocks/assessments.htm>

N. Zerbini, J. M. Waite, J. W. Durban, R. LeDuc, M. E. Dahlheim, and P. R. Wade (2007). Estimating abundance of killer whales in the nearshore waters of the Gulf of Alaska and Aleutian Islands using line-transect sampling. Mar Biol (2007) 150:1033–1045 DOI

10.1007/s00227-006-0347-8. 13 pages. Available at:  
<http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>

J. Durban,• D. Ellifrit, M. Dahlheim, J. Waite, C. Matkin, L. Barrett-Lennard, G. Ellis, R. Pitman, R. LeDuc, and P. Wade ( 2010) Photographic mark-recapture analysis of clustered mammal-eating killer whales around the Aleutian Islands and Gulf of Alaska. Mar Biol DOI 10.1007/s00227-010-1432-6. 14 pages. Available at:  
<http://alaskafisheries.noaa.gov/protectedresources/stellers/esa/biop/final/1210.htm>.

Aleutian Islands Fishery Ecosystem Plan. North Pacific Fishery Management Council. December 2007. 190p. Available at:

[http://www.fakr.noaa.gov/npfmc/PDFdocuments/conservation\\_issues/AIFEP/AIFEP12\\_07.pdf](http://www.fakr.noaa.gov/npfmc/PDFdocuments/conservation_issues/AIFEP/AIFEP12_07.pdf)

2000 Endangered Species Act Section 7 Consultation Biological and Incidental take Statement. Authorization of Bering Sea/Aleutian Islands groundfish fisheries based on the Fishery Management Plan for the Bering Sea/Aleutian Islands Groundfish; and Authorization of Gulf of Alaska groundfish fisheries based on the Fishery Management Plan for Groundfish of the Gulf of Alaska. November 2000. National Marine Fisheries Service. 2000. 588p. Available at:

[http://www.fakr.noaa.gov/protectedresources/stellers/plb/fmp\\_sec07-NOV30\\_2000\\_FINAL.pdf](http://www.fakr.noaa.gov/protectedresources/stellers/plb/fmp_sec07-NOV30_2000_FINAL.pdf)

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