

GULF of ALASKA

NAVY TRAINING ACTIVITIES

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT



JULY 2016 - FINAL
UNCLASSIFIED
VOLUME TWO — APPENDICES A-D



**Gulf of Alaska Navy Training Activities
Supplemental
Environmental Impact Statement/
Overseas Environmental Impact Statement
Final Version**



**July 2016
Volume 2**

GOA Supplemental EIS/OEIS Project Manager
Naval Facilities Engineering Command, Northwest, EV21.AB
1101 Tautog Circle
Silverdale, WA 98315

Appendix A: Federal Register Notices

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APPENDIX A FEDERAL REGISTER NOTICES

A-1. NOTICE OF INTENT (NOI) TO PREPARE A SUPPLEMENT ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT AND TO ANNOUNCE PUBLIC SCOPING

	
3408 Federal Register / Vol. 78, No. 11 / Wednesday, January 16, 2013 / Notices	
ACTION: Notice.	
SUMMARY: The Corporation for National and Community Service (CNCS) has submitted a public information collection request (ICR) titled "National Service Criminal History Check Recordkeeping Requirement" for review and approval in accordance with the Paperwork Reduction Act of 1995, Public Law 104-13, (44 U.S.C. Chapter 35). Copies of this ICR, with applicable supporting documentation, may be obtained by calling CNCS, Aaron Olszewski, at (202) 606-6709 or email to aolszewski@cncs.gov . Individuals who use a telecommunications device for the deaf (TTY-TDD) may call 1-800-833-3722 between 8:00 a.m. and 8:00 p.m. Eastern Time, Monday through Friday.	Description: CNCS requests renewal of the recordkeeping requirement previously approved under an emergency clearance.
ADDRESSES: Comments may be submitted, identified by the title of the information collection activity, to the Office of Information and Regulatory Affairs, Attn: Ms. Sharon Mar, OMB Desk Officer for the Corporation for National and Community Service, by any of the following two methods by February 15, 2013:	The requirements will be used in the same manner as the existing application. CNCS also seeks to continue using the current application until the revised application is approved by OMB. The current application is due to expire on March 31, 2013.
(1) <i>By fax to:</i> (202) 395-6974, Attention: Ms. Sharon Mar, OMB Desk Officer for the Corporation for National and Community Service; and (2) <i>Electronically by email to:</i> smar@omb.eop.gov .	Type of Review: Renewal of Approved Recordkeeping Requirement. Agency: Corporation for National and Community Service. Title: National Service Criminal History Check Recordkeeping Requirement. OMB Number: 3045-0145. Agency Number: None. Affected Public: CNCS Grantees and Subgrantees. Total Respondents: 112,357. Frequency: Three times per covered position. Average Time Per Response: Five minutes. Estimated Total Burden Hours: 28,089 hours. Total Burden Cost (capital/startup): None. Total Burden Cost (operating/maintenance): None. Dated: January 10, 2013.
SUPPLEMENTARY INFORMATION: The OMB is particularly interested in comments which:	United States Court of Appeals for the Armed Forces, 450 E Street Northwest, Washington, DC 20442-0001, telephone (202) 761-1448.
- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of CNCS, including whether the information will have practical utility; - Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; - Propose ways to enhance the quality, utility, and clarity of the information to be collected; and - Propose ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submissions of responses.	Dated: January 11, 2013. Aaron Siegel, <i>Alternate OSD Federal Register Liaison Officer, Department of Defense.</i> [FR Doc. 2013-00814 Filed 1-15-13; 8:45 am] BILLING CODE 5001-06-P
Comments	DEPARTMENT OF DEFENSE
A 60-day public comment Notice was published in the <i>Federal Register</i> on November 9, 2012. This comment period ended January 8, 2013. No public comments were received from this Notice.	Department of the Navy
	Notice of Intent to Prepare a Supplement to the Gulf of Alaska Navy Training Activities Environmental Impact Statement/Overseas Environmental Impact Statement and to Announce Public Scoping
	AGENCY: Department of the Navy, DoD. ACTION: Notice.
	SUMMARY: Pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality Regulations (40 Code of Federal Regulations (CFR) parts 1500-1508), and Executive Order 12114, the Department of the Navy (DoN) announces its intent to prepare a supplement to the 2011 Gulf of Alaska Navy Training Activities Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS). The SEIS/OEIS will support authorization of incidental takes of marine mammals under the Marine Mammal Protection Act and incidental takes of threatened and endangered marine species, under the Endangered Species Act. These federal regulatory permits and authorizations expire in May 2016. The DoN will evaluate new, relevant information and incorporate that information into revised analyses where appropriate. The SEIS/OEIS will also analyze data using an acoustic model not available for the 2011 EIS/OEIS, the Navy Acoustics Effects Model, to estimate potential marine species effects.
	DEPARTMENT OF DEFENSE
	Office of the Secretary
	U.S. Court of Appeals for the Armed Forces Code Committee Meeting
	ACTION: Notice of public meeting.
	SUMMARY: This notice announces the forthcoming public meeting of the Code Committee established by Article 146(a), Uniform Code of Military Justice, 10 U.S.C. 946(a), to be held at the Courthouse of the United States Court of Appeals for the Armed Forces, 450 E Street NW., Washington, DC 20442-0001, at 10:00 a.m. on Tuesday, March 5, 2013. The agenda for this meeting will include consideration of proposed changes to the Uniform Code of Military Justice and the Manual for Courts-Martial, United States, and other matters relating to the operation of the Uniform Code of Military Justice throughout the Armed Forces.
	FOR FURTHER INFORMATION CONTACT: William A. DeCicco, Clerk of Court,

and mail. Additional information concerning acceptance of scoping comments is available on the SEIS/OEIS web page located at: <http://www.GOAEIS.com>.

FOR FURTHER INFORMATION CONTACT: Mrs. Amy Burt, Naval Facilities Engineering Command, Northwest, 1101 Tautog Circle, Suite 203, Silverdale, Washington 98315-1101, Attn: GOA SEIS/OEIS Project Manager.

SUPPLEMENTARY INFORMATION: This SEIS/OEIS is a supplement to the 2011 Gulf of Alaska Navy Training Activities EIS/OEIS and Record of Decision. The SEIS/OEIS will be used to renew current regulatory permits and authorizations and to support U.S. Pacific Command, Northern Command, and Joint Task Force Commander training requirements to achieve and maintain Fleet readiness as required by Title 10 of the U.S. Code. The DoN's Proposed Action is to continue DoN training in the Gulf of Alaska as detailed under the Preferred Alternative in the 2011 EIS/OEIS, and implemented with the 2011 EIS/OEIS Record of Decision. The Proposed Action does not alter the DoN's original purpose and need or alternative analysis as discussed in the 2011 EIS/OEIS; therefore, the alternative analysis presented in the EIS/OEIS remains relevant and is not proposed to be reanalyzed in the SEIS/OEIS. The continued conduct of at-sea joint exercises in the Gulf of Alaska is needed to support the training of combat-capable naval forces. An SEIS/OEIS is considered to be the appropriate document as the DoN's Proposed Action may significantly impact or harm marine resources.

Resources that will be addressed due to the potential effects from the Proposed Action, new available scientific data, and modeling results will include, but are not limited to, marine mammals and threatened and endangered species.

The Gulf of Alaska (GOA) Navy Training Activities SEIS/OEIS Study Area consists of three components: (1) the GOA Temporary Maritime Activities Area, (2) U.S. Air Force over-land Special Use Airspace and air routes over the GOA and State of Alaska, and (3) U.S. Army training lands underlying Special Use Airspace. Collectively, for the purposes of the SEIS/OEIS, these areas are referred to as the Alaska Training Areas. The U.S. Air Force Special Use Airspace and U.S. Army training lands were previously analyzed for NEPA purposes under separate environmental documents and are not included in the analysis in this SEIS/OEIS but are included by reference.

The scoping process will be used to identify community concerns and local issues that will be addressed in the SEIS/OEIS. Federal agencies, Alaska Native Tribes, state agencies, local agencies, the public, and interested persons are encouraged to provide comments to the DoN to identify specific issues or topics of environmental concern. All comments, provided via the Web site or in writing via postal submission, will receive the same consideration during SEIS/OEIS preparation. Written comments must be postmarked, and Web site comments must be completed no later than March 18, 2013. Written comments should be mailed to: Mrs. Amy Burt, Naval Facilities Engineering Command, Northwest, 1101 Tautog Circle, Suite 203, Silverdale, Washington 98315-1101, Attn: GOA SEIS/OEIS Project Manager.

Dated: January 11, 2013.
C. K. Chiappetta,
Lieutenant Commander, Office of the Judge Advocate General, U.S. Navy, Federal Register Liaison Officer.
[FR Doc. 2013-00847 Filed 1-15-13; 8:45 am]
BILLING CODE 3810-FF-P

DEPARTMENT OF DEFENSE

Department of the Navy

Meeting of the Board of Visitors of Marine Corps University

AGENCY: Department of the Navy, DoD.
ACTION: Notice of Open Meeting.

SUMMARY: The Board of Visitors of the Marine Corps University will meet to review, develop and provide recommendations on all aspects of the academic and administrative policies of the University; examine all aspects of professional military education operations; and provide such oversight and advice, as is necessary, to facilitate high educational standards and cost effective operations. The Board will be focusing primarily on the internal procedures of Marine Corps University. All sessions of the meeting will be open to the public.

DATES: The meeting will be held on Friday, February 22, 2013 from 9:00 a.m. to 3:00 p.m.

ADDRESSES: The meeting will be held at the Crystal Gateway Marriott hotel in Crystal City, Virginia. The address is: 1700 Jefferson Davis Highway, Arlington, Virginia 22202.

FOR FURTHER INFORMATION CONTACT: Joel Westa, Director of Academic Support, Marine Corps University Board of Visitors, 2076 South Street, Quantico,

Virginia 22134, telephone number 703-784-4037.

Dated: January 9, 2013.
C.K. Chiappetta,
Lieutenant Commander, Office of the Judge Advocate General, U.S. Navy, Federal Register Liaison Officer.
[FR Doc. 2013-00810 Filed 1-15-13; 8:45 am]
BILLING CODE 3810-FF-P

DEPARTMENT OF EDUCATION

[Docket No. ED-2012-ICCD-0051]

Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Application for Client Assistance Program

AGENCY: Department of Education (ED), Office of Special Education and Rehabilitative Services (OSERS).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before February 15, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at <http://www.regulations.gov> by selecting Docket ID number ED-2012-ICCD-0051 or via postal mail, commercial delivery, or hand delivery. Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted. Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room 2E117, Washington, DC 20202-4537.

FOR FURTHER INFORMATION CONTACT: Electronically mail ICDocketMgr@ed.gov. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize

A-2. NOTICE OF AVAILABILITY (NOA) OF THE GULF OF ALASKA NAVY TRAINING ACTIVITIES DRAFT SUPPLEMENTAL EIS/OEIS

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assistance in completing the application. No person is required to submit any information unless a valid OMB control number is displayed. No person is required to submit any information unless they desire a Federal power allocation.

H. Is the collection developed by an office that has planned and allocated resources for the efficient and effective management and use of the information collected?

Western's power marketing offices will administer and evaluate the applications. Use and management of the collected information has been factored into each office's functions and resource requirements. Historically, Western has requested the same relative information from applicants and effectively used Western resources to utilize and manage the information in its determinations. Each power marketing office will make a recommendation to Western's Administrator on which applicant(s) should be awarded a Federal power allocation based on the information contained in the APD. Western's Administrator shall use his discretion in the final award of power allocations. The procedure and process for the allocation of power shall be the subject matter of a separate notice and is outside the scope of this process.

I. Does the collection use effective and efficient statistical survey methods?

Since the information collected is used to determine whether an applicant receives an allocation of Federal power, this section is inapplicable.

J. Does the collection use information technology to the maximum extent practicable to reduce the burden and to improve data quality, agency efficiency, and responsiveness to the public?

The APD will be accessible for downloading via Western's Web page. Western will accept email submission of the APD, as well as submission via fax or regular mail. Applicants also can enter the information on an electronic APD on Western's Web page.

VII. Invitation for Comments

Western invites public comment on its request to extend its APD that Western submitted to OMB pursuant to the Paperwork Reduction Act of 1995. The Paperwork Reduction Act requires OMB to make a decision on the ICR within 60 days after this publication or receipt of the proposed collection of information, whichever is later.²⁰

²⁰ See 5 CFR 1320.10(h).

Comments should be sent directly to the addresses listed in the ADDRESSES Section above.

Dated: August 15, 2014.

Mark A. Gabriel,
Administrator.

[FR Doc. 2014-19960 Filed 8-21-14; 8:45 am]

BILLING CODE 6450-01-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-FRL-9016-6]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564-7146 or <http://www.epa.gov/compliance/nea/>.

Weekly receipt of Environmental Impact Statements

Filed 08/11/2014 Through 08/15/2014 Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: <http://www.epa.gov/compliance/nea/eisdata.html>.

EIS No. 20140230, Final EIS, BLM, ID, Jarbidge Proposed Resource Management Plan, Review Period Ends: 09/22/2014, Contact: Heidi Whitlach 208-736-2350.

EIS No. 20140231, Final EIS, USFS, WA, Bailey, Aeneas, Revis, and Tunk Livestock Grazing Analysis, Review Period Ends: 09/22/2014, Contact: Phillip Christy 509-486-5137.

EIS No. 20140232, Draft Supplement, NMFS, FL, Adjustments to the Annual Catch Limit and Accountability Measures for Royal Red Shrimp, Comment Period Ends: 10/06/2014, Contact: Susan Gerhart 727-551-5602.

EIS No. 20140233, Draft EIS, BIA, WA, Samish Indian Nation Trust Acquisition and Casino Project, Comment Period Ends: 10/06/2014, Contact: Dr. B.J. Howerton 503-231-6749.

EIS No. 20140234, Draft Supplement, USN, AK, Gulf of Alaska Navy Training Activities, Comment Period Ends: 10/20/2014, Contact: Amy Burt 360-396-0924.

EIS No. 20140235, Draft EIS, NRC, NJ, PSEG Site, Early Site Permit NUREG-2168, Comment Period Ends: 11/06/2014, Contact: Allen Fetter 301-415-8556.

EIS No. 20140236, Final EIS, USACE, WA, Lower Snake River Programmatic Sediment Management Plan, Review Period Ends: 09/22/2014, Contact: Sandra Shelin 509-527-7265.

EIS No. 20140237, Final Supplement, NOAA, AK, Management of the Subsistence Harvest of Northern Fur Seals on St. George Island, Review Period Ends: 09/22/2014, Contact: Michael Williams 907-271-5117.

EIS No. 20140238, Final EIS, USFS, CO, Vail Mountain Recreation Enhancement Project, Review Period Ends: 09/22/2014, Contact: Roger Poirier 970-945-3245.

EIS No. 20140239, Draft EIS, FTA, CA, Eastside Transit Corridor Phase 2, Comment Period Ends: 10/21/2014, Contact: Mary Nguyen 213-202-3960.

EIS No. 20140240, Draft Supplement, USACE, WA, Mount St. Helens Long-Term Sediment Management Plan, Comment Period Ends: 09/29/2014, Contact: Tina Teed 503-808-4960.

Amended Notices

EIS No. 20140183, Draft EIS, USFS, AZ, Tonto National Forest Travel Management, Comment Period Ends: 09/17/2014, Contact: Marianne Thomas 602-225-5213.

Revision to the FR Notice Published 07/03/2014; Extending Comment Period from 08/18/2014 to 09/17/2014.

Dated: August 19, 2014.

Cliff Rader,
Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2014-20038 Filed 8-21-14; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OPP-2014-0561; FRL-9914-57]

Amendment, Extension, or Issuance of an Experimental Use Permit

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has granted amendments, extensions, and issuances of experimental use permits (EUPs) to the pesticide applicants described in Unit II. of the SUPPLEMENTARY INFORMATION. An EUP permits use of a pesticide for experimental or research purposes only in accordance with the limitations in the permit.

FOR FURTHER INFORMATION CONTACT: Robert McNally, Biopesticides and Pollution Prevention Division (7511P), Office of Pesticide Programs, Environmental Protection Agency, 1200

A-3. NOTICE OF PUBLIC MEETINGS (NOPM) FOR THE GULF OF ALASKA NAVY TRAINING ACTIVITIES DRAFT SUPPLEMENTAL EIS/OEIS

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Office, NRL Code 1004, 4555 Overlook Avenue SW., Washington, DC 20375–5320, telephone 202–767–3083. Due to U.S. Postal delays, please fax 202–404–7920, email: rita.manak@nrl.navy.mil or use courier delivery to expedite response.

(AUTHORITY: 35 U.S.C. 207, 37 CFR Part 404.)

Dated: August 18, 2014.

N. A. Hagerty-Ford,

Commander, Office of the Judge Advocate General, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2014–19982 Filed 8–21–14; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Public Meetings for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Gulf of Alaska Navy Training Activities

AGENCY: Department of the Navy, DoD.
ACTION: Notice.

SUMMARY: Pursuant to section 102(2)(c) of the National Environmental Policy Act of 1969, regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations Parts 1500–1508), and Presidential Executive Order 12114, the Department of the Navy (DoN) has prepared and filed with the U.S. Environmental Protection Agency a Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). The DoN prepared this analysis to update the Gulf of Alaska Navy Training Activities Final EIS/OEIS, which was completed with community input in May 2011 (hereafter referred to as the 2011 GOA Final EIS/OEIS), and to renew federal regulatory permits and authorizations. In the Draft Supplemental EIS/OEIS, the DoN uses a new acoustic modeling method and evaluates new, relevant information, such as new marine mammal density data and new scientific analyses, as appropriate. The DoN analyzes data using the Navy Acoustic Effects Model, not previously available for the 2011 GOA Final EIS/OEIS, to evaluate potential effects on marine species from training activities. The National Marine Fisheries Service is a cooperating agency for this Supplemental EIS/OEIS.

With the filing of the Draft Supplemental EIS/OEIS, the DoN is initiating a 60-day public comment

period and has scheduled five public meetings to inform the public and receive comments on the Draft Supplemental EIS/OEIS. This notice announces the dates and locations of the public meetings and provides supplementary information about the environmental planning effort.

Dates And Addresses: The 60-day Draft Supplemental EIS/OEIS public review period will begin August 22, 2014, and end October 20, 2014. The DoN will hold five public meetings to inform the public about the Proposed Action and to provide an opportunity to comment on the adequacy and accuracy of the supplemental environmental analysis. Each of the public meetings will include an open house information session, followed by a short presentation by the DoN. DoN representatives will be available during the open house information sessions to provide information related to the Draft Supplemental EIS/OEIS. Federal, state, and local agencies and officials, as well as interested organizations and individuals are encouraged to provide comments in writing during the public review period or in person at one of the scheduled public meetings.

The public meetings will be held from 5:00 p.m.–8:00 p.m., with a DoN presentation at 6:30 p.m., on the following dates and at the following locations:

1. Monday, September 8, 2014, at the Elks Lodge, 102 W. Marine Way, Kodiak, AK 99615
2. Tuesday, September 9, 2014, at the Z.J. Loussac Library Public Conference Room, 3600 Denali St., Anchorage, AK 99503
3. Wednesday, September 10, 2014, at the Best Western Bidarka Inn Sea Breeze Room, 575 Sterling Highway, Homer, AK 99603
4. Thursday, September 11, 2014, at the Juneau Arts & Humanities Council Main Hall, 350 Whittier St., Juneau, AK 99801
5. Friday, September 12, 2014, at the Mt. Eccles Elementary School Simpler Gymnasium, 201 Adams St., Cordova, AK 99574

Attendees will be able to submit oral and written comments during the public meetings. A court reporter will record oral comments from the public. In the interest of available time, and to ensure all who wish to provide an oral statement to the court reporter have the opportunity to do so, each speaker's comments will be limited to three (3) minutes, which may be extended if meeting attendance permits. Equal weight will be given to oral and written statements. Written comments may also

be submitted via mail to Naval Facilities Engineering Command Northwest, Attention: Ms. Amy Burt—GOA Supplemental EIS/OEIS Project Manager, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315–1101, or electronically via the project Web site (www.GOAETS.com). All comments, oral or written, submitted during the public review period will become part of the public record. All comments will be reviewed or responded to in the Final Supplemental EIS/OEIS. Comments must be postmarked or received online by October 20, 2014, for consideration in the Final Supplemental EIS/OEIS.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Northwest, Attention: Ms. Amy Burt—GOA Supplemental EIS/OEIS Project Manager, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315–1101.

SUPPLEMENTARY INFORMATION: A Notice of Intent to prepare this Supplemental EIS/OEIS was published in the *Federal Register* on January 16, 2013 (78 FR 3408).

This Supplemental EIS/OEIS is an update to the 2011 GOA Final EIS/OEIS and Record of Decision (ROD). It will support U.S. Pacific Command, Northern Command, and Joint Task Force Commander training requirements to achieve and maintain Fleet readiness as required by Title 10 of the U.S. Code. The DoN's Proposed Action is the same as the Proposed Action presented in the 2011 GOA Final EIS/OEIS and ROD, which is to continue conducting periodic military training activities in a specific area of the Gulf of Alaska called the Temporary Maritime Activities Area. The Temporary Maritime Activities Area and Proposed Action, including the location, number, and frequency of major training exercises, remain unchanged from the 2011 analysis. The DoN evaluated each resource area discussed in the 2011 GOA Final EIS/OEIS to determine if additional analysis is necessary in the Draft Supplemental EIS/OEIS due to new information or new analysis methods.

In this Draft Supplemental EIS/OEIS, the DoN re-evaluates potential impacts from ongoing military training activities conducted in the Temporary Maritime Activities Area. All resource areas were examined to determine the need for re-analysis in this Draft Supplemental EIS/OEIS. The marine mammal resource analysis for each alternative in the 2011 GOA Final EIS/OEIS was updated. For other resource areas, the 2011 analysis remains valid.

The Supplemental EIS/OEIS supports authorization of incidental takes of

Appendix B: Agency Correspondence

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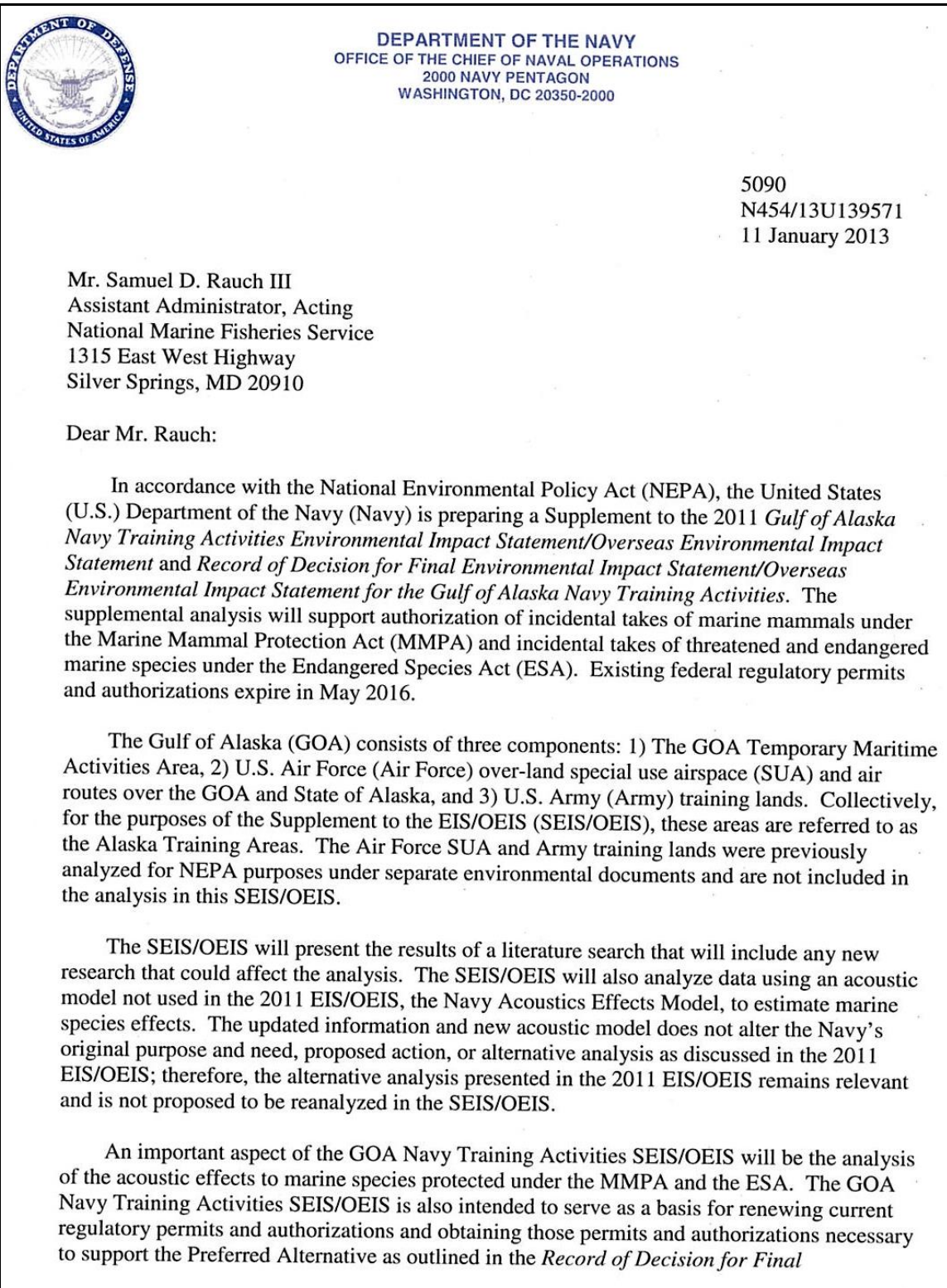
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APPENDIX B AGENCY CORRESPONDENCE

B.1 COOPERATING AGENCY CORRESPONDENCE BETWEEN NAVY AND NATIONAL MARINE FISHERIES SERVICE, HEADQUARTERS



Environmental Impact Statement/Overseas Environmental Impact Statement for the Gulf of Alaska Navy Training Activities.

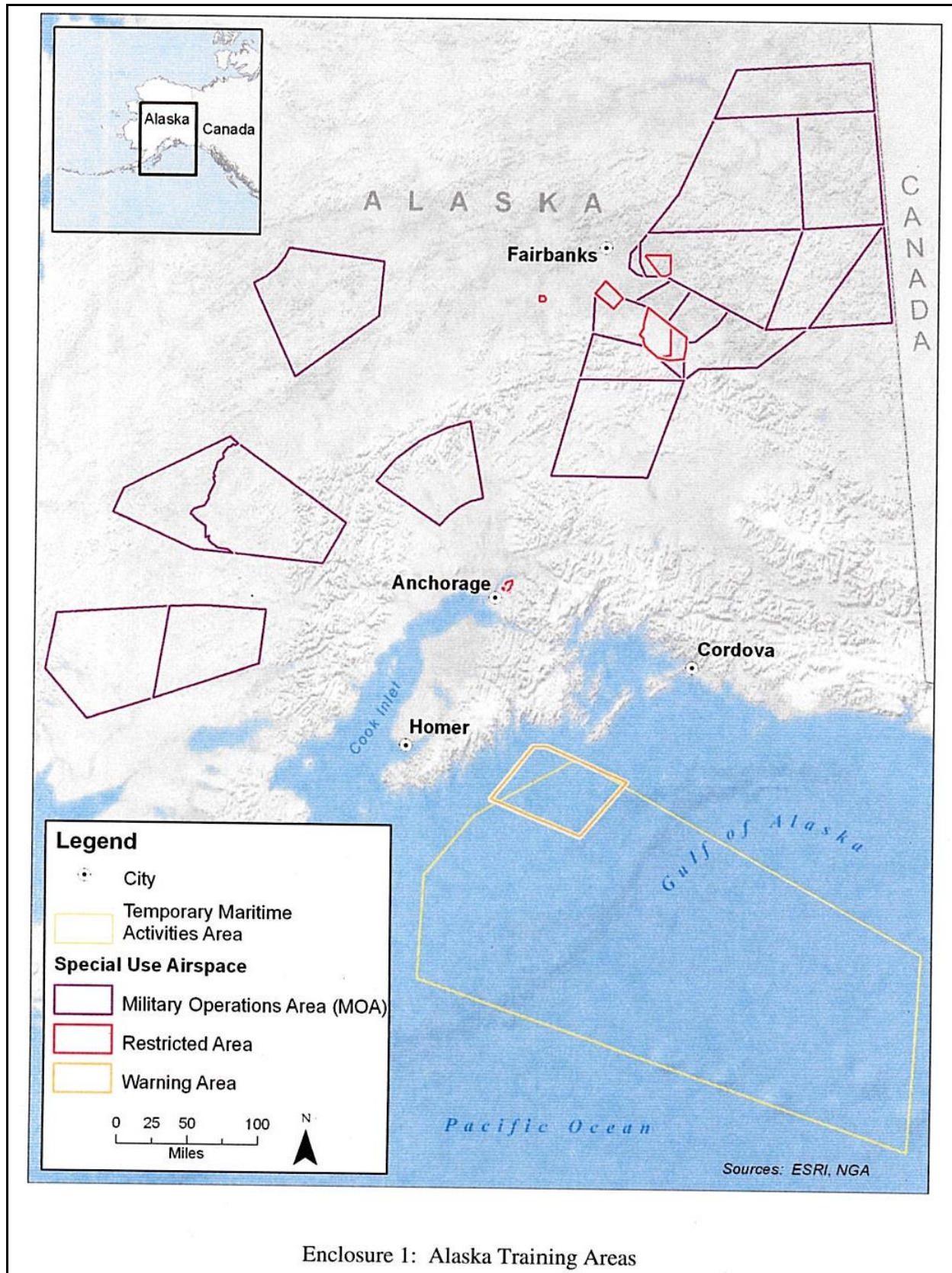
The MMPA Final Rule, Letter of Authorization, and Programmatic Biological Opinion for GOA will expire in May 2016. To complete the analysis required by the permitting and consultation process, the Navy and the National Marine Fisheries Service (NMFS) will need to work together. Therefore, in accordance with the Council on Environmental Quality's (CEQ) NEPA guidelines (specifically 40 Code of Federal Regulations Part 1501) and CEQ's 2002 guidance on cooperating agencies, the Navy requests that NMFS serve as a cooperating agency for the development of the GOA Navy Training Activities SEIS/OEIS.

As the lead agency, the Navy will be responsible for overseeing preparation of the SEIS/OEIS that includes, but is not limited to, the following:

- Gathering all necessary background information and preparing the EIS/OEIS and all necessary permit applications associated with acoustic issues within the GOA SEIS/OEIS Study Area.
- Working with NMFS personnel to determine the method of estimating potential effects to protected marine species, including threatened and endangered species.
- Circulating the appropriate NEPA documentation to the general public and any other interested parties.
- Scheduling and supervising meetings held in support of the NEPA process, and compiling any comments received.
- Maintaining an administrative record and responding to any Freedom of Information Act requests relating to the SEIS/OEIS.

The Navy respectfully requests that NMFS, in its role as a cooperating agency, provide support as follows:

- Provide timely comments after the Agency Information Meeting (which will be held at the onset of the SEIS/OEIS process) and on working drafts of the SEIS/OEIS documents. The Navy requests that comments on draft SEIS/OEIS documents (Version 2) be provided within 30 working days.
- Respond to Navy requests for information, in particular, those related to review of the acoustic effects analysis and evaluation of the effectiveness of protection and mitigation measures.
- Coordinate, to the maximum extent practicable, any public comment periods that are necessary in the MMPA permitting process with the Navy's NEPA public comment periods.



**Supplement to the Environmental Impact Statement/Overseas Environmental Impact Statement
(SEIS/OEIS) for Gulf of Alaska (GOA) Navy Training Activities**

MILESTONE	DATE
Notice of Intent Published in Federal Register	16 Jan 2013
Scoping Period	16 Jan – 18 Mar 2013
*** No Scoping Meetings ***	
Prepare Draft EIS/OEIS	Apr 2013 – Jun 2014
Release Draft EIS/OEIS to Public	Jun 2014
Draft EIS/OEIS Public Comment Period (60 days)	20 Jun 2014 – 19 Aug 2014
Public Hearings	Kodiak, AK Monday, 21 July 2014 Anchorage, AK Tuesday, 22 July 2014 Homer, AK Wednesday, 23 July 2014 Juneau, AK Friday, 25 July 2014 Cordova, AK Saturday, 26 July 2014
Prepare Final EIS/OEIS	Sep 2014 – Jan 2016
Release Final EIS/OEIS to Public	15 Jan 2016
Record of Decision signed	05 Apr 2016

Enclosure 2: Notional Schedule of Events

B.2 COOPERATING AGENCY CORRESPONDENCE BETWEEN NATIONAL MARINE FISHERIES SERVICE, ALASKA REGION, AND NAVY**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

February 6, 2013

Ms. Amy Burt - GOA Supplemental EIS/OEIS Project Manager
Naval Facilities Engineering Command Northwest
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

Re: Notice of Intent to Prepare a Supplemental Environmental Impact Statement/Overseas
Environmental Impact Statement (EIS/OEIS) for Gulf of Alaska (GOA) Navy Training Activities

Dear Ms. Burt:

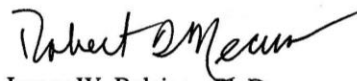
The National Marine Fisheries Service (NMFS), Alaska Region, has received the request from the Department of the Navy (Navy) to be a cooperating agency on the Supplemental EIS/OEIS for Navy training activities in specific areas of the GOA. This analysis is being prepared to supplement the GOA Navy Training Activities Final EIS/OEIS, completed in May 2011. This document is being prepared to ensure critical training requirements are met and will:

- Evaluate new, relevant information and incorporate that information into revised analyses where appropriate;
- Analyze data using a new acoustic model to estimate potential effects on various marine species; and
- Renew current federal regulatory permits and authorizations.

We understand that NMFS's Office of Protected Resources; at our Headquarters in Silver Spring, Maryland, has agreed to be a cooperating agency in the preparation of the Supplemental EIS/OEIS. We regret to inform you that NMFS's Alaska Region is unable to be a cooperating agency due to staff limitations and current work load. However, we are concerned about potential effects to NMFS trust resources as a result of the proposed activities. Although the Alaska Region is not able to serve as a cooperating agency, we intend to provide comments on living marine resources as appropriate through the EIS/OEIS review process. We would appreciate receiving two (2) hard copies of the draft and final statements for our review.

Should you have any questions please contact LTJG Larry V. Thomas Jr. at
Larry.V.Thomas@noaa.gov, or by phone 907-271-6620.

Sincerely,

for 
James W. Balsiger, Ph.D.
Administrator, Alaska Region



ALASKA REGION - <http://alaskafisheries.noaa.gov>

cc: brad.smith@noaa.gov
jeanne.hanson@noaa.gov
amy.burt@navy.mil
jolie.Harrison@noaa.gov
kara.meckley@noaa.gov
nmfs.hq.nepa@noaa.gov
gretchen.harrington@noaa.gov
jay.nunenkamp@noaa.gov

B.3 COOPERATING AGENCY CORRESPONDENCE BETWEEN NATIONAL MARINE FISHERIES SERVICE, HEADQUARTERS, AND NAVY

FEB 22 2013



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910
THE DIRECTOR

Mr. John P. Quinn
Deputy Director, Energy and Environmental
Readiness Division
Department of the Navy
2000 Navy Pentagon
Washington, DC 20350-2000

Dear Mr. Quinn:

Thank you for your letter requesting that NOAA's National Marine Fisheries Service (NMFS) be a cooperating agency in the preparation of a Supplement to the 2011 Gulf of Alaska Navy Training Activities Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS). NMFS supports the Navy's decision to prepare a supplement to this EIS/OEIS and agrees to be a cooperating agency, due, in part, to our responsibilities under section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA) and section 7 of the Endangered Species Act.

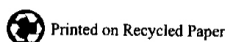
We will make every effort to support the Navy in the specific ways described in your letter. Therefore, to the maximum extent practicable, NMFS will:

- Provide timely review and comments on working drafts of the SEIS/OEIS documents.
- Respond to Navy requests for information in a timely manner.
- Coordinate any public comment periods that are necessary in the MMPA permitting process with the Navy's NEPA public comment periods.
- Participate in meetings, as necessary, hosted by the Navy to discuss protected marine species including threatened and endangered species.
- Adhere to the Navy's NEPA schedule to the maximum degree possible.

If you have any questions or need additional information, please contact Ms. Jolie Harrison, NMFS Office of Protected Resources, at (301) 427-8420.

Sincerely,

Samuel D. Rauch III
Deputy Assistant Administrator
for Regulatory Programs,
performing the functions and duties of the
Assistant Administrator for Fisheries



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THE ASSISTANT ADMINISTRATOR
FOR FISHERIES



B.4 NAVY CORRESPONDENCE WITH U.S. FISH AND WILDLIFE SERVICE, ANCHORAGE FISH AND WILDLIFE OFFICE**DEPARTMENT OF THE NAVY**

COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:

5090

Ser N01CE1/0336

3 Apr 14

Ms. Ann Rappoport, Field Supervisor
Anchorage Fish and Wildlife Field Office
U.S. Fish and Wildlife Service
605 W. 4th Avenue, Room G61
Anchorage, AK 99501

SUBJECT: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS) (CONSULTATION #2010-0075)

Dear Ms. Rappoport:

The purpose of this letter is to provide you with information concerning the status of the Navy's continuation of training activities that were previously the subject of Consultation #2010-0075. Specifically, as discussed below, there are no changes to the actual activities, the geographic parameters, or levels of activities occurring in the areas previously subject to consultation with USFWS. There are also no new listed or proposed species in the study area. As such, none of the criteria for reinitiation of consultation as set forth in 50 C.F.R. § 402.16 are triggered.

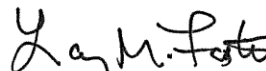
The Navy proposes to continue conducting military training activities in the GOA training area, and has undertaken preparation of a Supplemental EIS/OEIS to cover these activities. The Supplemental EIS/OEIS will address the continuation of Navy training activities in the GOA training area from 2016 through the year 2021, incorporating a new acoustic model to estimate impacts to various marine species and renew current federal permits and authorizations. As with consultation #2010-0075, the proposed training activities would continue to occur within the GOA over two 21-day periods during the April-October time frame, as described in the Final EIS/OEIS for "Gulf of Alaska Navy Training Activities" of March 2011.

Subj: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS) (CONSULTATION #2010-0075)

The Navy previously prepared a Biological Evaluation covering potential effects of the Navy's training activities to Endangered Species Act (ESA) listed species under jurisdiction of the U.S. Fish and Wildlife Service and provided it to your office on February 24, 2010. The Navy concluded the effects of the proposed action "may affect, not likely to adversely affect" for short-tailed albatross (*Phoebastria albatrus*). Your office responded on March 24, 2010 and concurred with the Navy's determination. The Navy also concluded that the proposed action "may affect, not likely to adversely affect" the northern sea otter (*Enhydra lutris kenyoni*) based on input received at and following our Draft EIS/OEIS public hearings about northern sea otter occurrence in the GOA. Your office also concurred with this determination on March 31, 2011. In May of 2011, after carefully considering the operational and environmental consequences of the proposed action and information received from the public and regulatory agencies, the Navy issued a Record of Decision (ROD), implementing the Preferred Alternative, Alternative 2 of the Final EIS/OEIS.

Because the Navy's training activities, geographic parameters, and level of activities previously analyzed in the GOA Final EIS/OEIS have not changed, the Navy's previous determination that the action "may affect, not likely to adversely affect" U.S. Fish and Wildlife ESA-listed species (specifically, the short-tailed albatross and the northern sea otter) remains unchanged. None of the circumstances articulated at 50 C.F.R. § 402.16(a)-(d) are present. Therefore, the Navy is not requesting to reinitiate consultation at this time.

If you need additional information or have questions, please feel free to contact Mr. Alex Stone, who can be reached at (619) 545-8128 or via email at alexander.stone@navy.mil or Ms. Amy Burt at (360) 396-0924 or via email at amy.burt@navy.mil.


L. M. FOSTER
By direction

Copy to:
Chief of Naval Operations (N454)
Commander, Navy Region Northwest (N40)

B.5 NAVY CORRESPONDENCE WITH NATIONAL MARINE FISHERIES SERVICE, ALASKA REGION**DEPARTMENT OF THE NAVY**

COMMANDER
UNITED STATES PACIFIC FLEET
250 MAKALAPA DRIVE
PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:

5090

Ser N01CE1/0337

3 Apr 14

Dr. James W. Balsinger
Regional Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802-1668

SUBJECT: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF
OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS)

Dear Dr. Balsinger:

The purpose of this letter is to provide you with information concerning the status of the Navy's continuation of training activities that were previously the subject of consultations with NMFS in August of 2010. Specifically, as discussed below, there are no changes to the actual activities, the geographic parameters, or levels of activities occurring in the areas previously subject to consultation with NMFS. There have also been no changes to designated essential fish habitat (EFH) areas in the study area. As such, there is no requirement for supplemental consultation with NMFS as required by 50 C.F.R. § 600.920(1).

The Navy proposes to continue conducting military training activities in the GOA training area, and has undertaken preparation of a Supplemental EIS/OEIS to cover these activities. The Supplemental EIS/OEIS will address the continuation of Navy training activities in the GOA training area from 2016 through 2021, incorporating a new acoustic model to estimate impacts to various marine species and renew current federal permits and authorizations. The proposed training activities would continue to occur within the GOA over two 21-day periods during the April-October time frame.

The Navy previously prepared an essential fish habitat (EFH) assessment covering potential impacts of training activities on designated EFH areas within the GOA in accordance with the

Subj: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS)

Magnuson-Stevens Fisheries Conservation and Management Act of 1976, Public Law 94-265 as amended through October 11, 1996 (Magnuson-Stevens Act), section 305(b)(2) and 50 C.F.R. §600.920 and provided it to your office on August 2, 2010. The Navy's determination in the August 2010 EFH assessment was that there would be no adverse effects to EFH in the GOA from Navy training activities.

The EFH assessment of August 2010 explains that, based on the limited extent, duration, and magnitude of potential impacts from GOA Navy training activities, including vessel movements, aircraft overflights, potential fuel spills, ship discharges, explosive and non-explosive ordnance use, sonar training, and weapons firing, there would be no adverse effects to EFH. Sinking Exercises (SINKEX) proposed in the GOA would have the potential to adversely affect Habitat Areas of Particular Concern (HAPCs) within the Temporary Maritime Activities Area. For this reason, the Navy restricted SINKEX activities within designated HAPCs as a part of the Proposed Action. With this restriction, the Navy determined that training activities involving expended materials would have no adverse effects on EFH, including HAPCs, within the GOA due to the limited extent, duration, and magnitude of potential impacts.

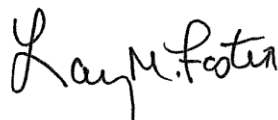
Your office responded to the EFH assessment on January 4, 2011 with a determination that the action would have an adverse effect on EFH and provided recommended conservation measures. The Navy provided a response on January 24, 2011, agreeing to implement one of the recommended measures: "Request coordination with other research activities in the GOA to avoid displacement or effects to other activities". In May of 2011, after carefully considering the operational and environmental consequences of the proposed action and information received from the public and regulatory agencies, the Navy issued a Record of Decision (ROD), implementing the Preferred Alternative, Alternative 2 of the Final EIS/OEIS.

Because the Navy's training activities, geographic parameters, and level of activities previously analyzed in the GOA Final EIS/OEIS have not changed, including the restriction of SINKEX activities within designated HAPCs, the Navy's previous analysis of impacts to EFH within the GOA training area remains adequate and does not raise the requirement of supplemental consultation pursuant to 50 C.F.R. § 600.920(1). The Navy would continue to implement the conservation recommendation of coordinating with

Subj: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS)

other research activities within the GOA to avoid displacement or effects to other activities. Therefore, the Navy is not requesting to reinitiate consultation at this time.

If you need additional information or have questions, please feel free to contact Mr. Alex Stone, who can be reached at (619) 545-8128 or via email at alexander.stone@navy.mil or Ms. Amy Burt, who can be reached at (360) 396-0924 or via email at amy.burt@navy.mil.



L. M. FOSTER
By direction

Copy to:
Chief of Naval Operations (N454)
Commander, Navy Region Northwest (N40)

B.6 NAVY CORRESPONDENCE WITH CHIEF, OFFICE OF HISTORY AND ARCHAEOLOGY, AND STATE HISTORIC PRESERVATION OFFICER**DEPARTMENT OF THE NAVY**

COMMANDER
UNITED STATES PACIFIC FLEET
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PEARL HARBOR, HAWAII 96860-3131

IN REPLY REFER TO:
5090
Ser N01CE1/0338
3 Apr 14

Ms. Judith E. Bittner
Chief, Office of History and Archaeology, and State Historic
Preservation Officer (SHPO)
550 West 7th Ave., Suite 1310
Anchorage, Alaska 99501-3565

SUBJECT: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF
OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS)

Dear Ms. Bittner:

The purpose of this letter is to provide you with information concerning the status of the Navy's continuation of military training activities that were previously the subject of consultation with your office (File number 3130-IR Navy). Specifically, as discussed below, there are no changes to the actual activities, levels of activities, or the area of potential effect (APE), which were subject to consultation with SHPO. As such, none of the criteria for re-initiation of consultation as set forth in 36 Code of Federal Regulations (C.F.R.) §800 are triggered.

The Navy proposes to continue conducting military training activities in the GOA training area, and has undertaken preparation of a Supplemental EIS/OEIS to cover these activities. The Supplemental EIS/OEIS will address the continuation of Navy training activities in the GOA training area from 2016 through 2021. The proposed training activities would continue to occur within the GOA over two 21-day periods during the April-October time frame, as described in the Final EIS/OEIS for "*Gulf of Alaska Navy Training Activities*" of March 2011.

The Navy previously prepared a determination of no adverse effects to historic properties from the proposed actions and provided it to your office on April 14, 2010. The APE for the Proposed Action was the GOA Temporary Maritime Activities Area (TMAA) and over-flight areas between the TMAA and Air Force

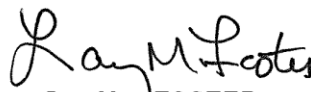
Subj: CONTINUATION OF NAVY TRAINING ACTIVITIES UNDER THE GULF OF ALASKA (GOA) NAVY TRAINING ACTIVITIES SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (EIS)/OVERSEAS EIS (OEIS)

Special Use Areas and Army training lands. The Navy's April 2010 determination of no adverse effects was based on several factors: 1) as confirmed with the 12 Alaska Native tribes in the GOA area, there are no traditionally religious and/or culturally important properties within the APE; 2) the APE for Navy proposed actions in Alaska is limited to aquatic lands located some distance from shore and potential cultural resources in the area are comprised of sunken shipwrecks; and 3) none of the nine shipwrecks that may lie within the APE have been determined to be eligible for inclusion in the National Register of Historic Places (NRHP), therefore, they are not historic property as defined in 36 C.F.R. §800.16(1)(1).

Your office responded on May 18, 2010 and concurred with the Navy's determination of no adverse effects. In May of 2011, after carefully considering the operational and environmental consequences of the proposed action and information received from the public and regulatory agencies, the Navy issued a Record of Decision (ROD), implementing the Preferred Alternative, Alternative 2 of the Final EIS/OEIS.

Because the Navy's training activities, level of activities, and the APE previously analyzed in the GOA Final EIS/OEIS have not changed, the Navy's previous determination of no adverse effects to historic properties remains unchanged. None of the circumstances articulated at 36 C.F.R. § 800.8(c)(5) are present. Therefore, the Navy is not requesting to reinitiate consultation at this time.

If you need additional information or have questions, please feel free to contact Mr. Alex Stone, who can be reached at (619) 545-8128 or via email at alexander.stone@navy.mil or Ms. Amy Burt at (360) 396-0924 or via email at amy.burt@navy.mil.



L. M. FOSTER
By direction

Copy to:
Chief of Naval Operations (N454)
Commander, Navy Region Northwest (N40)

B.7 NAVY CORRESPONDENCE WITH UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 24 2013

OFFICE OF
WATER

Donald R. Schregardus
Deputy Assistant Secretary of the Navy (Environment)
Office of the Assistant Secretary of the Navy (Energy, Installations, and Environment)
1000 Navy Pentagon
Washington, DC 20350-1000

Dear Mr. Schregardus:

The Environmental Protection Agency (EPA) has been evaluating the provisions of the Marine Protection, Research, and Sanctuaries Act (MPRSA) general permit for the Sinking Exercise (SINKEX) program conducted by the Department of the Navy (Navy). The general permit is captioned "Transport of Target Vessels" and is published at 40 C.F.R. 229.2 (Permit). SINKEX involves the targeting and sinking of obsolete Navy vessels in ocean waters for ship survivability or weapons lethality evaluation, major joint or multi-national exercises, or the evaluation of significant new multi-unit tactics or tactics and weapons combinations. The Navy's conduct of the SINKEX program is subject to the Permit.

Polychlorinated biphenyls (PCBs) were raised as an issue in the late 1980s, when they were found to be present in certain solid shipboard materials on SINKEX vessels. Potential shipboard materials that could contain PCBs include, but are not limited to, insulation, wires, felts, and rubber gaskets; a more extensive list is provided in Attachment 1. By letter dated August 2, 1999 (1999 Letter), from EPA's Robert H. Wayland III to Navy's Elsie Munsell, EPA interpreted the Permit's requirements applicable to PCBs and the manner in which the Navy would proceed with SINKEX activities under the Permit. At that time, EPA affirmed that SINKEX operations could continue under the Permit and its requirements, including those related to PCBs as described in the 1999 Letter, the terms and conditions of which were accepted by Navy the same day.

MPRSA section 104(d) directs EPA to periodically review, and if appropriate, revise permits issued under the MPRSA. EPA has recently conducted such a periodic review focused on the Permit's provisions applicable to SINKEX vessel preparation, specifically the PCB-related requirements as interpreted in the 1999 Letter. EPA also reviewed the Navy's verification and reporting of SINKEX vessel preparation activities.

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Upon review, EPA has determined that the activity authorized under the Permit for the SINKEX program conducted by Navy does not pose an unreasonable risk of injury to human health or the environment. Based on further review of available data and advancements in technology since the 1999 Letter, EPA has determined that additional clarification of the Permit's requirements will ensure the continued protection of human health and the environment, while also providing greater transparency regarding SINKEX vessel preparation and Navy's subsequent verification and reporting. Today's Determination and Agreement clarifies EPA's interpretations of the Permit, and also identifies Navy's specific agreements related to SINKEX vessel preparation, the removal of PCBs, and the documentation of each, when Navy conducts future SINKEX activities under the Permit. SINKEX operations may continue in accordance with the requirements of the Permit, including the clarifications discussed below. Today's Determination and Agreement supersedes the 1999 Letter.

Verification of Navy SINKEX Process

- 1) SINKEX vessels include, but are not limited to, destroyers, tenders, cutters, frigates, cruisers, tugs, and amphibious and transport ships. Navy agrees that SINKEX vessels will not likely, in the future, include aircraft carriers or submarines. Additionally, consistent with the assumptions that Navy employed for the 1994 "modeling study" to assess the risks associated with PCBs remaining on SINKEX vessels, Navy agrees that future SINKEX vessels will not include PCBs in amounts that exceed the worst-case estimate of 100 pounds of PCBs remaining onboard. If a vessel required for a critical weapons testing or ship survivability exercise contains more than 100 pounds of PCBs, which cannot be reduced below the 100 pounds threshold or removed without damaging the integrity of the ship, Navy agrees to apply for a special permit under the MPRSA.
- 2) Navy agrees to provide to EPA notice of SINKEX vessel selection approvals. Navy agrees to provide EPA with this information no later than 90 days after such selection approvals have been made. EPA may request additional follow-up information. Navy agrees to respond to follow-up information requests from EPA within 30 days of receipt.
- 3) Prior to each future SINKEX activity, but no later than 45 days prior to the SINKEX activity, the Navy agrees to provide electronic notification to EPA's Director of the Oceans and Coastal Protection Division the following:
 - a. SINKEX vessel name,
 - b. SINKEX vessel class,
 - c. SINKEX vessel tonnage,
 - d. location of SINKEX vessel,
 - e. estimated weight of PCBs (based on potential PCB-containing shipboard materials as listed in Attachment 1) to remain on board the SINKEX vessel,
 - f. description of efforts taken to clean the SINKEX vessel prior to a SINKEX activity, and
 - g. estimated number and types of shipboard materials that may contain PCBs (based on potential PCB-containing shipboard materials as listed in Attachment 1) to be removed and estimated weight of PCBs in these materials, if known.

- 4) Navy agrees to develop implementation procedures consistent with the requirements of the Permit and interpretation in this Determination and Agreement within one year of the dated signatures of today's Determination and Agreement, and provide an electronic copy of these procedures to the EPA's Director of the Oceans and Coastal Protection Division.

SINKEX Vessel Preparation Requirements Relating to PCB Removal under Permit

The Permit for SINKEX requires that appropriate measures be taken to remove, to the maximum extent practicable, all materials that may degrade the marine environment (40 CFR 229.2(a)(4)). The requirements described below for SINKEX vessel preparation related to PCBs are practicable and appropriate measures to remove materials that may degrade the marine environment. Therefore, SINKEX vessel preparation according to the provisions below is required by the Permit. The Permit requires that:

- 5) Before engaging in a SINKEX activity, Navy must conduct a PCB survey and sampling of each SINKEX vessel to ascertain the possible presence of PCBs in shipboard materials, as well as the presence of liquid PCBs. When preparing the PCB survey and sampling plan, refer to Attachment 1 for a list of shipboard materials that may contain PCBs onboard Navy vessels proposed for SINKEX. Based on the data provided to EPA in the past, EPA anticipates that some potential PCB containing shipboard materials will already have been removed prior to vessel preparation.

a. Before sinking a SINKEX vessel, qualified personnel at a Navy or other certified facility must take appropriate measures to remove all transformers containing 3 pounds or more of dielectric fluid and all capacitors containing 3 pounds or more of dielectric fluid and to drain and flush hydraulic equipment, heat transfer equipment, high/low pressure systems, cutting power machinery that uses cooling or cutting oil, and containers containing liquid PCBs, regardless of concentration. In addition, such personnel must make reasonable efforts to remove capacitors and transformers containing less than 3 pounds of dielectric fluid from the vessel. Reasonable efforts include, but are not necessarily limited to, the removal of such capacitors from electrical and control panels by using hand tools, such as wire or bolt cutters, screw drivers, and wrenches, as well as hand-held battery-operated power tools, such as reciprocating saws and drills or electric screwdrivers.

b. Before sinking a SINKEX vessel, qualified personnel at a Navy or other certified facility must take appropriate measures and make reasonable efforts to remove all readily detachable shipboard materials that deliberately or unintentionally contain any PCBs (see Attachment 1) capable of creating debris or contributing to chemical pollution. Reasonable efforts include, but are not necessarily limited to, use of hand tools, such as wire or bolt cutters, screw drivers, hand-held scrapers, and wrenches, as well as hand-held battery-operated power tools, such as electric screwdrivers.

c. Before the sinking of a SINKEX vessel, the Navy, however, is not required to remove shipboard materials containing PCBs that cannot be practicably removed or their removal will threaten the structural integrity of the vessels so as to impede the SINKEX (e.g., removal of materials mounted under heavy equipment). Navy may leave such shipboard materials in place. If removal of shipboard materials containing PCBs would require heat, chemical stripping, abrasive blasting, or if removal would endanger human safety or health, even when conducted with protective equipment and reasonable safety measures, Navy may leave these shipboard materials in place.

- 6) Navy shall dispose of all removed PCBs or shipboard materials containing PCBs in accordance with the Toxic Substances Control Act PCB regulations.

Pre-sink SINKEX Vessel Preparation Verification

- 7) Navy agrees to provide the opportunity to representatives of EPA to conduct a vessel walkthrough. Navy agrees to provide EPA access to the SINKEX vessel and the supporting area, as well as access to records, reports, data, schedules, or other documents related to today's Determination and Agreement, to verify completion or conduct of actions taken by Navy or agreed to by Navy in this Determination and Agreement.

Post-sink SINKEX Vessel Information to submit to EPA

- 8) Navy must report annually to EPA:
- a. documentation regarding efforts taken to clean each vessel prior to a SINKEX activity; amendments to documentation as provided in section 3 should be clearly identified;
 - b. documentation regarding estimates of the weight of PCBs (based on potential PCB-containing shipboard materials as listed in Appendix 1) remaining on board at the time of sinking; amendments to documentation as provided in section 3 of this Determination and Agreement should be clearly identified;
 - c. estimated number and types of shipboard materials that may contain PCBs (based on potential PCB-containing shipboard materials as listed in Attachment 1) removed and calculations with supporting information (including the results of the PCB sampling conducted) used to estimate the total weight of PCBs in these materials, if known; amendments to documentation as provided in section 3 of this Determination and Agreement should be clearly identified;
 - d. calculations and supporting information (including the results of the PCB sampling conducted) used to estimate the total weight of non-liquid PCBs remaining onboard the SINKEX vessel; calculations will be presented based on potential PCB-containing shipboard material as listed in Attachment 1;
 - e. location of all SINKEX vessels sunk that year, presented as the vessels' location on the bottom within 500 yards; and
 - f. water depth at which the vessel rests.

A copy of the annual report must be submitted electronically to EPA's Director of the Oceans and Coastal Protection Division by February 1 of each year, covering the previous calendar year's SINKEX activities. EPA will make these reports publically available at the conclusion of our review.

Consistent with today's Determination and Agreement, SINKEX operations may continue in compliance with the Permit, including the SINKEX vessel preparation and documentation related requirements described above. We are pleased to be working with the Navy on the importance of Permit rigor and transparency. Please feel free to contact David Redford, Chief of the Marine Pollution Control Branch (202-566-1288), if you or your staff have any questions regarding the above requirements.

Sincerely,



Benita Best-Wong
Director
Office of Wetlands, Oceans, and Watersheds

Attachment

The terms and conditions, as specified herein, have been accepted by:



1/27/2014

Donald R. Schregardus
Deputy Assistant Secretary of the Navy (Environment)

Attachment 1. Potential PCB-Containing Shipboard Materials that May Be Onboard Navy Vessels Proposed for SINKEX

Examples of Shipboard Materials that could contain solid PCBs

- Cable insulation
- Rubber and felt ventilation gaskets
- Thermal insulation material
- Double backed adhesives and tapes
- Paint (aluminized)
- Rubber products including rubber isolation mounts, rubber gaskets, foundation mounts, pipe hangers

Examples of Shipboard Materials that could contain liquid PCBs

- Oils, greases, and lubricants, including drained electrical equipment:
 - ✓ Oil used in electrical equipment such as capacitors, transformers, rectifiers, motors, anchor windlasses, hydraulic systems, and vacuum pumps
 - ✓ Cutting oil
 - ✓ Heat transfer fluids
 - ✓ Air compressor lubricants

Appendix C: Acoustic Primer

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APPENDIX C ACOUSTIC PRIMER

This section introduces basic acoustic principles and terminology describing how sound travels or “propagates” in air and water. These terms and concepts are used when analyzing potential impacts due to acoustic sources and explosives used during naval training and testing. This section briefly explains the transmission of sound; introduces some of the basic mathematical formulas used to describe the transmission of sound; and defines acoustical terms, abbreviations, and units of measurement. Because seawater is a very efficient medium for the transmission of sound, the difference between transmission of sound in water and in air are discussed. Finally, it discusses the various sources of underwater sound, including physical, biological, and anthropogenic sounds.

C.1 TERMINOLOGY/GLOSSARY

Sound is an oscillation in pressure, particle displacement, or particle velocity, as well as the auditory sensation evoked by these oscillations, although not all sound waves evoke an auditory sensation (i.e., they are outside of an animal’s hearing range) (American National Standards Institute S1.1-1994). Sound may be described in terms of both physical and subjective attributes. Physical attributes may be directly measured. Subjective (or sensory) attributes cannot be directly measured and require a listener to make a judgment about the sound. Physical attributes of a sound at a particular point are obtained by measuring pressure changes as sound waves pass. The following material provides a short description of some of the basic parameters of sound.

C.1.1 PARTICLE MOTION AND SOUND PRESSURE

Sound can be described as a vibration traveling through a medium (air or water in this analysis) in the form of a wave. Introducing a vibration from a sound source into water causes the water particles to vibrate, or oscillate about their original position, and collide with each other, transferring the vibration through the water in the form of a wave. As the sound wave travels through the water, the particles of water oscillate but do not actually travel with the wave. The result is a mechanical disturbance (i.e., the sound wave) that propagates away from the sound source.

Sound has two components: particle motion and pressure. Particle motion is quantified as the velocity, amount of displacement (i.e., amplitude), and direction of the displacement of the particles in the medium. The pressure component of sound is created when vibrations in the medium compress and then decompress the particles in the medium in an oscillating manner, resulting in fluctuations in pressure that propagate through the medium as a sound wave. The basic unit of sound pressure is the Pascal (Pa) ($1 \text{ Pa} = 1.45 \times 10^{-4}$ pounds per square inch), although the most commonly encountered unit is the micropascal (μPa) ($1 \mu\text{Pa} = 1 \times 10^{-6}$ Pascal). Animals with an eardrum or similar structure directly detect the pressure component of sound. Some marine fish also have specializations to detect pressure changes. Certain animals (e.g., most invertebrates and many marine fish) do not have anatomical structures that enable them to detect the pressure component of sound and are only sensitive to the particle motion component of sound. The particle motion component of sound that these animals can detect degrades more rapidly with distance from the sound source than the pressure component, such that particle motion is most detectable by these animals near the sound source. This difference in acoustic energy sensing mechanisms limits the range at which these animals can detect most sound sources analyzed in this document.

C.1.2 FREQUENCY

The number of oscillations or waves per second is called the frequency of the sound, and the metric is Hertz (Hz). One Hz is equal to one oscillation per second, and 1 kilohertz (kHz) is equal to 1,000 oscillations per second. The inverse of the frequency is the period or duration of one acoustic wave.

Frequency is the physical attribute most closely associated with the subjective attribute “pitch”; the higher the frequency, the higher the pitch. Human hearing generally spans the frequency range from 20 Hz to 20 kHz. The pitch based on these frequencies is subjectively “low” (at 20 Hz) or “high” (at 20 kHz).

Pure tones have a constant, single frequency. Complex tones contain multiple, discrete frequencies, rather than a single frequency. Broadband sounds are spread across many frequencies. The frequency range of a sound is called its bandwidth. A harmonic of a sound at a particular frequency is a multiple of that frequency (e.g., harmonic frequencies of a 2 kHz tone are 4 kHz, 6 kHz, 8 kHz, etc.). A source operating at a nominal frequency may emit several harmonic frequencies at much lower sound pressure levels.

In this document, sounds are generally described as either low- (less than 1 kHz), mid- (1 kHz–10 kHz), high- (greater than 10 kHz–100 kHz), or very high- (greater than 100 kHz) frequency. Hearing ranges of marine animals (e.g., fish, birds, and marine mammals) are quite varied and are species-dependent. For example, some fish can hear sounds below 100 Hz and some species of marine mammals have hearing capabilities that extend above 100 kHz. Discussions of noise and potential impacts must therefore focus not only on the sound pressure, but the composite frequency of the noise and the species considered.

C.1.3 DUTY CYCLE

Duty cycle describes the portion of time that a sound source actually generates sound. It is defined as the percentage of the time during which a sound is generated over a total operational period. For example, if a sound navigation and ranging (sonar) source produces a 10-second ping once every 100 seconds, the duty cycle is 10 percent. Duty cycles vary among different acoustic sources; in general, a low duty cycle is 20 percent or less and a high duty cycle is 80 percent or higher.

C.1.4 LOUDNESS

Sound levels are normally expressed in decibels (dB), a commonly misunderstood term. Although the term decibel always means the same thing, decibels may be calculated in several ways, and the explanations of each can quickly become both highly technical and confusing.

Because mammalian ears can detect large pressure ranges and humans judge the relative loudness of sounds by the ratio of the sound pressures (a logarithmic behavior), sound pressure level is described by taking the logarithm of the ratio of the sound pressure to a reference pressure (American National Standards Institute 1994). Use of a logarithmic scale compresses the wide range of pressure values into a more usable numerical scale. (The softest audible sound has a power of about 0.000000000001 watt/square meter [m^2] and the threshold of pain is around 1 watt/ m^2 . With the advantage of the logarithmic scale, this ratio is efficiently described as 120 dB.)

On the decibel scale, the smallest audible sound (near total silence) is 0 dB. A sound 10 times more powerful is 10 dB. A sound 100 times more powerful than near total silence is 20 dB. A sound

1,000 times more powerful than near total silence is 30 dB. Table C-1 compares common sounds to their approximate decibel rating.

Table C-1: Common In-Air Sounds and their Approximate Decibel Ratings

Source	Source Level (dB re 20 μ Pa at 1 m)
Near total silence	0
Whisper	15
Normal conversation	60
Lawnmower	90
Car horn	110
Rock concert	120
Gunshot	140 (peak)

Note: dB re 20 μ Pa at 1 m = decibels referenced to 20 micropascals at 1 meter

C.2 PREDICTING HOW SOUND TRAVELS

Sounds are produced throughout a wide range of frequencies, including frequencies beyond the audible range of a given receptor. Most sounds heard in the environment do not consist of a single frequency, but rather a broad band of frequencies differing in sound level. The intensities of each frequency add to generate perceptible sound.

The speed of sound is not affected by the intensity, amplitude, or frequency of the sound, but rather depends wholly on characteristics (e.g., the density and the compressibility) of the medium through which it is passing. Sound travels faster through a medium that is harder to compress. For example, water is more difficult to compress than air, and sound travels approximately 1,100 feet per second (ft./s [340 meters per second {m}/s]) in air and 4,900 ft./s (1,500 m/s) in seawater.

The speed of sound in air is primarily influenced by temperature, relative humidity, and pressure, because these factors affect the density and compressibility of air. Generally, the speed of sound in air increases as air temperature increases. Sound travels faster in seawater than in air, because seawater is more difficult to compress than air, making seawater a more efficient medium for the transmission of sound. As with air, the speed of sound through seawater increases with increasing temperature, and to a lesser degree, with increasing pressure and salinity.

In the simple case of sound propagating from a point source without obstruction or reflection, the sound waves take on the shape of an expanding sphere. As spherical propagation continues, the sound energy is distributed over an ever-larger area following the inverse square law: the intensity of a sound wave decreases inversely with the square of the distance between the source and the receptor. For example, doubling the distance between the receptor and a sound source results in a reduction in the intensity of the sound of one-fourth of its initial value; tripling the distance results in one-ninth of the original intensity, and so on (Figure C-1). As expected, sound intensity drops at increasing distance from the point source. In spherical propagation, sound pressure levels drop an average of 6 dB for every doubling of distance from the source. Potential impacts on sensitive receptors, then, are directly related to the distance from the receptor to the noise source, and the intensity of the noise source itself.

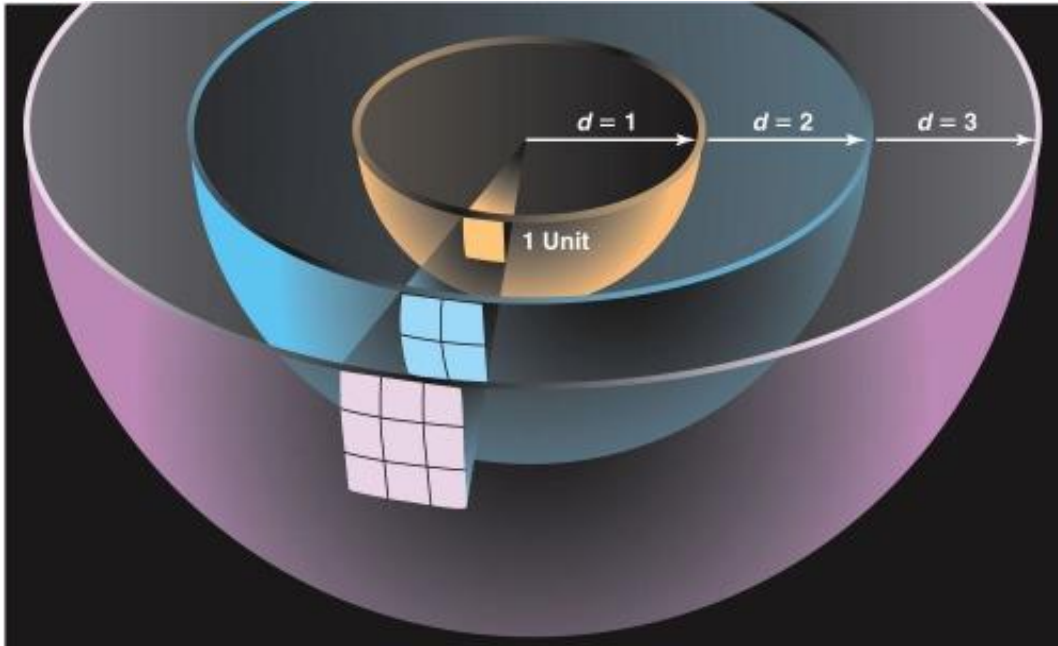


Figure C-1: Graphical Representation of the Inverse-Square Relationship in Spherical Spreading

While the concept of a sound wave traveling from its source to a receptor is relatively simple, sound propagation is quite complex because of the simultaneous presence of numerous sound waves of different frequencies and other phenomena such as reflections of sound waves and subsequent constructive (additive) or destructive (cancelling) interferences between reflected and incident waves. Other factors such as refraction, diffraction, bottom types, and surface conditions also affect sound propagation. While simple examples are provided here for illustration, the Navy Acoustic Effects Model used to quantify acoustic exposures to marine mammals and sea turtles takes into account the influence of multiple factors to predict acoustic propagation (Marine Species Modeling Team 2012).

C.2.1 SOUND ATTENUATION AND TRANSMISSION LOSS

As a sound wave passes through a medium, the intensity decreases with distance from the sound source. This phenomenon is known as attenuation or propagation loss. Sound attenuation may be described in terms of transmission loss (TL). The units of transmission loss are dB. The transmission loss is used to relate the source level (SL), defined as the sound pressure level produced by a sound source at a distance of 3.3 feet (ft.) (1 meter [m]), and the received level (RL) at a particular location, as follows:

$$RL = SL - TL$$

The main contributors to sound attenuation are as follows:

- Geometrical spreading of the sound wave as it propagates away from the source
- Sound absorption (conversion of sound energy into heat)
- Scattering, diffraction, multipath interference, boundary effects
- Other nongeometrical effects (Urick 1983)

C.2.2 SPREADING LOSS

Spreading loss is a geometrical effect representing regular weakening of a sound wave as it spreads out from a source (Campbell et al. 1988). Spreading describes the reduction in sound pressure caused by the increase in surface area as the distance from a sound source increases. Spherical and cylindrical spreading are common types of spreading loss.

As described before, a point sound source in a homogeneous medium without boundaries will radiate spherical waves—the acoustic energy spreads out from the source in the form of a spherical shell. As the distance from the source increases, the shell surface area increases. If the sound power is fixed, the sound intensity must decrease with distance from the source (intensity is power per unit area). The surface area of a sphere is $4\pi r^2$, where r is the sphere radius, so the change in intensity is proportional to the radius squared. This relationship is known as the spherical spreading law. The transmission loss for spherical spreading is:

$$TL = 20\log_{10}r$$

where r is the distance from the source. This is equivalent to a 6 dB reduction in sound pressure level for each doubling of distance from the sound source. For example, calculated transmission loss for spherical spreading is 40 dB at 328.1 ft. (100 m) and 46 dB at 656.2 ft. (200 m).

In cylindrical spreading, spherical waves expanding from the source are constrained by the water surface and the seafloor and take on a cylindrical shape. In this case the sound wave expands in the shape of a cylinder rather than a sphere and the transmission loss is:

$$TL = 10\log_{10}r$$

Cylindrical spreading is an approximation to wave propagation in a water-filled channel with horizontal dimensions much larger than the depth. Cylindrical spreading predicts a 3 dB reduction in sound pressure level for each doubling of distance from the source. For example, calculated transmission loss for cylindrical spreading is 20 dB at 328.1 ft. (100 m) and 23 dB at 656.2 ft. (200 m).

C.2.2.1 Reflection and Refraction

When a sound wave propagating in a medium encounters a second medium with a different density (e.g., the air-water boundary) part of the incident sound will be reflected back into the first medium and part will be transmitted into the second medium (Kinsler et al. 1982). The propagation direction will change as the sound wave enters the second medium; this phenomenon is called refraction. Refraction may also occur within a single medium if the properties of the medium change enough to cause a variation in the sound speed.

Refraction of sound resulting from spatial variations in the sound speed is one of the most important phenomena that affect sound propagation in water (Urlick 1983). The sound speed in the ocean primarily depends on hydrostatic pressure (i.e., depth) and temperature. Sound speed increases with both hydrostatic pressure and temperature. In seawater, temperature has the most important effect on sound speed for depths less than about 984.2 ft. (300 m). Below 4,921.3 ft. (1,500 m), the hydrostatic pressure is the dominant factor because the water temperature is relatively constant. The variation of sound speed with depth in the ocean is called a sound speed profile.

Although the actual variations in sound speed are small, the existence of sound speed gradients in the ocean has an enormous effect on the propagation of sound in the ocean. If one pictures sound as rays emanating from an underwater source, the propagation of these rays changes as a function of the sound speed profile in the water column. Specifically, the directions of the rays bend toward regions of slower sound speed. This phenomenon creates ducts in which sound becomes “trapped,” allowing it to propagate with high efficiency for large distances within certain depth boundaries. During winter months, the reduced sound speed at the surface due to cooling can create a surface duct that efficiently propagates sound such as shipping noise. The deep sound channel or Sound Frequency and Ranging channel is another duct that exists where sound speeds are lowest in the water column (2,000–4,000 ft. [600–1,200 m] depth at the mid-latitudes). Intense low-frequency underwater sounds, such as explosions, can be detected halfway around the world from their source via the Sound Frequency and Ranging channel (Baggeroer and Munk 1992).

C.2.2.2 Diffraction, Scattering, and Reverberation

Sound waves experience diffraction in much the same manner as light waves. Diffraction may be thought of as the bending of a sound wave around an obstacle. Common examples include sound heard from a source around the corner of a building and sound propagating through a small gap in an otherwise closed door or window. An obstacle or inhomogeneity (e.g., smoke, suspended particles, or gas bubbles) in the path of a sound wave causes scattering if secondary sound spreads out from it in a variety of directions (Pierce 1989). Scattering is similar to diffraction. Normally diffraction is used to describe sound bending or scattering from a single object, and scattering is used when there are multiple objects. Reverberation, or echo, refers to the prolongation of a sound that occurs when sound waves in an enclosed space are repeatedly reflected from the boundaries defining the space, even after the source has stopped emitting.

C.2.2.3 Multipath Propagation

In multipath propagation, sound may not only travel a direct path from a source to a receiver, but also be reflected from the surface or bottom multiple times before reaching the receiver (Urick 1983). At some distances, the reflected wave will be in phase with the direct wave (their waveforms add together) and at other distances the two waves will be out of phase (their waveforms cancel). The existence of multiple sound paths, or rays, arriving at a single point can result in multipath interference, a condition that permits the addition and cancellation between sound waves resulting in the fluctuation of sound levels over short distances. A special case of multipath propagation loss is called the Lloyd mirror effect, where the sound field near the water's surface reaches a minimum because of the destructive interference (cancellation) between the direct sound wave and the sound wave being reflected from the surface. This can cause the sound level to decrease dramatically within the top few meters of the water column.

C.2.2.4 Surface and Bottom Effects

Because the sea surface reflects and scatters sound, it has a major effect on the propagation of underwater sound in applications where either the source or receiver is at a shallow depth (Urick 1983). If the sea surface is smooth, the reflected sound pressure is nearly equal to the incident sound pressure; however, if the sea surface is rough, the amplitude of the reflected sound wave will be reduced.

The sea bottom is also a reflecting and scattering surface, similar to the sea surface. Sound interaction with the sea bottom is more complex, however, primarily because the acoustic properties of the sea bottom are more variable and the bottom is often layered into regions of differing density. For a hard

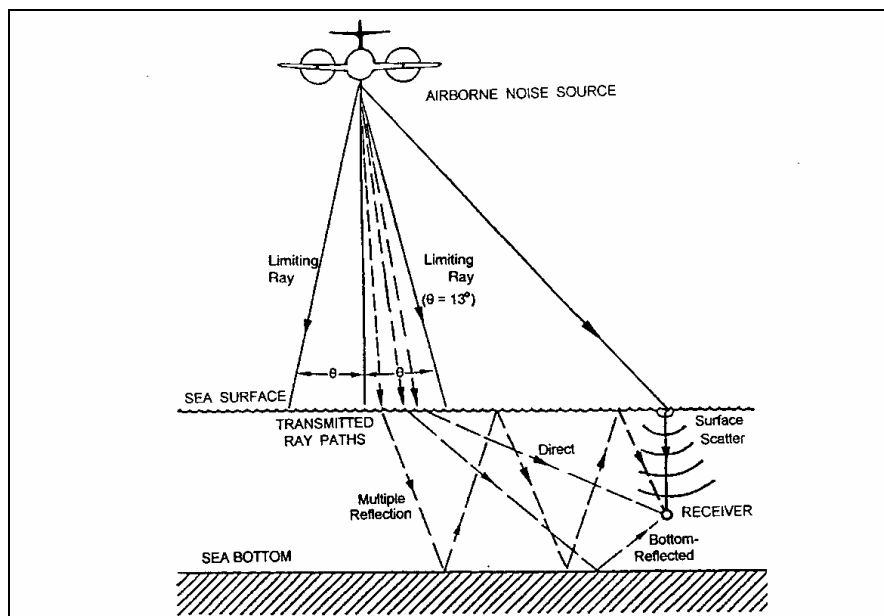
bottom such as rock, the reflected wave will be approximately in phase with the incident wave. Thus, near the ocean bottom, the incident and reflected sound pressures may add together, resulting in an increased sound pressure near the sea bottom.

C.2.2.5 Air-Water Interface

Sound from aerial sources such as aircraft, muzzle blasts, and projectile sonic booms, can be transmitted into the water. The most studied of these sources are fixed-wing aircraft and helicopters, which create noise with most energy below 500 Hz. Noise levels in water are highest at the surface and are highly dependent on the altitude of the aircraft and the angle at which the aerial sound encounters the ocean surface. Transmission of the sound once it is in the water is identical to any other sound as described in the section above.

Transmission of sound from a moving airborne source to a receptor underwater is influenced by numerous factors and has been addressed by Young (1973), Urick (1983), Richardson et al. (1995), Eller and Cavanagh (2000), Laney and Cavanagh (2000), and others. Sound is transmitted from an airborne source to a receptor underwater by four principal means: (1) a direct path, refracted upon passing through the air-water interface; (2) direct-refracted paths reflected from the bottom in shallow water; (3) evanescent transmission in which sound travels laterally close to the water surface; and (4) scattering from interface roughness due to wave motion.

Airborne sound is refracted upon transmission into water because sound waves move faster through water than through air (a ratio of about 4:1). When a sound wave hits the surface of the water at angles greater than 13 degrees from vertical, all of the sound is reflected and no sound enters the water. As a result, most of the acoustic energy transmitted into the water from an aircraft arrives through a relatively narrow cone extending vertically downward from the aircraft (Figure C-2). The intersection of this cone with the surface traces a “footprint” directly beneath the flight path, with the width of the footprint being a function of aircraft altitude. Sound may enter the water outside of this cone due to surface scattering and as evanescent waves, which travel laterally near the water surface.



Source: Richardson et al. 1995

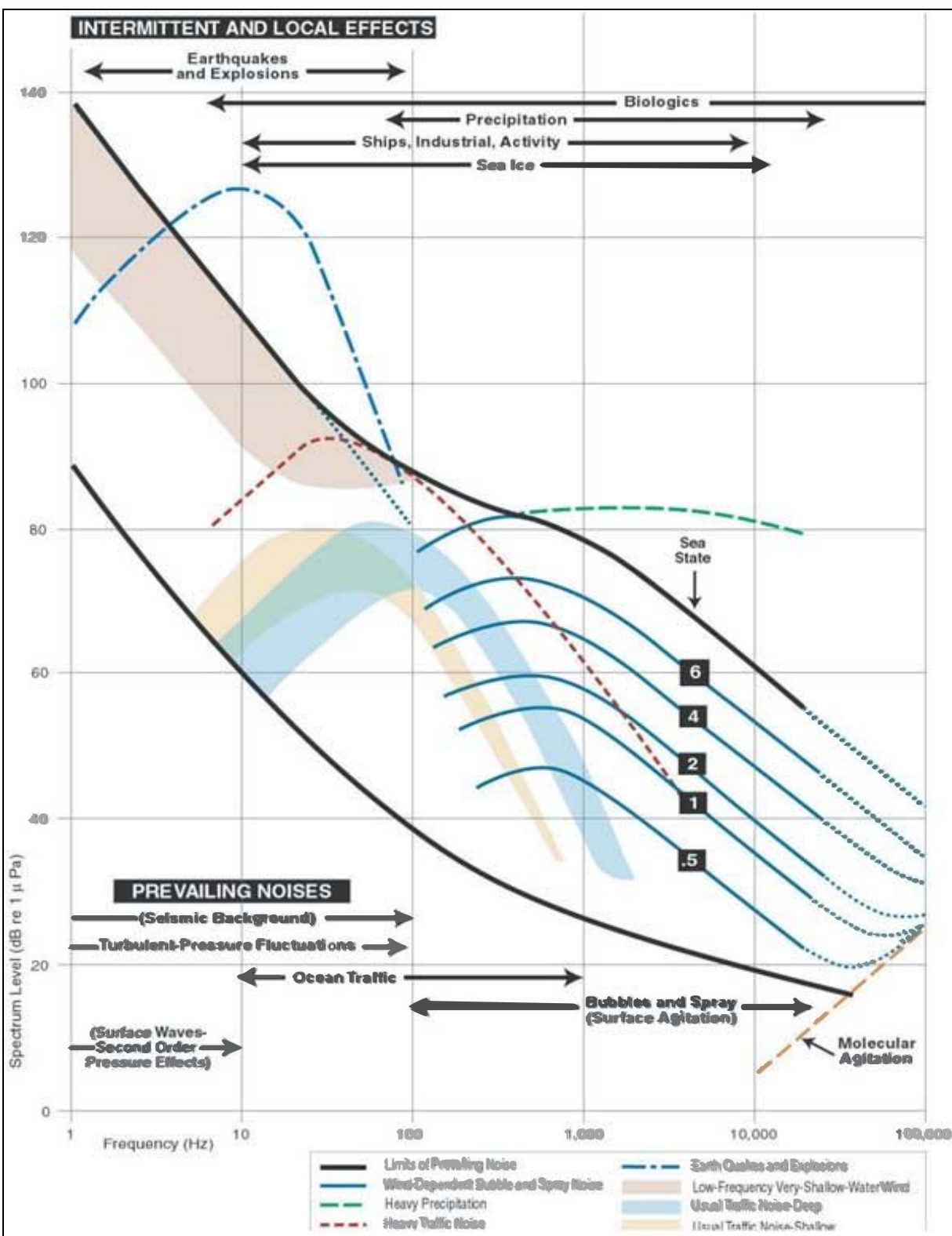
Figure C-2: Characteristics of Sound Transmission through the Air-Water Interface

The sound pressure field is actually doubled (+6 dB) at the air-to-water interface because of the large difference in the acoustic properties of water and air. For example, an airborne sound with a sound pressure level of 100 dB re 1 μ Pa at the sea surface becomes 106 dB re 1 μ Pa just below the surface. The pressure and sound levels then decrease with increasing distance as they would for any other in-water noise.

C.3 SOURCES OF SOUND

Ambient noise is the collection of ever-present sounds of both natural and human-generated origin. Ambient noise in the ocean comprises sound generated by natural physical, natural biological, and anthropogenic (human-generated) sources (Figure C-3). Preindustrial physical and biological noise sources in marine environments were often not high enough to interfere with the hearing of marine animals (Richardson et al. 1995). However, the increase in anthropogenic noise sources in recent times is a concern.

Except for sounds generated by some marine species, most natural ocean sound is broadband (composed of a spectrum of numerous frequencies). Virtually the entire frequency spectrum is represented in ambient sound sources as shown in Figure C-3 (National Research Council 2003, adapted from Wenz 1962). Earthquakes and explosions produce sound signals from 1 Hz to 100 Hz; marine species can produce signals from 100 Hz to more than 10,000 Hz; and commercial shipping, industrial activities, and naval ships have signals between 10 Hz and 10,000 Hz (Figure C-3). Spray and bubbles associated with breaking waves are the major contributions to the ambient sound in the 50–100,000 Hz range. At frequencies greater than 100,000 Hz, “thermal noise” caused by the random motion of water molecules is the primary source. Natural sources, especially from wave and tidal action, can cause coastal environments to have particularly high ambient sound levels.



Source: National Research Council (2003), adapted from Wenz (1962)

Figure C-3: Oceanic Ambient Noise Levels from 1 Hertz to 100,000 Hertz, Including Frequency Ranges for Prevalent Noise Sources

C.3.1 UNDERWATER SOUNDS

Physical, biological, and anthropogenic sounds all contribute to the ambient underwater noise environment. Example source levels for various underwater sounds are shown in Table C-2. Many naturally occurring sounds have source levels similar to anthropogenic sounds.

Table C-2: Source Levels of Common Underwater Sounds

Source	Source Level (dB re 1 μ Pa at 1 m)
Ice breaker ship	193 ¹
Large tanker	186 ¹
Seismic airgun array (32 guns)	259 (peak) ¹
Dolphin whistles	125–173 ¹
Dolphin clicks	194–219 ²
Humpback whale song	144–174 ³
Snapping shrimp	183–189 ⁴
Sperm whale click	236 ⁵
Naval mid-frequency active sonar (SQS-53)	235
Lightning strike	260 ⁶
Seafloor volcanic eruption	255 ⁷

¹ Richardson et al. 1995, ² Rasmussen et al. 2002, ³ Payne and Payne 1985; Thompson et al. 1979,

⁴ Au and Banks 1998, ⁵ Levenson 1974; Watkins 1980, ⁶ Hill 1985, ⁷ Northrop 1974

Note: dB re 1 μ Pa at 1 m = decibels referenced to 1 micropascal at 1 meter

C.3.2 PHYSICAL SOURCES OF UNDERWATER SOUND

Physical processes that create sound in the ocean include rain, wind, waves, sea ice, lightning strikes at the sea surface, undersea earthquakes, and eruptions from undersea volcanoes. Generally, these sound sources contribute to a rise in the ambient sound levels on an intermittent basis. Underwater sound from rain typically is between 1 and 10 kHz. Wind produces frequencies between 100 Hz and 30 kHz, while wave-generated sound is a significant contributor in the infrasonic range (i.e., 1–20 Hz) (Simmonds et al. 2003). Seismic activity results in the production of low-frequency sounds that can be heard for great distances.

C.3.3 BIOLOGICAL SOURCES OF UNDERWATER SOUND

Marine animals use sound both passively and actively to navigate, communicate, locate food, reproduce, and detect predators and other important environmental cues. Sounds produced by marine species can increase ambient sound levels by nearly 20 dB over the range of a few kHz (e.g., crustaceans and fish) or over the range of tens to hundreds of kHz (e.g., dolphin clicks and whistles). For example, reproductive activity, including courtship and spawning, accounts for the majority of sounds produced by fish. During the spawning season, croakers (family Sciaenidae) vocalize for many hours and often dominate the acoustic environment (Ramcharitar et al. 2006). Other species, including baleen whales (Mysticetes) and toothed whales and dolphins (Odontocetes) produce a wide variety of sounds in many different behavioral contexts. These sounds can include tonal calls, clicks, whistles, and pulsed sounds, which cover a wide range of frequencies depending on the species and sound type produced. For instance, bottlenose dolphin clicks and whistles have a dominant frequency range of 110–130 kHz and 3.5–14.5 kHz, respectively (Au 1993). In addition, sperm whale clicks range in frequency from 0.1 kHz to 30 kHz, with dominant energy in two bands (2–4 kHz and 10–16 kHz) (Richardson et al. 1995). Blue and

fin whales produce low-frequency moans at frequencies of 10–25 Hz. Colonies of snapping shrimp can generate sounds at frequencies of 2–15 kHz.

C.3.4 ANTHROPOGENIC SOURCES OF UNDERWATER SOUND

In addition to sounds generated during Navy training and testing, other non-Navy activities also introduce similar types of anthropogenic (human-generated) sound into the ocean from a number of sources, including non-military vessel traffic, industrial operations onshore (pile driving), seismic profiling for oil exploration, oil drilling, underwater explosions, and in-air sources that can enter the water. Noise levels resulting from human activities in coastal and offshore areas are increasing; however, there are few historical records of ambient noise data to substantiate the level of increase. Some studies have documented increases in ambient noise off California over the last several decades (Andrew et al. 2002, McDonald et al. 2006, 2008).

Commercial shipping is the most widespread source of human-made, low-frequency (0–1,000 Hz) noise in the oceans and may contribute more than 75 percent of all human-made sound in the sea (International Council for the Exploration of the Sea 2005), particularly in coastal areas and near shipping lanes (see Figure 3.12-1 for commercial shipping lanes in the Study Area). There are approximately 20,000 large commercial vessels at sea worldwide at any given time. Because low-frequency sounds carry for long distances, a large vessel emitting sound at 6.8 Hz can be detected 75–250 nautical miles away (Polefka 2004). The dominant component of low-frequency ambient noise is commercial tankers, which contribute twice as much noise as cargo vessels and at least 100 times as much noise as research vessels (Hatch et al. 2008). Most of these sounds are produced as a result of propeller cavitation (when air spaces created by the motion of propellers collapse) (Southall et al. 2007).

High-intensity, low-frequency impulsive sounds are emitted during seismic surveys to determine the structure and composition of the geological formations below the sea bed to identify potential hydrocarbon reservoirs (i.e., oil and gas exploration) (Simmonds et al. 2003).

C.3.5 AERIAL SOUNDS

Aerial sounds may be produced by physical, biological, or anthropogenic sources. These sounds may be transmitted across the air-water interface as well. Of the physical sources of sound, surf noise is one of the most dominant. The highest sound levels from surf are typically low frequency (below 100 Hz). Biological sources of sound can be a significant contribution to the noise level in coastal environments such as areas occupied by highly vocal sea lions. Anthropogenic noise sources like ships, industrial sites, cars, and airplanes are also potential contributors.

C.3.6 NAVY SOURCES OF SOUND IN THE WATER

Many of the Navy's proposed activities may introduce sound into the ocean. The type of sound will determine how that source is measured and evaluated for potential impacts to the environment. All of the Navy-produced sounds may be categorized as impulsive or non-impulsive. Impulsive sounds feature a very rapid increase to high pressures, followed by a rapid return to the static pressure. Impulsive sounds are often produced by processes involving a rapid release of energy or mechanical impacts (Hamernik and Hsueh 1991). Non-impulsive sounds lack the rapid rise time and can have longer durations than impulsive sounds. Non-impulsive sound can be continuous or intermittent. See Figure C-4 for examples of impulsive and non-impulsive underwater sound sources.

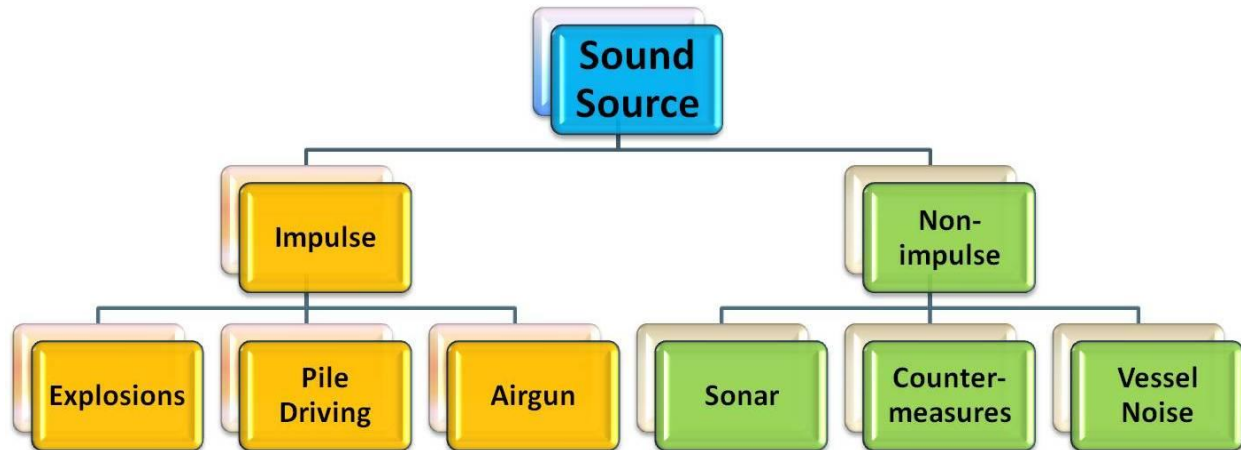


Figure C-4: Examples of Impulsive and Non-impulsive Sound Sources

C.4 SOUND METRICS

C.4.1 PRESSURE

Various sound pressure metrics are illustrated in Figure C-5 for (a) a non-impulsive, and (b) an impulsive sound. Sound pressure varies differently with time for non-impulsive and impulsive sounds. As shown in Figure C-5, the non-impulsive sound has a relatively gradual rise in pressure from static pressure (the ambient pressure without the added sound), while the impulsive sound has a near-instantaneous rise to a higher peak pressure. The peak pressure shown on both illustrations is the maximum absolute value of the instantaneous sound pressure during a specified time interval, which accounts for the values of peak pressures below the static (ambient) pressure (American National Standards Institute 1994). Peak-to-peak pressure is the difference between the maximum and minimum sound pressures. The root-mean-squared sound pressure is often used to describe the average pressure level of sounds. As the name suggests, this method takes the square root of the average squared sound pressure values over a time interval. The duration of this time interval can have a strong effect on the measured root-mean-squared sound pressure for a given sound, especially where pressure levels vary significantly, as during an impulsive. If the analysis duration includes a significant portion of the waveform after the impulsive has ended and the pressure has returned to near static, the root-mean-squared level would be relatively low. If the analysis duration includes the highest pressures of the impulsive and excludes the portion of the waveform after the impulsive has terminated, the root-mean-squared level would be comparatively high. For this reason, it is important to specify the duration used to calculate the root-mean-squared pressure for impulsive sounds.

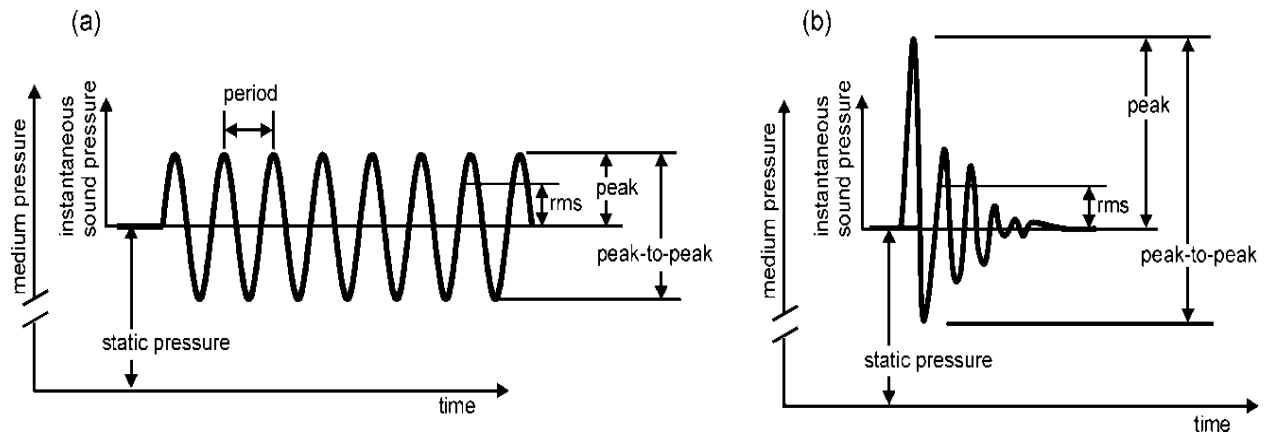


Figure C-5: Various Sound Pressure Metrics for a Hypothetical (a) Pure Tone (Non-Impulsive) and (b) Impulsive Sound

C.4.2 SOUND PRESSURE LEVEL

Because mammalian ears can detect large pressure ranges and humans judge the relative loudness of sounds by the ratio of the sound pressures (a logarithmic behavior), sound pressure level is described by taking the logarithm of the ratio of the sound pressure to a reference pressure (American National Standards Institute 1994). Use of a logarithmic scale compresses the wide range of pressure values into a more usable numerical scale.

Sound levels are normally expressed in dB. To express a pressure X in decibels using a reference pressure X_{ref} , the equation is:

$$20 \log_{10} \left(\frac{X}{X_{ref}} \right)$$

The pressure X is the root-mean-square value of the pressure. When a value is presented in decibels, it is important to specify the value and units of the reference pressure. Normally the decibel value is given, followed by the text “re,” meaning “with reference to,” and the value and unit of the reference pressure. The standard reference pressures are 1 μPa for water and 20 μPa for air (American National Standards Institute 1994). It is important to note that, because of the difference in reference units between air and water, the same absolute pressures would result in different dB values for each medium.

C.4.3 SOUND EXPOSURE LEVEL

When analyzing effects on marine animals from multiple moderate-level sounds, it is necessary to have a metric that quantifies cumulative exposure(s) (American National Standards Institute 1994). The Sound Exposure Level (SEL) can be thought of as a composite metric that represents both the intensity of a sound and its duration. Individual time-varying noise events (e.g., a series of sonar pings) have two main characteristics: (1) a sound level that changes throughout the event and (2) a period of time during which the source is exposed to the sound. Cumulative SEL provides a measure of the net impact of the

entire acoustic event, but it does not directly represent the sound level heard at any given time. Sound exposure level is determined by calculating the decibel level of the cumulative sum-of-squared pressures over the duration of a sound, with units of dB re 1 micropascal squared seconds ($\mu\text{Pa}^2\text{-s}$) for sounds in water.

Some rules of thumb for SEL are as follows:

- The numeric value of SEL is equal to the sound pressure level of a one-second sound that has the same total energy as the exposure event. If the sound duration is one second, sound pressure level and SEL have the same numeric value (but not the same reference quantities). For example, a one-second sound with a sound pressure level of 100 dB re 1 μPa has a SEL of 100 dB re 1 $\mu\text{Pa}^2\text{-s}$.
- If the sound duration is constant but the sound pressure level changes, SEL will change by the same number of decibels as the sound pressure level.
- If the sound pressure level is held constant and the duration (T) changes, SEL will change as a function of $10\log_{10}(T)$:
 - $10\log_{10}(10) = 10$, so increasing duration by a factor of 10 raises SEL by 10 dB.
 - $10\log_{10}(0.1) = -10$, so decreasing duration by a factor of 10 lowers SEL by 10 dB.
 - Since $10\log_{10}(2) \approx 3$, so doubling the duration increases SEL by 3 dB.
 - $10\log_{10}(1/2) \approx -3$, so halving the duration lowers SEL by 3 dB.

Figure C-6 illustrates the summation of energy for a succession of sonar pings. In this hypothetical case, each ping has the same duration and sound pressure level. The SEL at a particular location from each individual ping is 100 dB re 1 $\mu\text{Pa}^2\text{-s}$ (red circles). The upper, blue curve shows the running total or cumulative SEL.

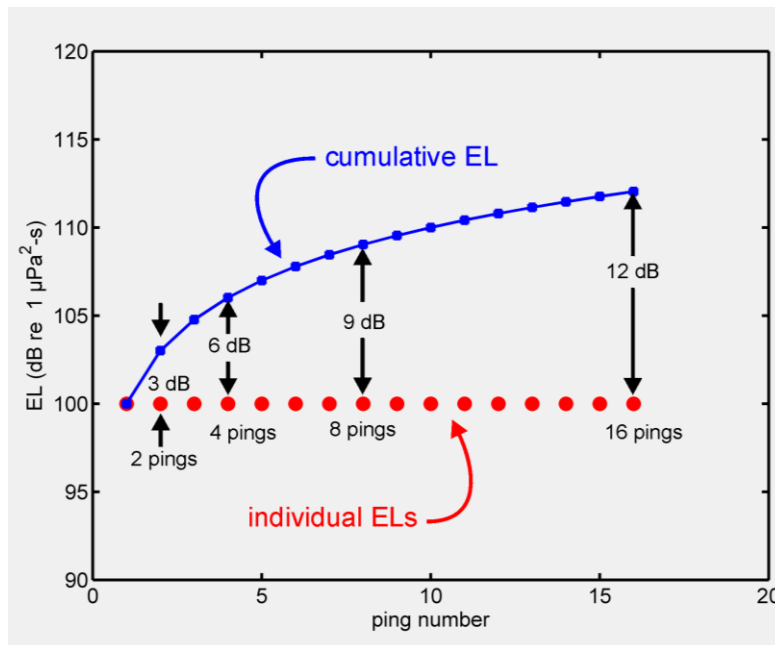


Figure C-6: Summation of Acoustic Energy (Cumulative Exposure Level, or Sound Exposure Level) from a Hypothetical, Intermittently Pinging, Stationary Sound Source (EL = Exposure Level)

After the first ping, the cumulative SEL is 100 dB re 1 $\mu\text{Pa}^2\text{-s}$. Since each ping has the same duration and sound pressure level, receiving two pings is the same as receiving a single ping with twice the duration. The cumulative SEL from two pings is therefore 103 dB re 1 $\mu\text{Pa}^2\text{-s}$. The cumulative SEL from four pings is 3 dB higher than the cumulative SEL from two pings, or 106 dB re 1 $\mu\text{Pa}^2\text{-s}$. Each doubling of the number of pings increases the cumulative SEL by 3 dB.

Figure C-7 shows a more realistic example where the individual pings do not have the same sound pressure level or SEL. These data were recorded from a stationary hydrophone as a sound source approached, passed, and moved away from the hydrophone. As the source approached the hydrophone, the received sound pressure level from each ping increased, causing the SEL of each ping to increase. After the source passed the hydrophone, the received sound pressure level and SEL from each ping decreased as the source moved farther away (downward trend of red line), although the cumulative SEL increased with each additional ping received (slight upward trend of blue line). The main contributions are from those pings with the highest individual SELs. Individual pings with SELs 10 dB or more below the ping with the highest level contribute little (less than 0.5 dB) to the total cumulative SEL. This is shown in Figure C-7 where only a small error is introduced by summing the energy from the eight individual pings with SEL greater than 185 dB re 1 $\mu\text{Pa}^2\text{-s}$ (black line), as opposed to including all pings (blue line).

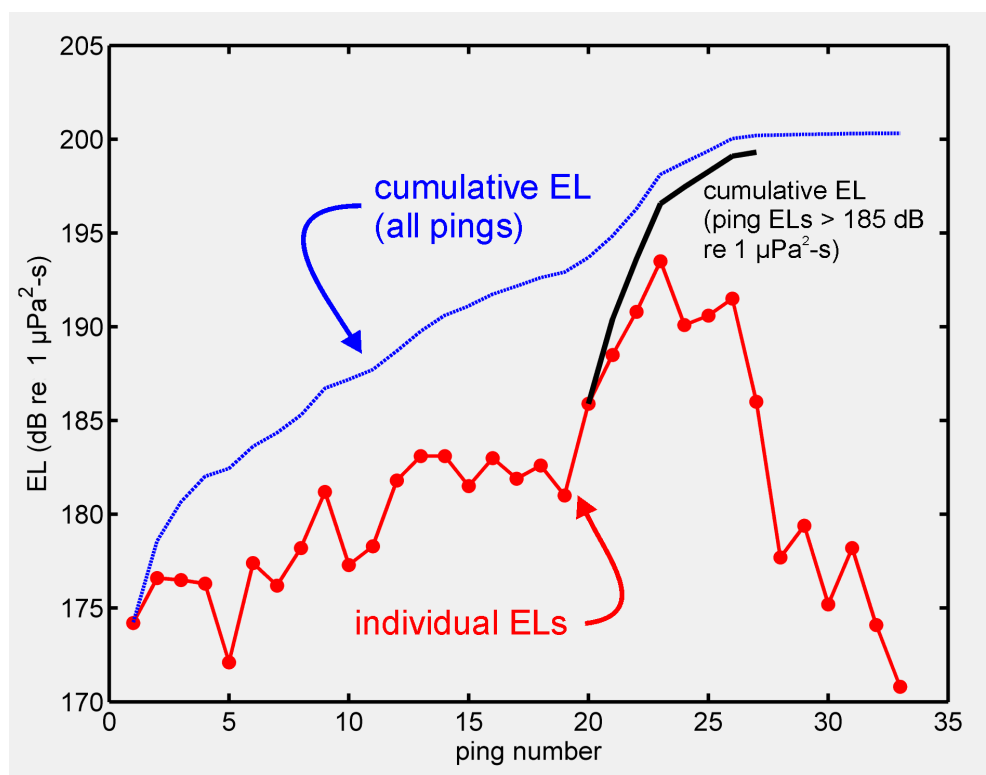


Figure C-7: Cumulative Sound Exposure Level under Realistic Conditions with a Moving, Intermittently Pinging Sound Source (Cumulative Exposure Level = Sound Exposure Level)

Impulsive (Pascal-seconds)

Impulsive is a metric used to describe the pressure and time component of an intense shock wave from an explosive source. The impulsive calculation takes into account the magnitude and duration of the initial peak positive pressure, which is the portion of an impulsive sound most likely to be associated

with damage. Specifically, impulsive is the time integral of the initial peak positive pressure with units of Pascal-seconds. The peak positive pressure for an impulsive sound is shown in Figure C-5 as the first and largest pressure peak above static pressure. This metric is used to assess potential injurious effects from explosives.

C.4.4 AUDITORY WEIGHTING FUNCTIONS

Animals, including humans, are not equally sensitive to sounds across their entire hearing range. The subjective judgment of a sound level by a receiver such as an animal is known as loudness. Two sounds received at the same sound pressure level (an objective measurement), but at two different frequencies, may be perceived by an animal at two different loudness levels depending on its hearing sensitivity (lowest sound pressure level at which a sound is first audible) at the two different frequencies. Furthermore, two different species may judge the relative loudness of the two sounds differently.

Auditory weighting functions are a method common in human hearing risk analysis to account for differences in hearing sensitivity at various frequencies. This concept can be applied to other species as well. When used in analyzing the impacts of sound on an animal, auditory weighting functions adjust received sound levels to emphasize ranges of best hearing and de-emphasize ranges of less or no sensitivity. A-weighted sound levels, often seen in units of “dBA” (A-weighted decibels), are frequency-weighted to account for the sensitivity of the human ear to a barely audible sound. Many measurements of sound in air appear as A-weighted decibels in the literature because the intent of the authors is often to assess noise impacts on humans.

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Appendix D: Public Participation

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There are no figures in this section.

APPENDIX D PUBLIC PARTICIPATION

This appendix includes information about the public's participation in the development of the Gulf of Alaska (GOA) Navy Training Activities Supplemental Environmental Impact Statement (EIS)/Overseas EIS (Supplemental EIS/OEIS).

D.1 PROJECT WEBSITE

A public website was established specifically for this project (<http://www.GOAEIS.com/>). This website address was published in the *Notice of Intent to Prepare a Supplement to the Gulf of Alaska Navy Training Activities Environmental Impact Statement and Overseas Impact Statement and to Announce Public Scoping* (Notice of Intent [NOI]) and has subsequently been re-printed in all newspaper advertisements, agency letters, public postcards, and other public involvement materials used at public meetings. Project Fact Sheets and various other materials remain available on the project website throughout the course of the project.

D.2 GENERAL SUMMARY OF THE SCOPING PERIOD

In accordance with the Council on Environmental Quality regulations for implementing the requirements of the National Environmental Policy Act (NEPA), scoping is not required for a Supplemental EIS/OEIS; however, in an effort to maximize public participation and ensure potential public concerns pertaining to scoping are addressed, the United States (U.S.) Department of the Navy (Navy) chose to conduct a scoping period for this Supplemental EIS/OEIS. The public scoping period began with the issuance of the NOI in the *Federal Register* on 16 January 2013. This notice included a project description and information on the purpose of the Supplemental EIS/OEIS. The scoping period lasted 60 days, concluding on 18 March 2013. Sections D.2.1 and D.2.2 describe the Navy's notification efforts during scoping. The scoping period allowed a variety of opportunities for the public to comment on the scope of the Supplemental EIS/OEIS.

D.2.1 TRIBAL NOTIFICATION LETTERS

Tribal letters were mailed on 11 January 2013 to 12 Alaska Native federally recognized tribes. Recipients included:

Alutiiq Tribe of Old Harbor (formerly Native Village of Old Harbor)
Kaguyak Village
Native Village of Afognak
Native Village of Chenega
Native Village of Eyak
Native Village of Ouzinkie
Native Village of Port Graham
Native Village of Port Lions
Native Village of Tatitlek
Sun'aq Tribe of Kodiak
Tangirnaq Native Village
Yakutat Tlingit Tribe

Additionally, personalized tribal notification letters were distributed to 28 tribal chairpersons and staff, including presidents, environmental coordinators, and natural resource managers.

D.2.2 PUBLIC SCOPING NOTIFICATION

The Navy made significant efforts at notifying the public to ensure maximum public participation during the scoping process. These notification efforts were similar in scope to the efforts for the 2011 GOA Final EIS/OEIS, and included lessons learned from that effort. A summary of these efforts follows.

D.2.2.1 Scoping Notification Letters

NOI/Notice of Scoping period letters were distributed on 11 January 2013 to 164 federal, state, and local elected officials and government agencies. Recipients included:

Federal

- U.S. Senators (Alaska) and Staff
- U.S. Representative (Alaska At-Large District) and Staff
- Alaska Maritime National Wildlife Refuge
- Alaska Science Center
- Bureau of Indian Affairs
- Bureau of Land Management, Alaska State Office
- Federal Aviation Administration
 - Washington, D.C., Headquarters
 - Regional Administrator, Alaska Region
 - Alaska Air Traffic Representative
 - Air Defense Liaison Officer, Headquarters North American Aerospace Defense Command
 - Northwest Mountain Region
- Office of Aviation Services
 - Alaska Regional Director
- U.S. Army Corps of Engineers
 - Environmental Special Programs Director
 - Alaska District Commander and District Engineer
 - Executive Office
- U.S. Department of Agriculture, Forest Service
 - Director, Alaska Region
 - Ranger, Chugach National Forest
 - Biologist, Chugach National Forest
 - Forest Supervisor, Chugach National Forest
- U.S. Department of Commerce
 - Acting Secretary, Washington, D.C., Headquarters
 - National Oceanic and Atmospheric Administration
 - Supervisory Fishery Research Biologist, Kodiak, Alaska
 - Fishery Resource Management Specialist, Juneau, Alaska
 - Alaska Fisheries Science Center, Seattle, Washington
 - Director, Kasitsna Bay Lab, Homer, Alaska
 - National Marine Fisheries Service (NMFS)
 - Alaska Regional Administrator
 - Assistant Regional Administrator, Office of Protected Resources
 - Deputy Regional Administrator
 - Alaska Fisheries Science Center
 - Alaska Regional Habitat Conservation Division
 - Alaska Habitat Conservation Division

Office of Protected Resources
 Office of Protect Resources Alaska Region
 Sustainable Fisheries Division
 North Pacific Fisheries Management Council
 U.S. Department of Homeland Security
 U.S. Coast Guard
 Office of Environmental Management
 Chief
 Environmental Planning Team Lead
 Office of Operating and Environmental Standards
 U.S. Department of the Interior
 Special Assistant to the Secretary
 Bureau of Indian Affairs
 Bureau of Land Management
 Bureau of Ocean Energy Management, Regulation, and Enforcement
 Director
 Regional Director
 Regional Supervisor, Leasing and Environment
 Office of Environmental Policy and Compliance
 Regional Environmental Officer
 U.S. Environmental Protection Agency
 Anchorage Operations Office
 NEPA Compliance Division, Washington, D.C.
 Region 10, Juneau, Alaska
 Region 10 NEPA Review Unit Office, Seattle, Washington
 U.S. Fish and Wildlife Service
 Alaska Regional Office
 Kodiak National Wildlife Refuge
 Branch Chief, Conservation Planning Assistance, Anchorage Field Office
 Field Supervisor, Anchorage Field Office
 U.S. Geological Survey
 Alaska Science Center
 Western Fisheries Research Center
 U.S. National Park Service
 Alaska Regional Aviation Manager
 Alaska Regional Director
 Wildlife Biologist, Humpback Whale Monitoring Program, Glacier Bay National Park and Preserve

State of Alaska

Governor and Staff

State Senators (Districts A, B, C, E, G, N, O, P, Q, R, and S) and Staff

State Representatives (Districts 2–7, 9–11, 13, 14, 16, and 27–37) and Staff

Alaska Marine Highway

Department of Natural Resources

Division of Forestry

Division of Geological and Geophysical Surveys

Division of Mining, Land and Water Anchorage

Division of Oil and Gas
Division of Parks and Outdoor Recreation
Public Information Center
Department of Commerce
Community and Economic Development
Division of Community and Regional Affairs
Department of Environmental Conservation
Commissioner's Office
Division of Administrative Services
Division of Air Quality
Division of Environmental Health
Division of Spill and Prevention Response
Department of Fish and Game
Commercial Fisheries Division
Division of Wildlife Conservation
Habitat Division
Sport Fisheries Division (Anchorage and Fairbanks)
Sportfishing Division (Glennallen Office)
Statewide Subsistence Division
Subsistence Division (Anchorage)
Department of Military and Veterans Affairs
Department of Transportation and Public Facilities
North Region Fairbanks
Ports and Harbors Division (Juneau Office)
Statewide Aviation Office
Kachemak Bay Conservation Society
Regulatory Commission of Alaska

Local – Alaska

City and Borough of Juneau
City of Cordova
Fairbanks North Star Borough
Kenai Peninsula Borough
Kodiak Island Borough
Matanuska-Susitna Borough
Municipality of Anchorage

D.2.2.2 Postcard Mailers

On 11 January 2013, postcards were mailed to 399 nongovernmental organizations; community, business, fishing, aviation, recreation and marina groups; government agencies; elected officials; and individuals on the project mailing list, many of whom participated in and commented on the 2011 GOA EIS/OEIS documents. Postcards included the scoping period dates and comment instructions.

D.2.2.3 News Releases

The Navy Region Northwest Public Affairs Office provided a single, uniform news release to media outlets, elected officials, and other potentially interested parties. The news release was distributed on 15 January 2013 and announced the intent to prepare a Supplemental EIS/OEIS. The news release

included information about the Proposed Action and its purpose and need, and project website and comment submittal information.

D.2.2.4 Newspaper Display Advertisements

Five display advertisements were published in each of the following newspapers: *Anchorage Daily News*, *Cordova Times*, *Juneau Empire*, *Kodiak Daily Mirror*, and *Peninsula Clarion*. The first series of newspaper advertisements ran concurrently with the NOI publication in the *Federal Register* on 16 January 2013, and ran for 3 consecutive days, with the exception of the weekly-published *Cordova Times*, which ran on the first 3 days the newspaper was scheduled to publish. The second and third series of advertisements were published on 2 additional days during the middle and end of the scoping period.

Anchorage, Alaska	Juneau, Alaska	Anchorage and Kenai Peninsula
<i>Anchorage Daily News (daily)</i>	<i>Juneau Empire (daily)</i>	Alaska
Wednesday, Jan. 16, 2013	Wednesday, Jan. 16, 2013	<i>Peninsula Clarion (daily)</i>
Thursday, Jan. 17, 2013	Thursday, Jan. 17, 2013	Wednesday, Jan. 16, 2013
Friday, Jan. 18, 2013	Friday, Jan. 18, 2013	Thursday, Jan. 17, 2013
Wednesday, Feb. 13, 2013	Wednesday, Feb. 13, 2013	Friday, Jan. 18, 2013
Wednesday, Mar. 6, 2013	Wednesday, Mar. 6, 2013	Wednesday, Feb. 13, 2013
		Wednesday, Mar. 6, 2013
Cordova, Alaska	Kodiak and Anchorage, Alaska	
<i>Cordova Times (weekly – Friday)</i>	<i>Kodiak Daily Mirror (daily)</i>	
Friday, Jan. 18, 2013	Wednesday, Jan. 16, 2013	
Friday, Jan. 25, 2013	Thursday, Jan. 17, 2013	
Friday, Feb. 1, 2013	Friday, Jan. 18, 2013	
Friday, Feb. 15, 2013	Wednesday, Feb. 13, 2013	
Friday, Mar. 8, 2013	Wednesday, Mar. 6, 2013	

D.2.3 SCOPING MEETINGS

Given that the Navy's Proposed Action and Alternatives have not changed from the 2011 GOA Final EIS/OEIS, public scoping meetings were not held, but public comments were accepted during the 60-day scoping period from 16 January 2013 to 18 March 2013.

D.2.4 PUBLIC SCOPING COMMENTS

Scoping participants submitted comments in three ways:

- Written letters (received any time during the public comment period)
- Electronic mail (received any time during the public comment period)
- Comments submitted directly on the project website (received any time during the public comment period)

In total, the Navy received 13 comment submissions from individuals, groups, agencies, and elected officials. Six comment submissions were submitted via the project website, five comment submissions were submitted via postal mail, and two comment submissions were submitted via e-mail. Table D.2-1 provides a breakdown of areas of concern based on comments received during scoping. Because many of the comment submissions addressed more than one issue, the total number of issues raised is greater than the 13 comment submissions received. However, as the general theme of some of the comments

remained the same, they have been consolidated into areas of concern. The summary following Table D.2-1 provides an overview of comments and is organized by area of concern.

Table D.2-1: Public Scoping Comment Summary

Area of Concern	Count	Percent of Total
Impacts on Marine Species	6	42.8%
Impacts on Airspace	1	7.2%
Impacts on Fisheries	3	21.4%
Issues Regarding the 2011 GOA Final EIS/OEIS	3	21.4%
General	1	7.2%
TOTAL	14	100.0%

Notes: EIS/OEIS = Environmental Impact Statement/Overseas Environmental Impact Statement, GOA = Gulf of Alaska

D.2.4.1 Impacts on Marine Species

- Concern about how military training in the area would impact various marine species
- Opposition to acoustic training in sensitive waters of the Gulf of Alaska
- Opposition to the issuance of any federal permits or authorizations
- Concern about how marine species would be impacted by hazardous substances, bioaccumulation, chemical pollutants, and the use of sonar
- Need to study cumulative impacts on marine mammals from military training, warming waters, and oil drilling
- Belief that the Navy harms animals and people wherever it trains

D.2.4.2 Impacts on Airspace

- Concern about the impacts military training in the Gulf of Alaska would have on special use airspace

D.2.4.3 Impacts on Fisheries

- Request to eliminate Navy training activities within 100 nautical miles of commercial, sport, and subsistence fisheries
- Concern for potential effects proposed training activities would have on NMFS trust resources
- Discussion of NMFS as a cooperating agency at both the local and headquarters levels

D.2.4.4 Issues Regarding the 2011 Gulf of Alaska Final Environmental Impact Statement/Overseas Environmental Impact Statement

- Dissatisfaction with how public and agency comments were addressed in the 2011 GOA Final EIS/OEIS
- Belief that the Navy presented flawed counts of species density in the 2011 GOA Final EIS/OEIS and need to fix density counts in the Supplemental EIS/OEIS
- Belief that it is unnecessary to conduct a Supplemental EIS/OEIS when the Final EIS/OEIS was recently completed

D.2.4.5 General

- Support for Navy training within the Gulf of Alaska to maintain readiness

D.3 DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

The GOA Draft Supplemental EIS/OEIS was released to the public on 22 August 2014 with the issuance of the Notice of Availability and a Notice of Public Meetings in the *Federal Register* (79 Federal Register [FR] 163, also in Appendix A – Federal Register Notices).

D.3.1 DISTRIBUTION OF THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

The Draft Supplemental EIS/OEIS was made available for viewing or download from the project website at www.GOAEIS.com. Letters providing notification of the availability of the Draft Supplemental EIS/OEIS on the website were mailed to 199 federal and local elected officials, government agencies, community and business groups, and tribal staff. CD-ROM versions of the Draft Supplemental EIS/OEIS were sent to federal and state government agencies, tribes, and individuals who requested a copy. In addition, hard copy versions were sent to information repositories (typically libraries).

The complete list of information repositories, tribes, and agencies that received copies of the EIS/OEIS (hardcopy, CD-ROM, or both) follows in Table D.3-1.

Table D.3-1: List of GOA Draft Supplemental EIS/OEIS Recipients

Information Repositories	
<u>Alaska</u>	
Alaska State Library, Juneau	Kodiak Public Library, Kodiak
Copper Valley Community Library, Glennallen	Seward Community Library, Seward
Cordova Public Library, Cordova	Univ of AK, Fairbanks/Elmer E. Rasmuson Library, Fairbanks
Homer Public Library, Homer	Z.J. Loussac Library, Anchorage
Tribes	
<u>Alaska</u>	
Kaguyak Village	Native Village of Port Graham
Native Village of Afognak	Native Village of Port Lions
Native Village of Chenega	Native Village of Tatitlek
Native Village of Eyak	Sun'aq Tribe of Kodiak
Native Village of Old Harbor	Tangirnaq Native Village
Native Village of Ouzinkie	Yakutat Tlingit Tribe
Agencies	
	<u>Federal</u>
Alaska Maritime National Wildlife Refuge	National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS)
Alaska Science Center	NOAA, NMFS, Alaska Fisheries Science Center
Alaskan Command and Joint Task Force Alaska	NOAA, NMFS, Habitat Conservation Division
Federal Aviation Administration	NOAA, NMFS, Office of Protected Resources
Federal Aviation Administration, Northwest Mountain Region	National Park Service
Marine Mammal Commission	National Park Service, Glacier Bay National Park & Preserve

Table D.3-1: List of GOA Draft Supplemental EIS/OEIS Recipients (continued)

Agencies (continued)	
	<u>Federal</u>
North Pacific Fisheries Management Council	U.S. Department of the Interior, Bureau of Land Management, Alaska State Office
Office of Aviation Services	U.S. Department of the Interior, Bureau of Ocean Energy Management
U.S. Air Force, Pacific Air Forces	U.S. Department of the Interior, Office of Environmental Policy and Compliance
U.S. Army Corps of Engineers	U.S. Environmental Protection Agency, Anchorage Operations Office
U.S. Army, Installation Management Command, Pacific Region	U.S. Environmental Protection Agency, National Environmental Policy Act Compliance Division
U.S. Coast Guard	U.S. Environmental Protection Agency Region 10
U.S. Coast Guard Headquarters, Office of Environmental Management	U.S. Fish and Wildlife Service and Kodiak National Wildlife Refuge
U.S. Department of Agriculture, Forest Service, Alaska Region	U.S. Fish and Wildlife Service, Alaska Region
U.S. Department of Agriculture, Forest Service, Chugach National Forest	U.S. Fish and Wildlife Service, Anchorage Field Office
U.S. Department of Commerce	U.S. Geological Survey, Alaska Science Center
U.S. Department of the Interior	U.S. Geological Survey, Western Fisheries Research Center
U.S. Department of the Interior, Bureau of Indian Affairs	U.S. Navy
U.S. Department of the Interior, Bureau of Land Management	
	<u>State and Local</u>
Alaska Department of Commerce, Community, and Economic Development	Alaska Department of Fish and Game Division of Sports Fisheries and Division of Subsistence
Alaska Department of Commerce, Community, and Economic Development Division of Community and Regional Affairs	Alaska Department of Fish and Game Division of Wildlife Conservation
Alaska Department of Environmental Conservation	Alaska Department of Fish and Game Statewide Subsistence
Alaska Department of Environmental Conservation Commissioner's Office	Alaska Department of Military and Veterans Affairs
Alaska Department of Environmental Conservation Division Administrative Services	Alaska Department of Natural Resources
Alaska Department of Environmental Conservation Division of Air Quality	Alaska Department of Natural Resources Division of Forestry
Alaska Department of Environmental Conservation Division of Environmental Health	Department of Natural Resources Division of Geological and Geophysical Surveys
Alaska Department of Environmental Conservation Division of Spill Prevention and Response	Department of Natural Resources Division of Mining Land and Water Anchorage
Alaska Department of Fish and Game	Department of Natural Resources Division of Oil and Gas
Alaska Department of Fish and Game Division of Commercial Fisheries	Alaska Department of Natural Resources Division of Parks and Outdoor Recreation
Alaska Department of Fish and Game Division of Sport Fishing, Glennallen Office	Alaska Department of Natural Resources Public Information Center

Table D.3-1: List of GOA Draft Supplemental EIS/OEIS Recipients (continued)

Agencies (continued)	
<u>State and Local (continued)</u>	
Alaska Department of Transportation & Public Facilities	Governor Parnell's Office
Alaska Department of Transportation & Public Facilities Division of Ports and Harbors	Kachemak Bay Conservation Society
Alaska Department of Transportation & Public Facilities Northern Region Fairbanks	Regulatory Commission of Alaska
Alaska Department of Transportation & Public Facilities Statewide Aviation	
<u>Canada</u>	
Fisheries and Oceans Canada Pacific Region	Parks Canada

D.3.2 PUBLIC COMMENT PERIOD FOR THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

The 60-day public comment period on the Draft Supplemental EIS/OEIS began with the EPA's issuance of the Notice of Availability on 22 August 2014 (79 FR 163, also in Appendix A – Federal Register Notices). The Navy made significant efforts to notify the public to ensure maximum public participation during the public comment period, including using postcards, news releases, public service announcements, fliers, notification letters, and newspaper display advertisements.

On 22 August 2014, the Navy also issued a Notice of Public Meetings (79 FR 163 Friday, also in Appendix A) that included a project description and dates and locations of the five public meetings. The public comment period allowed a variety of opportunities for the public to comment on the Draft Supplemental EIS/OEIS. Copies of the Draft Supplemental EIS/OEIS were provided to libraries in Alaska, and the document was available on the project website for review. Navy representatives were available during the open house public meetings to provide information and answer questions one-on-one. Comment sheets were made available to attendees.

D.4 PUBLIC COMMENTS AND NAVY RESPONSES

Comments on the Draft Supplemental EIS/OEIS were received at the public meetings either in writing or orally, via the project website, and via mail. The Navy also received a petition from a non-governmental organization with approximately 39,500 signatures at the close of the comment period (20 October 2014) (see Section D.4.1).

Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. The most commonly addressed themes included marine mammal impacts; the level, location, and timing of proposed training; use of sonar and underwater explosives; mitigation measures; impacts to fish and the fishing industry; expended materials; public meeting locations; and cumulative impacts.

All comments are reproduced in Tables D.4-1 through D.4-5. Table D.4-6 reproduces the non-governmental organization petition. Table D.4-7 reproduces comments from five Kodiak Area Tribes who were engaged in government-to-government consultation with the Navy on the proposed training activities in the Temporary Maritime Activities Area (TMAA). Next to each comment is the Navy's

response. Responses to all comments were prepared and reviewed by Navy experts for scientific and technical accuracy and completeness.

Each row in these tables presents the identification of the commenter, the comment, and the Navy's response to the comment. Because many commenters touched on more than one topic, in some cases the commenter's topics were separated into individual comments, assigned a number, and responded to separately. The commenter's name or organization may be abbreviated when the comment is broken into more than one topic. For example, the comments by the Marine Mammal Commission cover several topics, so these are separated into subsequent comments named MMC-02, MMC-03, etc. The comment numbering system also captures whether the comment was received electronically (via GOAEIS.com), in written form (by mail or during a public meeting), or orally (either privately or during public testimony at a public meeting).

Table D.4-1: contains comments from federal agencies and elected officials received during the public comment period and the Navy's response to those comments.

For the Final Supplemental EIS/OEIS, Navy has continued to update the discussion and analysis by considering new, emergent science published in peer-reviewed scientific journals and other verifiable sources since the Draft Supplemental EIS/OEIS was released to the public. Comments received on the draft document were also reviewed for any citation to references not otherwise listed in the draft document, and all such references were reviewed to determine if they constituted significant, relevant, and widely-respected additions to the field for possible inclusion into the Supplemental EIS/OEIS.

Some comments provided to the Navy cited newspapers, website blogs, conference abstracts, or reports from workshops, which have generally not been included in the Supplemental EIS/OEIS since those references did not go through the peer-review process, which is the standard for validating research and results in the scientific community.

Navy also did not include references suggesting alternate impact criteria, thresholds, or measures relating to effects on marine species that have not been approved, finalized, or found to be effective by NMFS in its capacity as the regulatory agency.

In general, Navy did not include references that lack the indicia of scientific reliability or finality (beyond speculation or unsupported hypothesis) and therefore do not warrant consideration at this time.

References found to enhance the analysis or that update the information previously presented have been added to the applicable References Cited and Considered section(s) for this Final Supplemental EIS/OEIS.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials

Commenter	Comment	Navy Response
U.S. Environmental Protection Agency – Region 10 (Written)	Ms. Amy Burt, Environmental Planner Naval Facilities Engineering Command Northwest 1101 Tautog Circle, Suite 203 Silverdale, Washington 98315-1101 RE: EPA Comments on the DOD Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (DSEIS/OEIS) for the Gulf of Alaska Navy Training Activities, EPA# 080028-DOD Dear Ms. Burt: We has reviewed the above-referenced document in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions. The Navy has conducted this DSEIS/OEIS primarily to re-analyze the direct, indirect, and cumulative effects of the proposed training activities on marine mammals. The analysis considers new scientific information and the recently developed Navy Acoustics Effect Model NAEMO. The re-analysis is in large part to support the reissuance of current Letters of Authorization, which are due to expire in 2016. The DSEIS/OEIS identifies the same or very similar impacts to marine mammals as the previous DSEIS/OEIS and also identifies the same preferred alternative (Alternative B). As such, we are giving the document the same impact rating of "EC" (Environmental Concern) because of our previously identified concerns, but an adequacy rating of "I" (Adequate) since the EIS improves the analysis of impacts to marine mammals. We have no additional recommendations for your consideration at this time. A copy of our rating system criteria used in conducting our environmental review is enclosed. Our rating and a copy of our comments will be published in the Federal Register. Thank you for the opportunity to review and provide written comments on the Gulf of Alaska Navy Training Activities DSEIS/DOEIS. If you have any questions regarding this letter, please contact Jennifer Curtis of my staff at (907) 271-6324 or curtis.jennifer@epa.gov.	Thank you for your review and participation.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
Marine Mammal Commission-01 (Written)	Naval Facilities Engineering Command Northwest Attention: Ms. Amy Burt-GOA Supplemental EIS/OEIS Project Manager 1101 Tautog Circle Suite 203 Silverdale, Washington 98315-1101 Dear Ms. Burt: The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Navy's Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (DSEIS) for training activities to be conducted from 2016 to 2021 within the Temporary Maritime Activities Area (TMAA) in the Gulf of Alaska (GOA; 79 Fed. Reg. 49769). The DSEIS discusses the impacts of those activities on marine mammals in the Gulf of Alaska. The Commission has commented on other draft environmental impact statements and previously proposed regulations for similar activities in other Navy training and testing study areas (10 July 2012, 5 November 2012, 7 March 2013, 24 October 2013, 20 February 2014 Commission letters). In concert with this letter, the Commission is providing comments to the National Marine Fisheries Service (NMFS) regarding the Navy's application for a letter of authorization (LOA). Background The Navy proposes to conduct training activities in the waters off Kodiak, Alaska. The activities would involve the use of mid- and high-frequency sonar, weapons systems, explosive and non-explosive practice munitions and ordnance, high-explosive underwater detonations, expended materials, electromagnetic devices, high-energy lasers, vessels, and aircraft. Activities would occur in summer, defined as April–October. The activities and alternatives under the 2011 Final Environmental Impact Statement/Overseas Environmental Impact Statement (FEIS) for GOA have not changed. However, the marine mammal densities, criteria and thresholds, and acoustic analyses have been updated for the DSEIS.	Thank you for reviewing the Draft Supplemental EIS/OEIS.
MMC-02	Uncertainty in density estimates Uncertainty in general—The Navy estimated marine mammal densities in GOA based on (1) models that use direct survey sighting data and distance sampling theory, (2) models that use known or inferred habitat associations to predict densities (e.g., relative environmental suitability (RES) models), typically in areas where survey data are limited or non-existent, or (3) extrapolation from neighboring regional density estimates or population/stock assessments based on expert opinion (Department of the Navy 2014b). The Navy acknowledged that estimates from both RES models and extrapolated densities include a high degree of uncertainty (Department of the Navy 2014b), but it does not appear that the Navy included measures of uncertainty (i.e., standard deviation, coefficient of variation, etc.) in those estimates.	The Navy coordinated with scientists at the Southwest Fisheries Science Center (SWFSC) and the National Marine Mammal Laboratory (NMML) to help identify the best available density estimates for marine mammals occurring in the Study Area. As the commenter points out, there is uncertainty in estimating marine mammal densities, and for some species very little data are available. Using the mean value to estimate densities is a reasonable and scientifically acceptable approach. While the mean may underestimate a species' density, by definition, it is equally probable that it could overestimate a species' density. The mean density estimate is the best value to use as input into the Navy's acoustic effects model to

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	For GOA, the Navy based some of its densities on stratified design-based estimates from Rone et al. (2014), which is a preferred approach to RES models and extrapolated estimates. However, the CVs were quite large in some instances. For example, the densities for killer whales were 0.005 (CV=0.60) for the inshore stratum, 0.002 (CV=0.77) for the offshore stratum, 0.002 (CV=0.77) for the seamount stratum, and 0.020 (CV=1.93) for the slope stratum. Using only the mean densities would very likely result in an underestimation of takes due to the CVs being so much greater than the mean point estimates. The abundance estimates for unidentified large whales also were prorated among blue, fin, and humpback whales within each stratum and incorporated proportionally into each species' density estimate. A high level of uncertainty and variability is inherent in using such prorated methods. In addition, the Rone et al. (2014) data were collected in summer (23 June–18 July 2013) but were considered representative of year-round densities. Further, some density estimates were based on data from Waite (2003) that included (1) a single sighting, for which the Navy noted the confidence in the density value was low and/or (2) f(0) and g(0) values derived from other surveys in the North Pacific¹ (Department of the Navy 2009). ¹ Waite (2003) did not provide survey-specific f(0) and g(0) values; therefore, those values originated from other surveys that occurred in the North Pacific. Waite (2003) data also were collected in summer (June and July) but were applied to other seasons.	minimize the influence of uncertainty inherent in the science. The Rone et al. (2014) data collected in July was used to model impacts for training that would most likely occur in July. Also, there is no reason or value to carrying the density to a year-round value because the Navy's proposed activities that are being analyzed in the proposed action would only occur between April and October annually. Furthermore, the use of the mean density estimate is consistent with the approach taken by NMFS to estimate and report the populations of marine mammals in NMFS's Stock Assessment Reports. For these reasons, the mean density estimate is thus considered the "best available data."
MMC-03	The Commission understands that density data are not available for all areas where or times when activities may occur and that when such data are available the densities could be underestimated. However, the Commission continues to believe that action proponents, including the Navy, should use the best available density estimate <u>plus</u> some measure of uncertainty (e.g., mean plus two standard deviations, mean plus the coefficient of variation, the upper confidence interval) in those instances. If one uses an average density estimate, there is approximately a 50 percent chance that the actual density is either greater or less than that estimate. The Navy did indicate that uncertainty characterized in the original density data references was catalogued and retained for potential later use. Thus, those values should be readily available for analysis. Therefore, the Commission recommends that the Navy (1) account for uncertainty in extrapolated density estimates for all species by using the upper limit of the 95% confidence interval or the arithmetic mean plus two standard deviations and (2) then re-estimate the numbers of takes accordingly.	Using the upper limit of the 95% confidence interval or adjusting the mean estimates as suggested would result in unreasonable and unrealistic estimates of species densities, particularly given the very high coefficients of variation (CVs) associated with most marine mammal density estimates. A confidence interval is only meant to be an indication of the uncertainty associated with a point estimate, and should not be used to derive any absolute number within the confidence interval. Using the upper limit of the range as an input would do nothing to decrease the level of uncertainty. Implementing the recommendation would result in an unrepresentative overestimate of the expected effects (takes) from the proposed action. Further, as detailed in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) of the Draft and Final Supplemental EIS/OEIS, the Navy's acoustic model already includes conservative assumptions (e.g., assumes that the animals do not move horizontally, assumes they are always head-on to the sound source so that they receive the maximum amount of energy, etc.), resulting in a more conservative (i.e., greater) assessment of potential impacts. Because Navy's intent in the Supplemental EIS/OEIS is to provide the most accurate estimate of impacts using the best available science, the three recommendations in this comment were not incorporated into the Final Supplemental EIS/OEIS.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
MMC-04	Pinniped densities—Similar to estimating cetacean densities, the Navy used data from Rone et al. (2014) to estimate densities of northern fur seals. Those data likely under-represent densities for the summer timeframe² in which activities are expected to occur. Adult males usually are on shore in the Pribilof Islands from May–August (some remain until November), while most adult females are on or near the breeding islands from June–November (Roppel 1984). Adult males may move south into GOA or the North Pacific Ocean or north into the Bering Sea. Adult females, pups, and juveniles³ move south and remain at sea until at least the next breeding season. Because the Rone et al. (2014) study occurred from late June through July, the spring/summer migration of fur seals through the Gulf of Alaska to the Pribilof Islands was likely mostly missed. Therefore, the Commission believes that the densities would be underestimated even if the Navy incorporated the CVs from the Rone et al. (2014) data. ² Defined as April–October in the DEIS ³ Young animals typically begin returning to breeding islands when 1 to 3 years old.	The Navy coordinated with scientists at the Southwest Fisheries Science Center (SWFSC) and the National Marine Mammal Laboratory (NMML) to help identify the best available density estimates for marine mammals occurring in the Study Area. The timeframe for which the activities are expected to occur are best represented by the June-July timeframe. Data collected from Rone et al. (2014) in the summer of 2014 resulting in 69 on-effort northern fur seal sightings (74 individuals) in the Study Area is representative of the presence of northern fur seals in the Study Area. The Rone et al. (2014) survey occurred in approximately the same month when previous Navy training events have occurred and are most likely to occur in the future. The Rone et al. (2014) data is therefore the most representative for use in the assessment of impacts. As noted in the Draft and Final Supplemental EIS/OEIS, tagging data presented by Ream et al. (2005) indicate the main foraging areas and the main migration route through the Gulf of Alaska are located far to the west of the Study Area, so the movement of animals involving the larger expanse of the Gulf of Alaska at other times of the year and outside the Study Area are not relevant.
MMC-05	For estimating Steller sea lion and elephant seal densities, the Navy used abundance data from stock assessment reports divided by an area. The Navy cited Angliss and Allen (2009) for the combined Steller sea lion abundance estimate. However, those abundance estimates have increased (see Allen and Angliss (2014) for the most current abundance estimates) since the 2008 stock assessment report⁴. For elephant seals, the Navy indicated that only male elephant seals migrate as far north as GOA during foraging trips based on information collected from extensive satellite tagging studies (Le Boeuf et al. 2000) and, thus, included only males in its density estimate. The Navy apparently misinterpreted Le Boeuf et al. (2000), as Figures 1 and 12 depict female elephant seals in the GOA. In addition, to account for males at rookeries that were not counted and an increase in the population since 2005, the Navy doubled the number of males and juveniles reported in the stock assessment report (3,815) to 7,630. Although the Navy included such a correction, it still has underestimated the abundance of elephant seals by not including females. Due to similar issues with pinniped densities for NWTT, the Commission suggested that the Navy update its Steller sea lion abundance estimate and contact NMML regarding unpublished satellite telemetry data⁵ that could be used to better determine the area of Steller sea lion occurrence. ⁴ Although the Navy did correctly include animals from the Gulf of Alaska, southeast Alaska, and British Columbia rookeries in its density estimates, it indicated in the Steller sea lion introduction in the Department of the Navy (2014b) that only individuals from the eastern stock were expected to occur in the study area. The Commission	The Navy coordinated with scientists at the National Marine Mammal Laboratory (NMML) to help identify the best available density estimates for marine mammals occurring in the Study Area. For Steller sea lions, rookeries on both sides of the 144 degrees west longitude line dividing the two stocks (DPSs) were used in the estimate of density. The abundance increase in the most recent Stock Assessment Report (Allen and Angliss 2014) is a trend characterizing the 12-year period between 2000 and 2012 and not a trend since 2008 as presented in Angliss and Allen (2009). Also, the data presented in Angliss and Allen (2009) reflects the majority of the increase in abundance since year 2000. Given the documented movement of animals from the west to the area of the Eastern DPS and outside the Study Area, the Navy's current density estimate remains a representative estimate for purposes of acoustic effect modeling. With regard to footnote #4, the text in the Density Technical Report has been revised to make it clearer that Steller sea lions from the Western stock are expected in the Study Area; however, as presented in the Draft and Final Supplemental EIS/OEIS, there is strong evidence of overlap between the two stocks.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	notes that individuals from the Gulf of Alaska rookeries are part of the western, not the eastern stock. ⁵ The Commission understands it is difficult to estimate densities when the best available data have not been published. Accordingly, the Commission recommended in its letter regarding the 2013 stock assessment reports that NMFS's Science Centers, including NMML, publish their data.	
MMC-06	For elephant seals, the Commission suggested the Navy use Robinson et al. (2012), which provided more recent satellite telemetry data on dispersion and movements of female northern elephant seals similar to those of LeBoeuf et al. (2000). Those suggestions, and ultimately recommendations, are applicable for GOA as well. Accordingly, the Commission recommends that the Navy (1) revise its Steller sea lion abundance estimates to include data from Allen and Angliss (2014) and consult with scientists at NMML⁶ regarding unpublished data to revise its Steller sea lion densities and (2) include abundance data for female elephant seals and incorporate data from Robinson et al. (2012) into its estimates of northern elephant seal densities—a similar method of scaling movement and dispersion data from tagged animals to the population may be used for Steller sea lions and elephant seals as well. ⁶ The Commission can provide contact information for the appropriate scientists at NMML.	For elephant seals, the text presented in the Draft and Final Supplemental EIS/OEIS does not indicate absolute geographic presence or absence of elephant seals but is presented as a generalization based on findings presented in the three references cited (Le Boeuf et al. 2000; Stewart and DeLong 1995; and Stewart and Huber 1993). Tag data from Robinson et al. (2012) was considered in the analysis (see References Cited and Considered) and clearly shows that the females mostly range east to about 173°W, between the latitudes of 40°N and 45°N, consistent with the presentation in the Draft and Final Supplemental EIS/OEIS. The derived density of elephant seals in the Study Area therefore remains a conservative estimate for purposes of acoustic effect modeling.
MMC-07	The Navy proposed to estimate the numbers of takes resulting from its activities by adjusting received sound levels at different frequencies based on the hearing sensitivity of various groups of marine mammals at those frequencies. The adjustments were based on “weighting” functions derived by Southall et al. (2007) and Finneran and Jenkins (2012; Type I and Type II weighting functions, respectively). Type I weighting functions (see Figure 1 in Southall et al. 2007) are flat over a wide range of frequencies and then decline at the extremes of the animal's hearing range. Type II weighting functions (Finneran and Jenkins 2012) are used only for cetaceans and combine the precautionary Type I curves developed by Southall et al. (2007) with equal loudness weighting functions derived from empirical studies of bottlenose dolphins (Finneran and Schlundt 2011). The Commission considers the theory behind those weighting functions to be reasonable.	Thank you for your comment and for participating in the NEPA process.
MMC-08	However, the amplitudes of the final Type II weighting functions were adjusted by lowering the sound exposure levels (SELs) at all frequencies by roughly 16–20 dB (compare Figures 2 and 6 of Finneran and Jenkins (2012)). For sonar-related activities, Finneran and Jenkins (2012) reduced the TTS thresholds for acoustic sources for low- and mid-frequency cetaceans (see Table 2 in Southall et al. 2007 for information on functional hearing groups) by 17 dB (assuming they rounded up from 16.5 dB). Because data are lacking for TTS thresholds for high-frequency cetaceans exposed to acoustic (i.e., tonal) sources, Finneran and Jenkins (2012) indicated that a 6-dB correction factor then was added to the TTS threshold (because it was derived from exposure to non-explosive impulsive sources (i.e., from airguns) rather than acoustic sources) based on the method outlined in Southall et al. (2007). However, the Commission's understanding	As detailed in Finneran and Jenkins (2012) the thresholds presented incorporate new findings since the publication of Southall et al. (2007) and the evolution of scientific understanding since that time. Dr. Finneran was one of the authors for Southall et al. (2007) and as such, is familiar with the older conclusions present in the 2007 publication and therefore was able to integrate that knowledge into the development of the refined approach that was presented in Finneran and Jenkins (2012) and based on evolving science since 2007. The thresholds and criteria used in the GOA Draft and Final Supplemental EIS/OEIS analysis have already incorporated the correct balance of conservative assumptions that tend towards overestimation in the face

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	is that Southall et al. (2007) did not use a 6-dB correction factor to extrapolate from impulsive to acoustic thresholds, but rather to estimate PTS thresholds from TTS thresholds based on peak pressure levels. Southall et al. (2007) did indicate that the TTS threshold for acoustic (non-impulsive) sources was 12 dB greater than for explosive sources (pulses) based on SELs (195 vs 183 dB re 1 μPa²-sec⁷, respectively). If the explosive threshold of 164.3 dB re 1 μPa²-sec (based on Lucke et al. (2009) and used in Finneran and Jenkins (2012)) is increased by 12 dB, the resulting unadjusted TTS threshold would be 176.3 dB re 1 μPa²-sec for acoustic sources. That threshold then should have been adjusted by 19.4 dB to yield a TTS threshold of 157 dB re 1 μPa²-sec. ⁷ Those TTS thresholds were based on Schlundt et al. (2000) and Finneran et al. (2002).	of uncertainty. Details regarding the process are provided in Section 3.8.3.1.6 (Quantitative Analysis). Also, see the summary of the thresholds used in the analysis as presented in Section 3.8.3.1.4 (Thresholds and Criteria for Predicting Acoustic and Explosive Impacts on Marine Mammals). Briefly, the original experimental data is weighted using the prescribed weighting function to determine the numerical threshold value. The MMC did not consider the appropriate weighting schemes when comparing thresholds presented in Southall et al. (2007) and those presented in Finneran and Jenkins (2012). TTS thresholds presented in Finneran and Jenkins (2012) are appropriate when the applicable weighting function (Type II) is applied to the original TTS data; TTS thresholds in Southall et al. (2007) were based on M-weighting. For example, while it is true that there is an unweighted 12-dB difference for onset-TTS between beluga watergun (Finneran et al. 2002) and tonal exposures (Schlundt et al. 2000), the difference after weighting with the Type II MF-cet weighting function (from Finneran and Jenkins 2012) is 6 dB. The MMC has confused (a) the 6 dB difference in PTS and TTS thresholds based on peak pressure described in Southall et al. 2007 with (b) the difference between impulsive and non-impulsive thresholds in Finneran and Jenkins (2012), which is coincidentally 6 dB. In summary, the values derived for impulsive and non-impulsive TTS and for determining PTS and impulsive behavior thresholds from TTS thresholds are correct based on the data presented. As noted in the introductory Section of the GOA Draft and Final Supplemental EIS/OEIS, NMFS is a cooperating agency in the development of the supplemental analysis because of its expertise and regulatory authority over marine resources. Additionally, the GOA Supplemental EIS/OEIS is intended to serve as NMFS's NEPA documentation for the rule-making process under the MMPA. Given this, NMFS was included in the development of the current thresholds. Furthermore, the thresholds and criteria used in the GOA Draft and Final Supplemental EIS/OEIS are consistent with the TTS and PTS thresholds NMFS proposed in its "Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals." The Navy has continued to revise those thresholds based on emergent research and in cooperation with NMFS as the federal regulator. Navy provided a Technical Report (Finneran 2015) to NMFS in early 2015 in this regard. NOAA determined that it would be appropriate to incorporate this new information into its Draft Guidance prior to its finalization. As a result, the Navy's proposal (Finneran 2015) was submitted for peer

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		review to external subject matter experts, in accordance with the process previously conducted for NOAA's Draft Guidance. Peer review comments were received by NOAA in April 2015. NOAA subsequently developed a Peer Review Report, which was published on its website on 31 July 2015, documenting the Navy's criteria proposal (Finneran 2015) that underwent peer review, the peer review comments, and NOAA responses to those comments (National Oceanic and Atmospheric Administration 2015c). NOAA then incorporated this information into revised Updated Draft Guidance that was recently published in the Federal Register for public review and comment (National Oceanic and Atmospheric Administration 2015d, 2015e; 80 FR 45642). The auditory weighting functions and PTS/TTS thresholds will not be adopted by NOAA or applied to applicants until the revised Updated Draft Guidance has finished undergoing public comment, any revisions are made based on public comments, and the Final Guidance is issued. At the time of publication of the GOA Supplemental EIS/OEIS, all of these steps have not been completed; therefore, the Navy has not adopted these proposed criteria in this document. However, the underlying science contained within Finneran (2015) has been addressed qualitatively within the applicable sections of the Supplemental EIS/OEIS.
MMC-09	Further, it is unclear how the explosive thresholds (i.e., for underwater detonations) were adjusted downward to account for the amplitude decrease in the Type II weighting functions. For example, Finneran and Jenkins (2012) indicated that they used Finneran et al. (2002) TTS data of 186 dB re 1 μPa²-sec to determine the TTS threshold for explosives for mid-frequency cetaceans, which also was supported by Southall et al. (2007). But if one uses the purported method of subtracting 16.5 dB from that threshold, the resulting Type II weighted SEL would be 169.5 (it appears it should be rounded down to 169 based on the Finneran and Jenkins (2012) document) rather than 172 dB re 1 μPa²-sec. Finneran and Jenkins (2012) proposed to use 172 dB re 1 μPa²-sec for low-frequency cetaceans as well. Lastly, they appear to use a correction factor of 18 rather than 19.4 to adjust the Type II weighted SEL for high-frequency cetaceans. The Commission is concerned that the TTS thresholds for explosive sources that the Navy used not only are greater than they should be based on the methods described but also are used as the basis for the PTS and behavioral thresholds. Thus, if those thresholds were not adjusted by the appropriate amplitude factors, the Navy may have estimated the numbers of takes of marine mammals incorrectly. To address these concerns, the Commission recommends that NMFS require the Navy to (1) use 157 rather than 152 dB re 1 μPa²-sec as the TTS threshold for high-frequency cetaceans exposed to acoustic sources, (2) use 169 rather than 172 dB re 1 μPa²-sec as the TTS thresholds for mid- and low-frequency cetaceans exposed to explosive sources, (3) use 145 rather than 146	Briefly, the original experimental data is weighted using the prescribed weighting function to determine the numerical threshold value. The MMC did not consider the appropriate weighting schemes when comparing thresholds presented in Southall et al. (2007) and those presented in Finneran and Jenkins (2012). TTS thresholds presented in Finneran and Jenkins (2012) are appropriate when the applicable weighting function (Type II) is applied to the original TTS data; TTS thresholds in Southall et al. (2007) were based on M-weighting. For example, while it is true that there is an unweighted 12-dB difference for onset-TTS between beluga watergun (Finneran et al. 2002) and tonal exposures (Schlundt et al. 2000), the difference after weighting with the Type II MF-cet weighting function (from Finneran and Jenkins 2012), is 6 dB. The MMC has confused (a) the 6 dB difference in PTS and TTS thresholds based on peak pressure described in Southall et al. 2007 with (b) the difference between impulsive and non-impulsive thresholds in Finneran and Jenkins (2012), which is coincidentally 6 dB. In summary, the values derived for impulsive and non-impulsive TTS and for determining PTS and impulsive behavior thresholds from TTS thresholds are correct based on the data presented.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	dB re 1 μPa²-sec as the TTS threshold for high-frequency cetaceans for explosive sources, and (4)(a) based on these changes to the TTS thresholds, adjust the PTS thresholds for high-frequency cetaceans exposed to acoustic sources by increasing the amended TTS threshold by 20 dB and for low-, mid-, and high-frequency cetaceans exposed to explosive sources by increasing the amended TTS thresholds by 15 dB and (b) adjust the behavioral thresholds for low-, mid-, and high-frequency cetaceans exposed to explosive sources by decreasing the amended TTS thresholds by 5 dB. ⁷ Those TTS thresholds were based on Schlundt et al. (2000) and Finneran et al. (2002).	
MMC-10	For determining TTS thresholds for pinnipeds for underwater detonations, the Navy used data from Kastak et al. (2005) and extrapolation factors from Southall et al. (2007). Kastak et al. (2005) estimated the average SEL for onset-TTS for pinnipeds exposed to octave-band underwater sound centered at 2.5 kHz (i.e., mid-frequency sound). However, underwater detonations produce broadband sound in the low-frequency range. The Commission recognizes that the data provided by Kastak et al. (2005) may be the only data available, but it is unclear if those data provide an appropriate basis for estimating the relevant thresholds. More importantly, the extrapolation factors from Southall et al. (2007) were not stated specifically in the Navy's analysis for underwater detonations, but it appears that the Navy used 6 dB. As noted in the previous paragraph, Southall et al. (2007) seem to have used 6 dB as the extrapolation factor for determining PTS thresholds from TTS thresholds based on peak sound pressure levels, not for extrapolating from acoustic to explosive thresholds. Further, Southall et al. (2007) determined the TTS threshold for harbor seals exposed to pulsed sound (explosive sources) by using a correction factor of 12 dB to reduce the Type I threshold of 183 dB re 1 μPa²-sec for mid-frequency cetaceans, which equates to 171 dB re 1 μPa²-sec. The Commission believes that a threshold of 171 rather than 177 dB re 1 μPa²-sec should have been used by the Navy. Further, as stated previously, the TTS thresholds serve as the basis for the PTS and behavioral thresholds and could have been underestimated. Therefore, the Commission recommends that the Navy (1) use 171 dB re 1 μPa²-sec as the TTS threshold for phocids exposed to explosive sources and (2) based on that decrease in the TTS threshold for phocids, adjust the PTS and behavioral thresholds by increasing the TTS threshold by 15 dB and decreasing the TTS threshold by 5 dB, respectively.	The derivation of the TTS thresholds is discussed in Section 3.8.3.1.4.4 (Temporary Threshold Shift for Sonar and Other Active Acoustic Sources) and Section 3.8.3.1.4.5 (Temporary Threshold Shift for Explosives) of the Draft and Final Supplemental EIS/OEIS. The same offset between impulsive and non-impulsive TTS found for the only species (beluga whale) where both types of sound were tested, was used to convert the Kastak data (which used non-impulsive tones) to an impulsive threshold. This method is explained in the referenced Technical Report (Finneran and Jenkins 2012) and Southall et al. (2007).
MMC-11	The SEIS indicated that the Navy would conduct the proposed activities from April–October. However, given that training activities likely would occur only during the month of July, the Navy selected July as the seasonal representative for its analyses (Department of the Navy 2014a). Because the GOA environment (i.e., sound speed profiles and wind speed) varies markedly by season, modeling for July would provide an appropriate basis for estimating takes during the April–October timeframe only if the environmental parameters in July are considered the worst-case scenario. Conversely, the Navy could have averaged the environmental data for each season⁸, as it had for	The factor having the most effect on the modeling is marine mammal density. The Navy did consider data collected on marine mammal densities in GOA during other months. This, along with detailed information on the Navy's selection protocol, datasets, and specific density values, was presented in Section 3.8.2.5 (Marine Mammal Density Estimates) and the Pacific Navy Marine Species Density Database Technical Report (cited as U.S. Department of the Navy [2014a]) in the Draft and Final Supplemental EIS/OEIS. For example,

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	NWTT and the other Navy study areas. In either case, the timeframe in which modeling is conducted should be consistent with environmental conditions in the months when the proposed activities would be authorized to occur. Otherwise, if the Navy modeled only during July but the activities actually occur in April, the estimated numbers of takes could be underestimated due to colder temperatures and greater wind speeds that cause surface ducting conditions in GOA in the cold season⁹. The Commission made similar recommendations regarding this issue in its 18 November 2010 letter regarding the LOA for the same activities under the GOA Draft EIS. ⁸ Although those generally are defined as either two (cold and warm) or four (winter, spring, summer, and fall) seasons, the Navy also could have averaged the environmental data for the timeframe of activities (April–October) since it did not include seasonality in its density estimates. ⁹ Defined as December–May.	data from Rone et al. (2009), consisting of a marine mammal survey of the Study Area in April 2009, was considered in development of the densities for the analysis presented in the Draft Supplemental EIS/OEIS. As noted in this Technical Report, density estimates used in the modeling were based largely on the density estimates derived by Rone et al. (2014) from data collected during the Navy-funded line-transect survey conducted in the GOA Study Area from 23 June to 18 July 2013. These data provide the best available density estimates for the summer period; data are not sufficient to derive monthly density estimates.
MMC-12	Therefore, the Commission again recommends that, if the Navy could conduct training activities from April–October, then it include the appropriate environmental parameters in its acoustic modeling based on those months¹⁰ rather than assuming the activities would occur only during July. If it is indeed the case that activities will occur only during July, then the Navy should not be including a 7-month timeframe for it to conduct its activities. ¹⁰ Based either on the worst-case scenario or on averaging of the relevant months.	The two multi-day Northern Edge exercise effects are summed to reflect the annual number of predicted effects. Highest densities from the summer were used to model two exercises; therefore, the sum of the annual effects likely overestimates effects to all species and presents a worst-case analysis. The modeling for GOA was not done for seasonal year-round continuous activity. Because the proposed training will most likely occur in the June to July timeframe (as evidenced by average past event timeframes), the proposed training in GOA is different from other range complexes such as the Northwest Training and Testing range complex, where there is year-round unit level training; therefore, a seasonal analysis is called for in GOA. The GOA Draft and Final Supplemental EIS/OEIS indicated that the proposed activities could occur during the summer months (April–October) but are most likely to occur in the June to July timeframe. Given the most likely timeframe for the exercise is in the summer months, the most representative way to model the likely impacts was to model using the environmental conditions and marine mammal density data for June–July.
MMC-13	Ranges to impact criteria—Many of the proposed activities involve mitigation measures that currently are being implemented in accordance with previous environmental planning documents, regulations, or consultations. Most of the current mitigation zones for activities involving acoustic (e.g., mid- and high-frequency active sonar) or explosive sources (e.g., underwater detonations, explosive sonobuoys, surface detonations) were designed originally to reduce the potential for onset of TTS. For the DSEIS, the Navy revised its acoustic propagation models by updating hearing criteria and thresholds and marine mammal density and depth data. Based on the updated information, the models now predict that for certain activities the ranges to onset of TTS are much larger than those estimated previously. Due to the ineffectiveness and unacceptable operational impacts associated with mitigating those large areas, the Navy is unable to mitigate for	The range to effects zone and the mitigation zone are not the same, so different terms are therefore used to describe each. The average ranges to effect are provided in the Draft and Final Supplemental EIS/OEIS to show the typical zones of impact around representative sources. With respect to this comment's footnote #11, the Draft Supplemental EIS/OEIS footnote #1 for the subject table reads as follows: "This table does not provide an inclusive list of source bins; bins presented here represent the source bin with the largest range to effects within the given activity category." For example, Bins E6 through Bin E9 are included in the activity category, "Missile Exercises (Including Rockets)

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	onset of TTS for every activity. For that reason, it proposes to base its mitigation zones for each activity on avoiding or reducing PTS. Table 5.3-2 in the DSEIS lists the Navy's predicted distances or ranges over which PTS and TTS might occur and the recommended mitigation zones. Rather than include all sources, the table categorizes sound sources by a representative source type within a source bin (e.g., Bin MF1: SQS-53 antisubmarine warfare hull-mounted sonar) and provides average and maximum distances from the sound source at which PTS could be expected to occur and the average range at which TTS could be expected to occur. Chapter 3 of the DSEIS also includes tables listing various ranges. However, the tables in Chapter 3 include (1) only a subset of the proposed activities (6 of the 9 explosive activities analyzed, Table 3.8-18), (2) the average rather than maximum ranges (Table 3.8-18), and (3) values that are not consistent with Table 5.3-2¹¹. ¹¹ Table 5.3-2 also includes only a subset of the proposed activities (5 of the 9 explosive activities analyzed), some of which are not relevant to GOA (Bins E2 and 3).	up to 250 lb. NEW Using a Surface Target." As presented in Chapter 5 of the Draft and Final Supplemental EIS/OEIS, the mitigation is the same for all bins within the activity category.
MMC-14	In addition, the DSEIS does not provide the ranges to PTS for acoustic sources for more than 1 ping (Table 3.8-11), as it does for TTS (i.e., 1, 5, and 10 pings; Table 3.8-12). Instead, the Navy assumed that marine mammals could not maintain a speed of 10 knots parallel the ship and receive adequate energy over successive pings to result in PTS. Further, the Navy indicated in Table 3.8-11 that the ranges to PTS for acoustic sources were "within representative ocean acoustic environments" and in Table 3.8-12 that the ranges to TTS for acoustic sources were "over a representative range of ocean environments", which the Commission assumes as not necessarily within GOA¹². ¹² Unlike Table 3.8-18 in which the Navy indicated the ranges to effects were for marine mammals within the study area.	As explained in the Draft and Final Supplemental EIS/OEIS in Section 3.8.3.3.1.1 (Range to Effects), there is no reason to show a PTS range for more than one ping because of the short distances over which a PTS has the potential to occur. For the case of the most powerful hull-mounted source (hull-mounted mid-frequency anti-submarine warfare sonar) the ship moves beyond the PTS zone for each successive ping and there is no difference in magnitude of successive pings. Refer to Section 3.8.3.1.1 (Non-impulsive and Impulsive Sound Sources). Pings occur approximately every 50 seconds, and each subsequent ping has the same approximate range to PTS from the bow of the ship as the first ping. Therefore, there is not sufficient overlapping energy from one ping to the next to make presentation of multiple pings useful. As noted in the comment and presented in the Draft and Final Supplemental EIS/OEIS, an animal would have to be exposed at the TTS level by the first ping and then continue parallel to the ship within close proximity for 50 seconds to receive a second ping, potentially resulting in a PTS level exposure. Given the science detailed in the Draft and Final Supplemental EIS/OEIS (see Section 3.8.3.1.7, Marine Mammal Avoidance of Sound Exposures) indicating that marine mammals will behaviorally avoid high levels of sound, the assumption that a marine mammal would not remain alongside a pinging vessel is a simple but reasonable assumption. The Draft and Final Supplemental EIS/OEIS concludes that it is unlikely for an animal to maintain a speed of 10 knots and stay in close proximity to a vessel using active sonar. As presented in the Draft and

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		Final Supplemental EIS/OEIS (see Section 3.8.3.3.1.1, Range to Effects), while 10 knots was the ship's speed used in the model, a ship engaged in anti-submarine warfare training could be moving at between 10 and 15 knots. For a Navy vessel moving at a nominal 10 knots, it is unlikely a marine mammal could maintain the speed to parallel the ship and receive adequate energy over successive pings to result in a PTS exposure.
MMC-15	Absent GOA-specific information, the DSEIS process is not fully transparent and the Commission and public cannot comment on the appropriateness of the proposed mitigation zones. To address those shortcomings, the Commission recommends that the Navy provide the predicted average and maximum ranges for all impact criteria (i.e., behavioral response, TTS, PTS, onset slight lung injury, onset slight gastrointestinal injury, and onset mortality), for all activities (i.e., based on the activity category and representative source bins and including ranges for more than 1 ping), and for all functional hearing groups of marine mammals within GOA.	Because the ranges to PTS for acoustic sources are relatively short, the ranges to PTS presented in the Draft and Final Supplemental EIS/OEIS are representative of the ranges for purposes of the discussion. In short, the information provided in the Draft and Final Supplemental EIS/OEIS should be considered applicable to the GOA Study Area. The approximate maximum ranges to TTS provided in the Draft and Final Supplemental EIS/OEIS Table 3.8-12 are also representative of the ranges to effect and are provided in the Supplemental EIS/OEIS to show the typical zones of impact around representative sources.
MMC-16	Passive and active acoustic monitoring—The Navy indicated in its DSEIS that the use of lookouts (i.e., observers) is expected to increase the likelihood of detecting marine mammals at the surface, but it also noted that it is unlikely that using lookouts will be able to help avoid impacts on all species entirely due to the inherent limitations of visually detecting marine mammals. The Commission agrees and has made numerous recommendations to the Navy in previous letters to characterize the effectiveness of visual observation. For a number of years, the Navy has been working with collaborators at the University of St. Andrews to study observer effectiveness. The Navy has noted in the DSEIS that while data were collected as part of a proof-of-concept phase, those data are not fairly comparable as protocols were being changed and assessed, nor are those data statistically significant. The Commission agrees that the data are preliminary and may not be statistically significant but the basic information they provide is useful. In one instance, the marine mammal observers (MMOs) had sighted at least three marine mammals at distances less than 914 m (i.e., within the mitigation zone for mid-frequency active sonar for cetaceans), which were not sighted by Navy lookouts (Department of the Navy 2012). Further, MMOs have reported marine mammal sightings not observed by Navy lookouts to the Officer of the Deck, presumably to implement mitigation measures—however neither details regarding those reports nor raw sightings data were provided to confirm this (Department of the Navy 2010). The Commission believes that the study will be very informative once completed but that a precautionary approach should be taken in the interim.	The EIS/OEIS discussion indicating that lookouts cannot avoid all impacts to marine mammals is an acknowledgement that behavioral effects are possible outside the range of visual detection by any observers on board vessels at sea (e.g., Navy lookouts or trained Marine Mammal Observers). The fact that the distance at which marine mammals can behaviorally react to a vessel or other sound source is well beyond any shipboard observation capability, which means the effectiveness of lookouts has nothing to do with avoiding “impacts on all species entirely.” As acknowledged by the comment, the data that has been collected for the effectiveness study is preliminary. Navy believes that any conclusions based on the data at this point in the study, and especially any conclusions based on one or two abstracted instances of observation, are invalid.
MMC-17	Therefore, the Commission believes that the Navy should supplement its visual monitoring efforts with other measures rather than simply reducing the size of the zones	The Navy is not reducing the size of the zones it plans to monitor. Navy will continue to monitor the surrounding water to the limit of the

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	it plans to monitor. The Navy did propose to supplement visual monitoring with passive acoustics during activities that generate impulsive sounds (i.e., primarily explosives¹³) but not during activities in which mid- and high-frequency active sonar would be used. ¹³ Specifically for sinking exercises and exercises that use improved extended echo-ranging sonobuoys	available optics for safety of ships and aircraft during specific training activities. The area monitored by Navy lookouts is not restricted to only the mitigation zones. Navy is, however, implementing new mitigation zones based on the evolution of science and resultant understanding of the likely impacts from the proposed actions. Discussion in the Draft and Final Supplemental EIS/OEIS Section 5.3.3.1.11 (Increasing Visual and Passive Acoustic Observations) articulates why increased use of passive acoustics for the purpose of mitigation would be impractical with regard to implementation of military readiness activities and result in an unacceptable impact on readiness. Passive acoustic monitoring is already and will continue to be implemented. As mentioned in numerous locations in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Draft and Final Supplemental EIS/OEIS, passive acoustic monitoring would be conducted with Navy assets, such as passive ships sonar systems or sonobuoys, already participating in the activity. Additionally, mitigation measures were developed based on predicted potential impacts; therefore, the use of acoustic monitoring is not always warranted, nor practicable from an operational standpoint (Section 5.3.2.1, Acoustic Stressors). Some events do use passive acoustic monitoring as part of the mitigation when practicable. The Navy's visual mitigation has been demonstrated to be effective over the 8 years of monitoring associated with Navy training and testing at sea as reflected in publically available reports submitted to NMFS since 2006 and accessible on the NMFS Office of Protected Resources website (see Section 3.8.5, Summary of Observations During Previous Navy Activities, of the Draft and Final Supplemental EIS/OEIS, for more information in this regard).
MMC-18	The Navy uses visual, passive acoustic, and active acoustic monitoring during Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) sonar activities to augment its mitigation efforts over large areas. Therefore, it is not clear why the Navy did not propose to use those same monitoring methods as part of its mitigation measures for the other activities described in its DSEIS. To ensure effective mitigation and monitoring, the Commission recommends that the Navy use passive and active acoustics, whenever practicable, to supplement visual monitoring during the implementation of its mitigation measures for all activities that could cause PTS, injury, or mortality beyond those explosive activities for which passive acoustic monitoring already was proposed.	The Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) platforms are slow moving and deploy a high frequency active sonar (HF/M3) to identify marine mammals in close proximity (2 km) to the SURTASS LFA vessel. The active sonar system used by SURTASS LFA is built into the system's vertical array and can only be employed in this fashion from a slow-moving or stationary platform. It is not possible to employ this system on the types of vessels analyzed in the GOA Draft and Final Supplemental EIS/OEIS because a vertical array cannot be used on other ship classes whose mission includes speed and tactical movement while protecting aircraft carriers and other high value units.
MMC-19	Clearance time for deep-diving species—The Navy has proposed to cease acoustic	Implementing mitigation measures based on a "key consideration" of

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	activities (i.e., active sonar transmissions, Bin MF1) when a marine mammal is detected within the mitigation zone. This raises the issue of when those activities should resume. According to the DSEIS, those acoustic activities would resume when (1) the animal has been observed exiting the mitigation zone, (2) the animal has been thought to have exited the mitigation zone based on its course and speed, (3) the mitigation zone has been clear from any additional sightings for a period of 30 minutes, (4) the ship has transited more than 1.8 km beyond the location of the last sighting, or (5) the ship concludes that dolphins are deliberately closing in on the ship to ride the ship's bow wave (and there are no other marine mammal sightings within the mitigation zone). The Commission questions some of those requirements when the position of the marine mammal is unknown. The key consideration is the position of the marine mammal relative to the sound source, which is best estimated as a function of the marine mammal's position when first sighted and the speed and heading of both the vessel and the marine mammal. If the vessel and marine mammal are not moving in the same direction, then the marine mammal may leave the mitigation zone relatively quickly. However, if they are moving in the same direction, then the marine mammal may remain within the mitigation zone for a prolonged period. Unless the marine mammal is resighted leaving or already outside the mitigation zone, the Navy should not resume its activity until it has had a reasonable chance of verifying that it can do so without impacting the marine mammal to a greater degree. The delay should take into account that (1) a marine mammal may remain underwater where it is not visible, (2) it may change its heading and speed in response to a vessel or sound source, and (3) visual observation alone may not be sufficient to determine a marine mammal's position relative to a vessel or sound source after the initial sighting, unless the marine mammal surfaces again and is observed.	knowing "the speed and heading" of a marine mammal is impractical, given it is often impossible for a Marine Mammal Observer or a Navy lookout to determine the speed and heading of a marine mammal based on limited data available during a sighting. If a marine mammal is within a mitigation zone, the mitigation is implemented regardless of the animal's speed or direction of travel. For a vessel and the MF1 source (as presented in the Draft and Final Supplemental EIS/OEIS, Chapter 5, Table 5.3-2), mitigation zone begins at 1,000 yards and the longest range to PTS (Level A harassment) is approximately 100 yards. For sperm whales and beaked whales the PTS range is approximately 10 yards from the sonar dome located at the bow of a vessel. The science, as presented in Section 3.8.3.1.2.6 (Behavioral Reactions) and Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) of the Draft and Final Supplemental EIS/OEIS, indicates it is likely that animals would avoid the sound source and would not continue along in close proximity to the vessel's sound source given avoidance reactions that NMFS and Navy have quantified as Level B behavioral reactions. For a Navy vessel moving at a nominal 10 knots, it is unlikely a marine mammal could maintain the speed to parallel the ship and receive adequate energy over successive pings to result in a PTS exposure.
MMC-20	The dive time of a sighted marine mammal is a central consideration whenever mitigation measures depend on visual observation. For some medium-sized and large cetaceans, the proposed 30-minute clearance time may be inadequate, sometimes markedly so. Beaked and sperm whales, in particular, can remain submerged for periods far exceeding 30 minutes. Blainville's and Cuvier's beaked whales have been known to dive to considerable depths (> 1,400 m) and to remain submerged for more than 80 minutes (Baird et al. 2008). The grand mean dive duration for those species of beaked whales during foraging dives has been estimated at approximately 60 minutes (51.3 and 64.5 minutes for Blainville's and Cuvier's beaked whales, respectively; Baird pers. comm.). Recent data on Cuvier's beaked whales revealed a maximum dive duration of more than 137 minutes and dive depths of more than 2,990 m with a mean dive duration of 67.4 minutes (Schorr et al. 2014). Sperm whales also dive to great depths and can remain submerged for at least 55 minutes (Drouot et al. 2004), with a grand mean dive time of approximately 45 minutes (Watwood et al. 2006). If they continue foraging in the same area as a stationary acoustic source and that source is turned on after only 30 minutes, then beaked whales and sperm whales could be exposed to sound levels	As described in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) Navy training events differ from systematic line-transect marine mammal surveys in several respects. These differences suggest the use of g(0), which takes into consideration dive times of cryptic or deep diving species, as a sightability factor to quantitatively adjust model-predicted effects based on mitigation is likely to result in an underestimate of the protection afforded by the implementation of mitigation. For example, for a dipping sonar from a hovering helicopter as a stationary source, as presented in the Draft and Final Supplemental EIS/OEIS in Chapter 5 (Table 5.3-2), the longest range to PTS is approximately 20 yards (Level A harassment). If an animal is observed within the mitigation zone, the activity can resume once the zone has been clear from any additional sightings for a period of 10 minutes. It is unlikely that a marine mammal would remain underwater directly below a hovering helicopter and within 20 yards of the sound source for more than 10 minutes is unlikely

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	sufficient to cause Level A harassment.	(Section 3.8.3.1.7, Marine Mammal Avoidance of Sound Exposures).
MMC-21	Furthermore, lookouts may not detect marine mammals each time they return to the surface, especially cryptic species such as beaked whales, which are difficult to detect even under ideal conditions. The Navy itself indicated in the DSEIS that beaked whales are notoriously difficult to detect at sea. Barlow (1999) found that “[a]ccounting for both submerged animals and animals that are otherwise missed by the observers in excellent survey conditions, only 23 percent of Cuvier’s beaked whales and 45 percent of Mesoplodon beaked whales are estimated to be seen on ship surveys if they are located directly on the survey trackline.” Therefore, after a shutdown, the Commission recommends that the Navy use a second clearance time category of 60 minutes for beaked whales and sperm whales if the animal has not been observed exiting the mitigation zone.	The MMC further recommends that specific mitigation measures involving a longer (1 hour) wait period be implemented based on species identification of sperm whales and beaked whales. As discussed in Section 5.3.3.1.15 (Increasing Reporting Requirements), Navy lookouts are not trained on taxonomic species identification of marine mammals since it has no applicability as a mission requirement. Navy lookouts are observing a relatively small area for the presence of marine mammals, which is not the same as conducting a line transect survey. For example, for a stationary dipping sonar deployed from a hovering helicopter, as presented in the Draft and Final Supplemental EIS/OEIS in Chapter 5 (Standard Operations Procedures, Mitigation, and Monitoring) (Table 5.3-2), the longest range to PTS is approximately 20 yards (Level A harassment). If an animal is observed within the mitigation zone, the activity can resume once the zone has been clear from any additional sightings for a period of 10 minutes. It is unlikely that a marine mammal would remain underwater directly below a hovering helicopter and within 20 yards of the sound source for more than 10 minutes (see Section 3.8.3.1.7, Marine Mammal Avoidance of Sound Exposures). Additionally, see Section 5.3.2.1.1.1 (Hull Mounted Mid-Frequency Active Sonar) and 5.3.2.1.1.2 (High-Frequency and Non-Hull Mounted Mid-Frequency Active Sonar), which discuss the reasons why waiting longer periods of time before resuming the training activity would be unacceptable due to impacts on personnel safety, the practicality of implementation, and the effectiveness of the military readiness activity.
MMC-22	The Navy assumed that marine mammals likely would avoid repeated high-level exposures to a sound source that could result in injuries (i.e., PTS). It therefore adjusted its estimated numbers of takes to account for marine mammals swimming away from a sonar or other active source and away from multiple explosions to avoid repeated high-level sound exposures. The Navy also assumed that harbor porpoises and beaked whales would avoid certain training activity areas because of high levels of vessel or aircraft traffic before those activities. For those types of activities, the Navy appears to have reduced the model-estimated takes from Level A harassment (i.e., PTS) to Level B harassment (i.e., TTS) during use of sonar and other active acoustic sources and from mortality to Level A harassment (i.e., injury) during use of explosive sources. The Commission recognizes that, depending on conditions, marine mammals may avoid areas of excessive sound or activity. Indeed, one of the concerns regarding sound-related disturbance is that it causes marine mammals to abandon important habitat on a long-term or even permanent basis. That being said, the Commission knows of no	The scientific basis for the avoidance of anthropogenic activity and sound underwater is presented in the Draft and Final Supplemental EIS/OEIS in Section 3.8.3.1.2.6 (Behavioral Reactions). Based on that information it was assumed that all marine mammals would avoid intense activity and the proximity to active sound sources. With regard to the comment’s concerns over long term consequences, Section 3.8.3.1.3. (Long-Term Consequences to the Individual and the Population) and Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Draft and Final Supplemental EIS/OEIS provide a discussion on this topic and the reasons why Navy does not expect marine mammals to abandon important habitat on a long-term or permanent basis.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	scientifically established basis for predicting the extent to which marine mammals will abandon their habitat based on the presence of vessels or aircraft. That would be essential information for adjusting the estimated numbers of takes.	
MMC-23	The Navy also indicated that its post-model analysis considered the potential for mitigation to reduce PTS from exposure to sonar and other active acoustic sources and mortalities from exposure to explosive sources. Clearly, the purpose of mitigation measures is to reduce the number and severity of takes. However, the effectiveness of the Navy's mitigation measures has not been demonstrated and remains uncertain. This is an issue that the Commission has raised many times in the past, and the Navy has recognized the need to assess the effectiveness of its mitigation measures in its Integrated Comprehensive Monitoring Program and in the current DSEIS, which states that although the use of lookouts was expected to increase the likelihood that marine species would be detected at the water's surface, it was unlikely that using those lookouts would help avoid impacts on all species because of the inherent limitations of visual monitoring.	It is incorrect to state that the effectiveness of the Navy's mitigation measures has not been demonstrated, since there are over 8 years of reporting that have been provided to NMFS from across the Navy for the issued Letters of Authorization. Those reports, including the first report in 2006, clearly document the implementation of mitigations that are designed to reduce the number and severity of impacts to marine species. These reports note instances where marine species were detected and mitigation was implemented, including the reductions or shut-down of active sonar. Even with implemented visual mitigation, training in the GOA Study Area will result in impacts to a number of marine mammals, which is why predicted effects are quantified. As noted previously, the inherent limitations of visual monitoring are that the distance at which marine mammals can behaviorally react to anthropogenic disturbance (many miles) is well beyond the capability of any humans to visually detect those animals.
MMC-24	According to data in the monitoring reports mentioned previously (Department of the Navy 2010, 2012), the effectiveness of the lookouts has yet to be demonstrated. However, the Navy proposed to adjust its take estimates based on both mitigation effectiveness scores and g(0)—the probability that an animal on a vessel's or aircraft's track line will be detected. According to its proposed approach, for each species the Navy would multiply a mitigation effectiveness score and a g(0) to estimate the percentage of the subject species that would be observed by lookouts and for which mitigation would be implemented, thus reducing the estimated numbers of marine mammal takes for Level A harassment and mortality (explosive sources only). The Navy would reduce the estimated numbers of Level A harassment (i.e., PTS) and mortality takes for that species to Level B (i.e., TTS) or Level A harassment (i.e., injury) takes, respectively. To implement that approach, the Navy assigned mitigation effectiveness scores of— 1 if the entire mitigation zone can be observed visually on a continuous basis based on the surveillance platform(s), number of lookouts, and size of the range to effects zone; 0.5 if (1) over half of the mitigation zone can be observed visually on a continuous basis or (2) there is one or more of the scenarios within the activity for which the mitigation zone cannot be observed visually on a continuous basis (but the range to effects zone can be observed visually for the majority of the scenarios); or N/A if (1) less than half of the mitigation zone can be observed visually on a continuous basis or (2) the mitigation zone cannot be observed visually on a continuous basis during most of the scenarios within the activity due to the type of surveillance platform(s).	Detecting all marine mammals to the limit of observation in a marine mammal survey research protocol is substantively different than the detection of marine mammals within a mitigation zone (such as 1,000 yards for Bin MF1 or a fixed location a few hundred yards in radius for most explosives). As presented in the Draft and Final Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures), although using g(0) likely underestimates the ability of Navy observers to detect a marine mammal during a given event, the Navy determined that the standard "detection probability" referred to as g(0) was most appropriate data available to numerically approximate the sightability of marine mammals within the mitigation zones for detection by a Lookout. As presented in the Draft and Final Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) and Section 3.8.3.3.6.2 (Avoidance Behavior and Mitigation Measures as Applied to Explosions), the Navy's acoustic modeling program predicts effects without taking into account any shutdown or delay of the activity when marine mammals are detected. The model therefore overestimates injurious impacts to marine mammals within mitigation zones and so the post-model analysis considers the potential for implementation of mitigation to reduce those already overestimated impacts. For clarification, the acoustic modeling adjustment factor

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	number of lookouts, and size of the mitigation zone. The difficulty with this approach is in determining the appropriate adjustment factors. Again, the information needed to judge effectiveness has not been made available. In addition, the Navy has not provided the criteria (i.e., the numbers and types of surveillance platforms, numbers of lookouts, and sizes of the respective zones) needed to elicit the three mitigation effectiveness scores. Moreover, the coverage afforded by the mitigation measures is not adequate to ensure that those measures will be effective. That is, measures of effort (i.e., numbers and types of surveillance platforms, numbers of lookouts, and sizes of mitigation zones) are not necessarily measures of, or even linked to, effectiveness. The Navy has not yet demonstrated that such measures of effort are synonymous with effectiveness nor has it demonstrated the effectiveness of the visual monitoring measures, as discussed previously. The Navy further reinforced that fact in its DSEIS when stating the Navy believes that it is improper to use the proof-of-concept data to draw any conclusions on the effectiveness of Navy lookouts. Therefore, it is unclear what basis the Navy would have to assign the mitigation effectiveness scores, as the use of those scores to reduce the numbers of takes is unsubstantiated.	represents the ability to effectively observe an entire mitigation zone, in contrast to a measurement of the effectiveness of Lookouts in detecting marine mammals in general. The basis for assigning the mitigation effectiveness factors is presented in the Draft and Final Supplemental EIS/OEIS in Table 3.8-10 (Post-Model Acoustic Effects Quantification Process) and Table 3.8-19 (Impulse Activities Adjustment Factors Integrating Implementation of Mitigation into Modeling Analyses for the Study Area) for the information on the observation of the mitigation zone as a mitigation effectiveness factor. Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) and Section 3.8.3.3.6.2 (Avoidance Behavior and Mitigation Measures as Applied to Explosions) of the Draft and Final Supplemental EIS/OEIS provide further details and analysis.
MMC-25	The information that the Navy provided in Chapter 5 of the DSEIS regarding the effectiveness of various mitigation measures does not necessarily comport with its determination of mitigation effectiveness scores. For example, the Navy indicated that the mitigation zone for sinking exercises is 4.6 km. However, the Navy stated it is highly unlikely that anything but a whale blow or large pod of dolphins will be seen at distances closer to 1.9 km near the perimeter of the mitigation zone. Further, the mortality zone is less than 229 m. The Commission is unsure how the Navy would implement a shut down or delay for odontocetes that are not in a large group or for pinnipeds in general. Nevertheless, the Navy concluded that the measure is likely effective and reduced the takes by the portion of animals that were likely to be seen, thus assigning the highest effectiveness score of 1 for the mortality zone and 0.5 for the injury zone (Table 3.8-19). Those effectiveness scores again seem to be measures of effort rather than of true effectiveness. In addition, the Navy appears to be inconsistent in its use of the terms “range to effects zone” and “mitigation zone,” which are not the same (see Table 5.3-2 of the DSEIS). More importantly, some of the mitigation zones may be smaller than the estimated range to effects zones. For example, the Navy proposed a mitigation zone of 183 m after a 10 dB reduction in power for its most powerful active acoustic sources (e.g., Bin MF1) and assumed that marine mammals would leave the area near the sound source after the first few pings.	The information presented in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Draft and Final Supplemental EIS/OEIS is not in conflict with the mitigation effectiveness factors used in the post-modeling adjustments. While it is harder to detect animals at greater distance, typically the example events occur much closer to the platform and there may be multiple platforms involved, so characterizations of mitigation based on assuming a maximum 1.9 km sighting distance from a platform are not accurate. As detailed in the Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) of the Draft and Final Supplemental EIS/OEIS, line-transect surveys and subsequent analyses are typically used to estimate cetacean abundance and differ greatly from Navy training so the use of g(0) as a relative sighting factor is conservative for the following reasons: (1) Mitigation zones for Navy training and testing events are significantly smaller (typically less than 1,000 yd. radius) than the area typically searched during line-transect surveys, which includes the maximum viewable distance out to the horizon; (2) Navy events can involve more than one vessel or aircraft (or both) operating in proximity to each other or otherwise covering the same general area. Additional vessels and aircraft can result in additional watch personnel observing the mitigation zone resulting in more observation platforms and observers than the two primary observers used in marine mammal surveys upon which g(0) is based; (3) A systematic marine mammal line-transect survey is designed to sample broad areas of the ocean, and generally does not retrace the same

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		area during a given survey. Therefore, in terms of $g(0)$, the two primary marine mammal survey observers have only a limited opportunity to detect marine mammals that may be present during a single pass along the trackline. In contrast, the small- and medium-caliber gunnery exercises noted in the comment involve an area-focused event, where participants, impacts, and Lookouts are focused on the same small area through the duration of the exercise. Both of these circumstances result in a longer observation period of a focused area with more opportunities for detecting marine mammals, than are offered by a systematic marine mammal line-transect survey that only passes through an area once. As presented in the Draft and Final Supplemental EIS/OEIS, the mitigation effectiveness factor is a factor used in the numerical adjustment to modeled exposures to account for likely animal behaviors and the implementation of mitigation, vice an absolute measure of effectiveness. The mitigation effectiveness number represents the ability to keep the mitigation zone under observation. The detectability of individual marine mammal species is represented in the adjustment of the raw modeling numbers by the $g(0)$ factor as described in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) and Section 3.8.3.3.6.2 (Avoidance Behavior and Mitigation Measures as Applied to Explosions). As presented in Chapter 5 of the Draft and Final Supplemental EIS/OEIS, Navy would implement a shut down or delay as appropriate and as presented for any marine mammal within the mitigation zone. Navy recognizes that there will be occasions when marine mammals may not be detected within the mitigation zone, which is why potential effects have been quantified.
MMC-26	However, the Navy did not present data on the range to onset PTS for more than 1 ping and only provided data for “representative ocean acoustic environments”, which may or may not be representative of GOA.	According to the science, as presented in Section 3.8.3.1.2.6 (Behavioral Reactions) and Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) of the Draft and Final Supplemental EIS/OEIS, it is likely that animals would avoid the sound source and not stay in close proximity to receive multiple pings given avoidance reactions that NMFS and Navy have quantified as Level B behavioral reactions. For a Navy vessel moving at a nominal 10–15 knots, it is unlikely a marine mammal would stay underwater in proximity to an aversive sound source while traveling at speed to receive adequate energy over successive pings resulting in a PTS exposure. For these reasons and as presented in Section 3.8.3.3.1.1 (Range to Effects), it is very unlikely these circumstances would occur, so it does not make

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		sense to present a ranges to PTS from multiple pings. The range to effects for PTS are such short distances, that the generic ocean environment provides an adequate approximation.
MMC-27	It also is unclear how the Navy evaluated sources that have a typical duty cycle of several pings per minute (i.e., dipping sonar), as the range to onset PTS for those sources appear to be based on 1 ping as well (Table 5.3-2). Without the relevant information, mitigation based on those zones cannot be evaluated fully or deemed effective and assigning mitigation effectiveness scores is inappropriate.	The procedure for assigning the mitigation effectiveness numbers is presented in the Draft and Final Supplemental EIS/OEIS in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) and Section 3.8.3.3.6.2 (Avoidance Behavior and Mitigation Measures as Applied to Explosions).
MMC-28	The Navy used numerous references to estimate species-specific g(0) values (Table 3.8-9). Those sources were based on both vessel- and aircraft-based scientific surveys of marine mammals. It also indicated that various factors are involved in estimating g(0), including sightability and detectability of the animal (e.g., behavior and appearance, group size, blow characteristics), viewing conditions (e.g., sea state, wind speed, wind direction, wave height, and glare), the observer's ability to detect animals (e.g., experience, fatigue, and concentration), and platform characteristics (e.g., pitch, roll, speed, and height above water). In the DSEIS, the Navy noted that due to the various detection probabilities, levels of experience, and dependence on sighting conditions, lookouts would not always be effective at avoiding impacts on all species. Yet it based its g(0) estimates on data from experienced researchers conducting scientific surveys, not on data from Navy lookouts whose effectiveness as observers has yet to be determined. The Commission recommended earlier in this letter that the Navy supplement its mitigation and monitoring measures because the observer effectiveness study has yet to be completed or reviewed. It therefore would be inappropriate for the Navy to reduce the numbers of takes based on the proposed post-analysis approach because, as the Navy has described its approach, it does not address the issue of observer effectiveness in the Navy's development of mitigation effectiveness scores or g(0) values. Further, the Navy has acknowledged that it would be improper to use the proof-of-concept data to draw any conclusions on the effectiveness of Navy lookouts. Accordingly, applicable data simply do not exist currently to fulfill the Navy's post-analysis objective. The Navy did indicate that, although distinct differences between marine mammal surveys and the proposed training activities exist, the use of g(0) as an approximate sightability factor for quantitatively adjusting model-estimated takes based on implementation of mitigation (mitigation effectiveness multiplied by g(0)) is an appropriate use of the best available science based on the way it has been applied. Consistent with its impact assessment processes, the Navy applied g(0) values in a conservative manner (erring on the side of overestimating the number of impacts) to adjust model-estimated takes within the applicable mitigation zones during training activities. That reasoning is unsupported by facts stated within the DSEIS itself. As an example, the mitigation zone for sinking exercises is 4.6 km with one lookout stationed on a vessel and one in an aircraft, the range to observe a whale blow or large pod of	Navy has used the best available science from published sources providing g(0) values for various marine mammal species as a relative measure of marine mammal detectability. As detailed in the Draft and Final Supplemental EIS/OEIS in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures), the use of g(0) as a relative measure of marine mammal detectability in the post-modeling analysis and implementation of mitigation has been addressed. A discussion of the differences between researchers involved in line transect surveys and Navy Lookouts has been presented as has a discussion of the mitigation effectiveness factors used in the post-modeling adjustments. The mitigation effectiveness factors (1, 0.5, or 0) for post-modeling adjustments do not require the completion of the overall Lookout effectiveness study to constitute valid estimates for the purpose of this analysis. Navy disagrees with the suggestion by the MMC to eliminate the step in the analysis that adjusted exposure estimates by considering likely behavioral responses to acoustic sources and the benefits of implementing mitigation. Quantifying likely behavior and the benefits of mitigation provide a more realistic, although still conservative, estimate of marine mammal exposures likely to occur during training and testing activities using acoustic and explosive sources. The Navy's visual mitigation has been demonstrated to be effective over the 8 years of monitoring associated with Navy training and testing at sea as reflected in publically available reports submitted to NMFS since 2006 and accessible on the NMFS Office of Protected Resources website.

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	dolphins as purported by the Navy is 1.9 km, and the mortality zone is less than 229 m, yet the Navy assigned a mitigation effectiveness score of 1—fully effective. The Commission is concerned that the Navy not only is applying g(0) values based on experienced scientists and not lookouts—who according to the Navy have less experience detecting marine mammals than marine mammal observers used for line-transect surveys—but also believes that mitigation can be implemented at ranges beyond visual limits. Given these concerns, the Commission recommends that the Navy (1) use the total numbers of model-estimated Level A harassment ¹⁴ and mortality takes rather than reducing the estimated numbers of Level A harassment and mortality takes based on the Navy's proposed post-model analysis and (2) incorporate those take estimates into its LOA application.	
MMC-29	Cumulative impacts The Navy's analysis of cumulative impacts on marine mammals extends the evaluations of individual and multiple sound-producing activities under the various alternatives provided in Chapter 3. The Navy's analytical framework is commendable, but its description and use of the framework in the DSEIS fall short in several important respects. First, the DSEIS did not include the detailed information needed to assess the reliability of the framework. Without that information, the framework is a conceptual model only and the reader does not have sufficient information to judge its practical utility and, therefore, the soundness of the Navy's decision-making based on that model.	Please note that the GOA Draft and Final Supplemental EIS/OEIS and the Navy's decision-making process do not rely on an output of the conceptual framework presented in other Navy environmental analyses. See Section 3.8.3.1.2 (Analysis Background and Framework) of the Draft and Final Supplemental EIS/OEIS describing the overall analysis and framework for the Supplemental EIS/OEIS. See Section 3.8.3.1.3 (Long-Term Consequences to the Individual and the Population), Section 3.8.3.3 (Analysis of Effects on Marine Mammals), and Section 3.8.4 (Summary of Impacts [Combined Impacts of all Stressors] on Marine Mammals) of the Draft and Final Supplemental EIS/OEIS. Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Draft Supplemental EIS/OEIS summarizes the empirical data gathered since 2006 indicating there is no direct evidence that routine Navy training and testing spanning decades has negatively impacted marine mammal populations at any Navy Range Complex.
MMC-30	Second, the DSEIS indicated that the Navy omitted from its overall cumulative impact analysis stressors or activities found to have a negligible impact on an individual species. Doing so runs counter to the idea behind a cumulative impact assessment. CEQ's regulations for implementing the National Environmental Policy Act point out that "[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). In essence, the approach used in the DSEIS does not support a cumulative impacts analysis.	Please note that the analysis of cumulative impacts is consistent with the findings from the 2011 GOA EIS/OEIS, and the current analysis supplements those findings. As stated in Section 4.2.2 (Identify Appropriate Level of Analysis for Each Resource), in accordance with Council on Environmental Quality guidance, the cumulative impacts analysis focused on impacts that are "truly meaningful." This was accomplished by reviewing the direct and indirect impacts that could occur on each resource under each alternative. Key factors considered were the current status and sensitivity of the resource and the intensity, duration, and spatial extent of the impacts of each potential stressor. In general, long-term rather than short-term impacts and widespread rather than localized impacts were considered more likely to contribute to cumulative impacts. Those impacts to a resource

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		that were considered to be negligible were not considered further in the analysis.
MMC-31	To address these fundamental concerns, the Commission recommends that the Navy revise its DSEIS to (1) include in its cumulative impacts analysis all potential risk factors, including those that are deemed individually minor but could be significant when considered collectively and (2) provide sufficient details to allow the reader to evaluate the utility of the Navy's conceptual framework for its cumulative impacts analysis.	The level of analysis for each resource was commensurate with the intensity of the impacts identified in Chapter 3 (Affected Environment and Environmental Consequences) of the 2011 GOA Final EIS/OEIS. The proposed action is identical, and there are no impacts in addition to those analyzed in the 2011 GOA EIS/OEIS. Furthermore, the acoustic impact modeling indicates fewer predicted effects to marine mammals from acoustic sources. Because of these factors, there are fewer cumulative impacts overall as compared to those analyzed in the 2011 GOA EIS/OEIS, which for acoustic stressors were found not to be cumulatively significant.
MMC-32	Possible errors in the take tables The Commission observed some possible errors in the take tables provided in the Navy's DSEIS, LOA application, and GOA technical report that includes the actual modeled data (GOA-TR; Department of the Navy 2014a). For example, in the GOA-TR, the model-estimated takes for TTS exceed those for behavior for Dall's porpoises (13,532 and 2,198, respectively) exposed to non-impulsive sources (acoustic sources) during training events under Alternative 2¹⁵ (Table 13 in Department of the Navy 2014a), but not for harbor porpoises (0 and 7,411, respectively). The Commission is unsure how the takes would be so much greater for the TTS threshold when it is higher than the behavior threshold¹⁶. ¹⁵ Alternative 2 in the DSEIS and GOA-TR is the Preferred Alternative, as discussed in the LOA application. ¹⁶ Interestingly, the harbor porpoise TTS and behavior takes for non-impulsive sources under the Preferred Alternative in the NWTT-TR were 769 and 5,920, respectively. The Commission also is unsure how the TTS takes for harbor porpoises are 0 in the GOA-TR.	There are no errors in the preliminary unprocessed numbers in the tables presented in the GOA TR or in the numbers presented in the tables in Draft Supplemental EIS/OEIS, Final Supplemental EIS/OEIS, or LOA application. The exposure numbers presented in the "GOA-TR" are raw model output that have not been adjusted by post-processing to account for likely marine mammal behavior or the affect from standard operating procedures and implementation of mitigation measures. The procedure for quantifying effects to marine mammals presented in the Draft and Final Supplemental EIS/OEIS and LOA application represent the most accurate means of estimating predicted takes incorporating all the information necessary for a complete analysis and using the best available science. As detailed in the Draft and Final Supplemental EIS/OEIS Section 3.8.3.1.5 (Behavioral Responses), non-TTS Level B behavioral responses for Dall's porpoise are predicted using the behavioral response function. This differs from harbor porpoise, where a sound pressure level of 120 dB re 1 µPa is used in this analysis as a threshold for predicting behavioral responses. As such, the two are not comparable. Because the TTS threshold is a sound exposure level-based threshold involving accumulated energy and includes many animats also exposed under the risk function, this result is not unexpected. Additionally, in the Study Area considered in the Draft and Final Supplemental EIS/OEIS, which generally consists of deep ocean areas well offshore, the density of Dall's porpoise is much higher than that of harbor porpoise. While harbor porpoise may be within the 120 dB re 1 µPa acoustic footprint, it is unlikely they would be within the close range required for TTS to occur. Harassment under the BRF and harassment under the TTS criteria are both considered

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
		Level B takes under MMPA and NMFS has determined that animals taken under the higher TTS criteria and the BRF should not be double counted or counted as taken twice by the same acoustic exposure or subsequent exposures within a 24 hour period.
MMC-33	One possible explanation is that the Navy used the weighted threshold of 152 dB re 1 μPa²-sec rather than the unweighted threshold of 176 dB re 1 μPa-sec¹⁷ as the upper limit of BRF2¹⁸ (Finneran and Jenkins 2012) for high-frequency cetaceans other than harbor porpoises. If that is the case, then the estimated numbers of takes for behavior would have been underestimated. It would not be appropriate for the Navy to use a weighted threshold based on a Type II weighting function when the Navy indicated that it applied the Type I weighting functions (as normally are used in concert with either unweighted or M-weighted thresholds) to the estimated exposures—this logic would apply to mid- and low-frequency cetaceans as well. The Navy did not specify what it used as the upper limit of the BRF2, but in previous environmental compliance documents for its Tactical Training Theater Assessment and Planning Program (TAP)¹⁹, the Commission believes that the Navy assumed the pings emitted from the sound sources were 1 sec in length, thus the sound pressure level and sound exposure level were equivalent. That meant that the upper limit of BRF2 as used in previous TAP documents was 195 dB re 1 μPa, which equated to 195 dB re 1 μPa²-sec and the delineation of behavior and TTS takes occurred at 195. The assumption of a 1-sec ping may be appropriate for some sound sources but likely is not appropriate for all. Therefore, the Commission recommends that the Navy (1) describe what it used as the upper limit of BRF1 for low-frequency cetaceans and the upper limits of BRF2 for both mid- and high-frequency cetaceans, including whether it assumed a 1-sec ping for all sources and (2) if the upper limits of the BRFs were based on weighted thresholds, use the unweighted or M-weighted thresholds of 195 dB re 1 μPa²-sec for low- and mid-frequency cetaceans and 176 dB re 1 μPa²-sec for high-frequency cetaceans to revise its behavior take estimates for all marine mammals exposed to acoustic sources. ¹⁷ Based on the Commission's rationale in the criteria and thresholds section of this letter. ¹⁸ BRF2 is used for all mid- and high-frequency cetaceans but beaked whales and harbor porpoises; while BRF1 is used for low-frequency cetaceans. ¹⁹ The environmental compliance documents under TAP are currently in place, including the final rules and associated letters of authorization under the MMPA that expire in 2015.	Navy has described the derivation of the BRF in Sections 3.8.3.1.5 (Behavioral Responses) of the Draft and Final Supplemental EIS/OEIS and Finneran and Jenkins (2012). The upper limit of either BRF is not directly related to the TTS threshold. Although BRF and TTS are considered as Level B under the MMPA for military readiness, they are two separate criteria based on different metrics and different frequency weighting systems. Sound exposure level (SEL) is the most appropriate metric to predict TTS since it accounts for signal duration. Sound pressure level is independent of duration and is the metric that best correlates with potential behavioral harassment. Furthermore, SEL to predict TTS is weighted with a Type II function for cetaceans whereas behavior is weighted with a Type I function. Mathematically SEL (for TTS) and SPL (for behavior) are not on the same linear scale and their relationship to one another changes based on the frequency and duration of the sounds being analyzed.
MMC-34	The Navy also appears to be rounding all take numbers from the GOA-TR down in its DSEIS and LOA application rather than rounding to the nearest whole number, which the Commission believes was the Navy's policy for species listed under the Marine Mammal Protection Act (MMPA) in its environmental compliance documents for its TAP Program. When determining the population within a modeling area in its GOA-TR, the Navy indicated the total true population is (1) rounded to 1 if the total true population is equal to or greater than 0.05 but less than 1.0 and (2) rounded to the nearest whole number if the total true population is equal to or greater than 1.0. For example, the	In April 2011 at the start of TAP Phase II process, Navy and NMFS (as a cooperating agency for NEPA purposes) had a meeting at NMFS headquarters and agreed to the rounding process presented in the GOA Draft and Final Supplemental EIS/OEIS. The final modeling numbers presented in the Draft and Final Supplemental EIS/OEIS were rounded down at the sub-total stage so those totals in the Draft and Final Supplemental EIS/OEIS based on the various effect criteria and the totals presented in the Letter of Authorization Request based

Table D.4-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
	model-estimated non-TTS (behavioral) takes for Stejneger's beaked whales exposed to non-impulsive sources during training events under Alternative 2 in the GOA-TR was 1,153.95 (Table 13 in Department of the Navy 2014a), but was rounded down to 1,153 in the DSEIS (Table 3.8-17) and LOA application (Table 5.220). It is unclear why the Navy wouldn't be rounding to the nearest whole number in its DSEIS and LOA application. Accordingly, the Commission recommends that the Navy round its takes, based on those takes in the GOA-TR tables, to the nearest whole number or zero in all of its take tables in the DSEIS and LOA application.	on Level A and Level B harassment as grand totals would sum consistently. Specifically, all fractional post-processed exposures for a species/stock across all events within each a category sub-total (Impulse and Non-Impulse) are summed to provide an annual total predicted number of effects. The options for rounding had been to round up, to round down, or to manually change the conventionally rounded numbers so that the sub-total and grand totals matched. Given the conservative factors in the modeling (described in the Draft Supplemental EIS/OEIS Section 3.8.3.1.6.3, Navy Acoustic Effects Model, [sub-heading <i>Model Assumptions and Limitations</i>]) that produce an overestimate in the predicted effects, using the Microsoft Excel rounddown function at this final stage of number presentation was considered to be the most consistent and representative means of producing the final numbers presented in the analyses. The differences in alternative rounding procedures would be negligible and would have no consequences related to the analysis of impacts to populations of marine mammals or the likely long term consequences resulting from the proposed action. NAEMO rounding for computation of the total population in a modeling area is unrelated to rounding of predicted effects post-modeling for sub-totals. However, the NAEMO computation illustrates another mathematically conservative procedure leading to overestimation of effects, that the rounddown function is intended to partially balance.

Table D.4-2 contains comments on the GOA Draft Supplemental EIS/OEIS from Alaska Native federally recognized Tribes, corporations, and organizations. Responses to these comments were prepared and reviewed for scientific and technical accuracy and completeness.

Table D.4-2: Responses to Comments Received from Alaska Native Federally-Recognized Tribes, Corporations, and Organizations

Commenter	Comment	Navy Response
Native Village of Eyak (NVE)-01 (Electronic and Written)	Naval Facilities Engineering Command Northwest Attention: Ms. Amy Burt - GOA Supplemental EIS/OEIS Project Manager 1101 Tautog Circle, Suite 203 Silverdale, WA 98315-1101 Ms. Burt, The Native Village of Eyak continues to be troubled by ongoing training operations in the Gulf of Alaska. The most recent draft Environmental Impact Statement lays out many of the potential risks quite well, however we question the finding that the impacts resulting from these training exercises are acceptable, and that mitigation of environmental impacts is even possible. We know more about deep space than we know about our oceans. One of the few certainties that exist, regarding oceanography, however, is the key role that the Gulf of Alaska plays globally. The area is a spawning ground, nursery, feeding ground, and habitat for innumerable species of marine mammals, fish, birds, crustaceans, plankton and likely hosts thousands of species that have yet to be discovered.	Thank you for your comment regarding potential impacts and their mitigation. While knowledge of the ocean is limited, there is a considerable body of research and years of monitoring data from areas where Navy intensively trains, which provide the basis for the findings presented in the 2011 GOA EIS/OEIS and the Supplemental EIS/OEIS. See for example, Section 3.8.5 (Summary of Observations During Previous Navy Activities). All indications from the best available science are that impacts from the proposed continuation of Navy training in the TMAA will result in no meaningful or lasting changes to any marine species, their habitat, or other resources in the area. Mitigation measures are modifications to the proposed action that are implemented for the sole purpose of reducing specific potential environmental impacts on a particular resource. As the analysis in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS presents, the Navy is aware that there will be impacts resulting from the proposed action even though there will be measures implemented as mitigations to reduce those impacts. For marine mammals in particular, the Navy is requesting a Letter of Authorization from National Marine Fisheries Service due to impacts under the Marine Mammal Protection Act. The Navy has conducted a government-to-government consultation with the Native Village of Eyak in accordance with Executive Order 13175 (<i>Consultation and Coordination with Indian Tribal Governments</i>) and Department of Defense policy, and addressed many of the Village's concerns regarding the potential impacts from training activities. The Navy is committed to working with local tribes and to keeping open lines of communication and coordination with tribal members. Thank you for participating in the NEPA process.

Table D.4 2: Responses to Comments from Alaska Native Federally Recognized Tribes (continued)

Commenter	Comment	Navy Response
NVE-02	It is well documented that the intense sonar use that accompanies war ships can have devastating impacts on marine mammals, causing them to become injured directly, or become confused and disoriented leaving them vulnerable to predation or stranding.	There is no direct evidence that routine Navy training and testing spanning decades has negatively impacted marine mammal populations at any Navy Range Complex. As the best available science and analysis in the Supplemental EIS/OEIS indicates, the expectation is that long-term consequences for individuals or populations of marine mammals are unlikely to result from Navy training activities in the TMAA. Please see for example, Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and observation of Navy events including the use of sonar since 2006 show no long-term impacts to marine mammal populations.
NVE-03	Furthermore, the use of live ammunition, at depth, will have negative impacts on any animals nearby, which range from minor disturbance, to barotrauma, to death. The economic importance of the Gulf of Alaska's resources are unquestionable. Further, the cultural significance of this area is beyond estimation to those who live in this area. The Gulf of Alaska is not a barren, secluded, isolated wasteland fit to be used as a shooting range, it is a complex, vibrant, and critically important marine habitat, perhaps the most intact in the world. The Native Village of Eyak is wholly opposed to the Gulf of Alaska being used in this manner. Sincerely, Robert Henrichs President NVE Traditional Tribal Council	Regarding explosives use, there are no mortalities predicted or expected and only three non-serious injuries predicted if there are two exercises in a single year as analyzed under Alternative 2. Please see Section 3 of the Supplemental EIS/OEIS for a characterization of the environment and the analysis of effects from the Navy's proposed action. As presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, Navy is aware of the resources present in the Gulf of Alaska and understands the importance of these resources to the people of Alaska, and their economic and cultural significance. In response to concerns, the Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern, (2) prohibiting use of explosives during training in the Portlock Bank area, and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull-mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements.

Table D.4 2: Responses to Comments from Alaska Native Federally Recognized Tribes (continued)

Commenter	Comment	Navy Response
Chugach Regional Resources Commission (CRRC)-01 (Written)	Ms. Burt, The Chugach Regional Resources Commission (CRRC) was established in 1984 by the seven Tribes of the Chugach Region of Alaska, including the Tatitlek Village IRA Council, Chenega IRA Council, Port Graham Village Council, Nanwalek IRA Council, Native Village of Eyak, Qutekcak Native Tribe, and the Valdez Native Tribe. CRRC was formed to collectively address issues of mutual concern regarding stewardship of the natural resources, subsistence, the environment, and to develop culturally appropriate economic projects that promote the sustainable development of the natural resources. As such, we are writing regarding the ongoing training operations in the Gulf of Alaska. We have been in communication with Robert Henrichs, President, Native Village of Eyak, who has informed us of his concerns that the impacts results from the training exercises are acceptable.	Thank you for briefly describing the purpose of the CRRC and for participating in the NEPA process. The Navy has consulted with the Native Village of Eyak and addressed many of the Village's concerns regarding the potential impacts from training activities. Please refer to the Navy's responses to comments from the Native Village of Eyak in this table. The Navy is committed to working with local tribes and to keeping open lines of communication and coordination with tribal members.
CRRC-02	The Gulf of Alaska is a very important ecosystem, and vital to the very existence of the Alaska Native people who inhabit this area. The area is rich in animal and plant life, and plays a key role in our natural world globally. Our research on king crabs alone, through our Alutiiq Pride Shellfish Hatchery, has answered many questions regarding the ocean's health and habitat for king crabs. We believe that the intense sonar use that accompanies war ships can have dramatic impacts on marine mammals, through direct injury or death. I cannot stress enough the economic and cultural importance of the Gulf of Alaska to the Chugach Region Tribes, which has been well documented in testimony provided during the Outer Continental Shelf court case (Native Village of Eyak vs. Trawler Diane Marie, Inc., Case No. A95-0065-cv). The Tribes of the Chugach Region are not in support of the Gulf of Alaska being used as a training ground and express concern over the use of this critically important habitat for this purpose. Thank you for the opportunity to express our views in this matter. Best regards, Patty Schwalenberg, Executive Director Chugach Regional Resources Commission 1840 South Bragaw Street, Suite 150 Anchorage, Alaska 99508	As presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, Navy is aware of the resources present in the Gulf of Alaska and the importance of these resources to the native people of Alaska. With regard to the specific concern over the use of sonar, there is no direct evidence that routine Navy training and testing spanning decades has negatively impacted marine mammal populations at any Navy Range Complex. As the best available science and analysis in the Supplemental EIS/OEIS indicates, the expectation is that long-term consequences for individuals or populations of marine mammals are unlikely to result from Navy training activities in the TMAA. Please see for example Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. The Navy and National Marine Fisheries Service have assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy, and the same should be true for the TMAA. Please see Chapter 2 (Description of Proposed Action and Alternatives) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS. The proposed action is the continuation of training activities that have been ongoing for more than a decade. Via research and multiple other forms of knowledge gathering, including face-to-face meetings, the Navy is aware of the economic and cultural importance of the Gulf of Alaska. There has been no past evidence of impact to the economic or cultural resources in the Gulf of Alaska from

Table D.4 2: Responses to Comments from Alaska Native Federally Recognized Tribes (continued)

Commenter	Comment	Navy Response
		Navy training and none are predicted to result from the continuation of the proposed activities. Thank you for participating in the NEPA process. The Navy is committed to working with local tribes and to keeping open lines of communication and coordination with tribal members.
D. Calcote Alaska Inter-Tribal Council (Electronic)	U.S. Navy Commander The plans to ‘expand warfare’ into Alaska lands and territories, into the habitat area for the ocean foods that we love, use and rely on is declaring war upon the First Nations and peoples that rely, use and occupy these lands and waters that support, give life, provide safe and resilient habitats since time immemorial. There are no ‘games’ that should occur with a right to take our life, our livelihoods, our reliance on ‘subsistence foods’, fish and marine mammals, kelps and clams that are clean and abundant, life in the ocean. Alaska’s oceans support the largest fisheries in the world, have the richest feeding grounds for fisheries unlike anywhere else in the world. The damages and harms from ‘expanding warfare’ upon Alaskas First Nation and peoples, upon the subsistence resources we use and rely on, will have long term unintended consequences upon the world that also relies on the fisheries of Alaska that are at risk from the US Navy bombs, guns, missiles, sunken ships and sonar: high and low frequencies. The ‘expanded warfare’ upon Alaska’s First Nations and peoples includes: “... two Carrier Strike Groups, use of high-frequency and mid-frequency active sonar for Anti-Submarine Warfare exercises, training on new weapons systems, and two ship-sinking exercises each year. The live weapons used would include surface-to-air missiles, air-to-air missiles, air-to-surface missiles, surface-to-air deck guns, air-to-surface bombs, air-to-surface guns, surface-to-surface guns, and heavyweight torpedoes” would endanger the ocean, the lifeways of the oceans by polluting, by killing, by taking life and by wrecking essential and critical habitats. These are not games.	Please note that the Navy is not proposing to expand warfare into Alaska lands and territories. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified and analyzed, and for which a ROD was issued in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. There is no proposed expansion of this area and no proposed change in the number of events that have been authorized since 2011. Furthermore, the analysis presented reflects the maximum level of activity that could be required to provide sufficient future training capacity. Based on the history of Navy training during in the TMAA, the expectation is that the activity would generally be less than the maximum analyzed in the EIS/OEIS, such as occurred during the last two training events (Northern Edge 2011 and 2015). Additionally, as presented in Section 3.6 (Fish) and Section 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, Navy is aware of the importance of fisheries in Alaska. The proposed training activities are predicted to have no

Table D.4 2: Responses to Comments from Alaska Native Federally Recognized Tribes (continued)

Commenter	Comment	Navy Response
	These are destruction activities at their worst. By ruining and destroying the fisheries and marine life in the Gulf of Alaska, the Navy is engaged in ecocide of our way of life, the foods that we use and rely on. Genocide includes harming portions of a people. The United States government may as well be declaring war upon the First Nations and peoples that rely, use and occupy these lands, waters, habitats. Areas essential for life on earth relies on clean water, not polluted waters and resources, not damaged resources. An area over 300 miles x 156 miles (42,146 square miles) of the northern Gulf of Alaska, just south of Prince William Sound and east of the Kenai Peninsula and Kodiak Island is rich in ocean life, life that we use and rely on. By bombing our fishing grounds during the summer, polluting essential and critical habitat for fisheries that we rely on and marine mammals rely on for a 5 year period will have dangerous impacts and repercussions on our life, our health, our tribal communities that rely on marine life, on the culture that surrounds our yearly subsistence activities will be damaged by dangerous chemicals from missiles, torpedoes, and bombs and all the gray water, ship effluents and pollutants that come and go with huge ships. There is marine traffic as well as fishing vessels busy in the summer months that the Navy plans to bomb the Gulf of Alaska. The United States needs to put those funds into the huge list of clean-up sites in Alaska, not create more clean up sites, don't create more damages and harms to Tribal Communities, or state cities and boroughs either. All Rights Reserved Respectfully D. Calcote Executive Director	impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. There has been no past evidence of impact to the health of fisheries or socioeconomic conditions in the TMAA of the Gulf of Alaska. Regarding concerns over subsistence resources, the proposed action is the continuation of training activities that have been ongoing for more than a decade. No impacts to traditional subsistence practices or resources are predicted to result from the proposed activities. The Navy's proposed action does not include bombing fishing grounds and will not pollute essential and critical habitat for fisheries. While there has been no demonstrated impacts from previous Navy training in the area and yet specifically in response to concerns voiced by the public over fisheries and marine mammals, the Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern, (2) prohibiting use of explosives during training in the Portlock Bank area, and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull-mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements. Thank you for participating in the NEPA process. The Navy is committed to working with local tribes and to keeping open lines of communication and coordination with tribal members.

Table D.4-3 contains comments from federal, state, and local agencies and elected officials received during the public comment period and the Navy's response.

Table D.4-3: Responses to Comments from State and Local Agencies and Elected Officials

Commenter	Comment	Navy Response
Sean Parnell, Governor, State of Alaska-01 (Written)	September 12, 2014 Admiral Harry B. Harris, Jr. Commander United States Pacific Fleet 250 Makalapa Drive Pearl Harbor, HI 96860-3131 Through Ms. Amy Burt Gulf of Alaska Supplemental EIS/ OES Project Manager Naval Facilities Engineering Command Northwest 1101 Tautog Circle, Suite 203 Silverdale, WA 98315-1101 Dear Admiral Harris, Thank you for the opportunity to provide comments regarding the Gulf of Alaska Navy Training Activities Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement (EIS/OEIS). The State of Alaska supports the United States Navy's proposed action to adopt Alternative Two of the EIS, which will increase the number of large-scale carrier group exercises and to conduct one sinking exercise per carrier strike group. Alaska offers incredible training value to the United States Navy, thanks to the Joint Pacific Alaska Range Complex (JPARC). This area consists of 65,000 square miles of airspace, 2,490 square miles of land space, and 42,000 square nautical miles of sea and air space over the Gulf of Alaska. These training areas, combined with large United States Air Force and Army contingents based in Alaska, allow for valuable joint training opportunities. This joint training is crucial to replicate real-world combat scenarios to ensure the United States Army, Air Force, and Navy are prepared to conduct joint operations. Training in the Gulf of Alaska Naval Training Area will also help prepare the Navy for Arctic operations. With increased foreign exploration and further opening of maritime trade routes in the Arctic, Alaska continues to be of vital importance to the protection of United States' interests and sovereignty in the Arctic region. Currently, the Coast Guard in Alaska remains the sole provider of maritime safety and security in Alaskan waters and is the primary conduit for ensuring national Arctic policy goals are achieved. Increasing naval training in the Gulf of Alaska and near Arctic areas will enable the Navy to be ready for real-world Arctic operations.	Thank you for reviewing the Supplemental EIS/OEIS. The Navy is committed to protecting the marine environment and marine life during the conduct of its training activities.

Table D.4-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

Commenter	Comment	Navy Response
Sean Parnell, Governor, State of Alaska-02	The State of Alaska, her citizens, and businesses are firmly committed to serving the United States military, including the Navy. We enjoy a strong partnership with the military in Alaska, and ensure we do all we can to help each service. I meet with Alaskan leaders regularly along with leaders on Joint Base Elmendorf-Richardson and Fort Wainwright to determine how we can help the military achieve its mission. A great example of this partnership is the Tanana River Bridge near Salcha, Alaska. The Army did not have year-round access to its training areas on the west side of the Tanana River and relied on an ice bridge for winter access. Because the military only received partial funds from Congress to provide dependable access, the State of Alaska contributed more than \$80 million needed for the \$180 million dollar project. The bridge opened this summer, and has greatly increased the Army's training ability in Alaska. We were proud to work with the Army on this project, and we also welcome the opportunity to develop a stronger partnership with the Navy. Whether that includes assisting the Navy with its shore-side logistical needs in Kodiak or other coastal cities, or welcoming sailors into our communities, the State of Alaska is ready to assist the United States Navy to accomplish its mission. The State of Alaska highly values the presence of Navy training in Alaskan waters, along with the service of military members stationed here and throughout the world. Alaska offers the Navy unparalleled joint training opportunities, the ability to increase Arctic operational ability, and a strong corporate partnership. I look forward to your completion of the EIS/OIS, and the State of Alaska welcomes your decision to adopt the proposed action of Alternative Two. Best regards, Sean Parnell Governor cc: The Honorable Ray Mabus, Secretary, United States Navy Admiral Jonathan Greenert, Chief of Naval Operations, United States Navy The Honorable Lisa Murkowski, United States Senate The Honorable Mark Begich, United States Senate The Honorable Don Young, United States House of Representatives	Thank you for reviewing the Supplemental EIS/OEIS. The Navy is committed to protecting the marine environment and marine life during the conduct of its training activities.

Table D.4-4 contains comments from non-governmental organizations received during the public comment period and the Navy's response. Responses to these comments were prepared and reviewed for scientific and technical accuracy and completeness.

Table D.4-4: Responses to Comments from Organizations

Commenter	Comment	Navy Response
Alaska Quiet Rights Coalition (AQRC)-01 (Written)	Dear Planners, The Alaska Quiet Rights Coalition is a statewide non-profit group with members and supporters from all parts of the state. Our mission statement includes representing the rights of wildlife to natural quiet. It has been well established that man-made noises can interfere with animal communication both on land and sea, that undersea noises are transmitted great distances, and that extremely loud noises can rupture eardrums, increase stress, change feeding behaviors and kill animals. This is, of course, all well know to Navy planners. The Navy is also aware that the Marine Mammals Protection Act (MMPA) prohibits United States citizens from killing marine mammals.	Please see the analysis presented in Section 3 of 2011 GOA Final EIS/OEIS and Section 3 of the Supplemental EIS/OEIS. With regard to "undersea noises," please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. In the Supplemental EIS/OEIS, the Navy has assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy including the TMAA. There are no mortalities predicted or expected from the continuation of Navy training activities in the Gulf of Alaska.
AQRC-02	The United States Military apparently considers itself as outside the laws of the country and not subject to the same laws that apply to the rest of us. Even though the US Navy goes through the motions of an EIS, the "No Action" alternative is apparently not being considered for the proposed GOA naval exercises. It is the only alternative that would be within the law.	The Navy complies with all applicable environmental laws, including the MMPA and NEPA. The Navy has developed this EIS/OEIS to meet the requirements of these laws. Please see Chapter 2 (Description of Proposed Action and Alternatives) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, and specifically the 2011 GOA Final EIS/OEIS Section 2.3.2 (Alternatives Eliminated from Further Consideration), which includes selection criteria and alternatives considered but eliminated.
AQRC-03	"Mitigation" plans do not include the obvious need to either cancel the exercises or move them out to the deep ocean and away from the concentration of marine mammal feeding areas. The plans also apparently do not include using winter months to avoid whale migrations months. Why not ? The MMPA was enacted for a reason. Marine mammals are an essential part of the marine ecosystem. In a time of climate change, acidification of the oceans, and overfishing pressures, adding to the stress levels and kill rate of these animals is not in the best interest of either our country or our planet. We are asking the US Navy to reconsider its Gulf of Alaska plans. Thank you for this opportunity to comment. E. Hatton, for the Alaska Quiet Rights Coalition P.O.Box 202592 Anchorage, AK 99520	A new discussion of identified marine mammal feeding areas has been added to applicable sections of Section 3.8 (Marine Mammals). In general the location of the TMAA, whose boundary nearest Kenai Peninsula is 25 nautical miles offshore, does not overlap with concentrated marine mammal feeding areas. Navy's specific mitigation measures are outlined in the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring). The mitigation measures mentioned in the comment and the reason why they have not been adopted were discussed in Section 5.3.3 (Mitigation Measures Considered But Eliminated). As described in Section 1.1 (Introduction), because of the severe environmental conditions during winter months, exercises normally occur in the summer (April to October). Please see Section 3.8 (Marine Mammals), which states that there are marine mammals present year-round in the Gulf and that

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		some of the migratory species (humpback and gray whales) are typically found closer to shore than the waters that constitute the majority of the Study Area. The comment mentions a “kill rate” and please note there are no mortalities expected or predicted by the acoustic effects modeling or likely to result from the proposed action. Finally, please note that the Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEK event from occurring in Habitats of Particular Concern, (2) prohibiting use of explosives during training in the Portlock Bank area, and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull-mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements.
Center for Water Advocacy (CWA)-01 (Electronic)	Military readiness is vital to our national security, but it need not come at the expense of degraded water quality, fisheries and marine mammal populations.	Please see the analysis presented in Section 3 (Affected Environment and Environmental Consequences) of the 2011 GOA EIS/OEIS and the Supplemental EIS/OEIS. The continuation of Navy training in Gulf of Alaska would not result in degraded water quality, fisheries, or have long term consequences to populations of marine mammals.
CWA-02	The Navy estimates that its sonar training exercises in the GOA from its Preferred Alternative (Alternative 2) will result in more than 425,000 marine mammal “takes” (behavioral impacts, harassment, injury, death) every year - that’s over 2.125 million takes during the course of the Marine Mammal Protection Act permit it must seek from NOAA. In all, the Navy expects to “take” more than 20 different species of marine mammals, including 7 endangered species, in the GOA.	As described in the 2011 GOA Final EIS/OEIS, the term “take,” as defined by the Marine Mammal Protection Act means “to harass,” and all but three of the estimated “takes” are behavioral. As presented in the Supplemental EIS/OEIS, the number of total effects predicted from the use of sonar and other active acoustic sources under Alternative 2 is 36,414 annually based on the latest science and more accurate modeling approach. Only three of these total annual effects from the use of sonar and other active acoustic sources involve injury; the remaining 36,411 are temporary changes in an animal’s behavior. With regard to long-term effects, please see Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. In the Supplemental EIS/OEIS, the Navy has assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy, including the TMAA.
CWA-03	Nearly all of the mitigation measures that the Navy has proposed for the GOA concern the operation of a small “safety zone” around the sonar ship. Yet it is widely agreed in	Please see Chapter 5 (Mitigation Measures) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS discussing mitigation

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	the scientific community that this measure is inadequate given the far-reaching effects of Navy sonar and the difficulty of spotting marine mammals from fast-moving vessels.	measures, which include more than visual detection of marine mammals from vessels. The size of the safety zone is based on scientific data indicating the range at which injury may occur and therefore be reduced or prevented. Please also note that the speed of a Navy vessel in the proposed action has no impact on the ability of an observer to spot marine mammals on the surface. The current mitigation measures were developed in collaboration between Navy scientists, acoustic experts, and marine mammal scientists with the National Marine Fisheries Service. In response to scoping during the 2011 GOA EIS/OEIS, the boundary of the TMAA was moved to the southwest to avoid Steller sea lion critical habitat.
CWA-04	The Navy has not proposed to establish any protection areas in the GOA, despite the broad recognition that geographic protection zones are the most effective available means to mitigate sonar's impacts on marine wildlife.	The Navy has considered whether additional mitigations are warranted in specific areas within the TMAA; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard. Also and as noted above, Navy did move the TMAA as part of the scoping process, specifically to avoid Steller sea lion critical habitat. In addition, already incorporated into the Navy's and NMFS' analysis of effects to marine mammals has been consideration of emergent science regarding locations where cetaceans are known to engage in activities at certain times of the year that are important to individual animals as well as populations of marine mammals (see discussion in Van Parijs 2015). As explained in Van Parijs (2015), each of these locations has been identified by NMFS as a Biologically Important Area (BIA). It is important to note that the BIAs were not meant to define exclusionary zones, nor were they meant to be locations that serve as sanctuaries from human activity, or areas analogous to marine protected areas (see Ferguson et al. [2015a] regarding the envisioned purpose for the BIA designations). The NMFS-identified BIAs do not have direct or immediate regulatory consequences, and these areas do not describe the totality of a species' range or habitat. The stated intention is for the BIAs to serve as resource management tools and their currently identified boundaries be considered dynamic and subject to change based on any new information as well as "existing density estimates, range-wide distribution data, information on population trends and life history parameters, known threats to the population, and other relevant information" (Van Parijs 2015). A review of the final BIAs for fin whales, North Pacific right whales, beluga whales, humpback whales, and gray whales showed that there is only minimal spatial overlap with the North Pacific right whale feeding BIA and the gray whale migration BIA (see Ferguson et al.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		2015b) with the Navy TMAA. Because these two BIA are at the nearshore edge of the TMAA, Navy events there are unlikely. Additionally, there may be only limited, if any, temporal overlap between Navy activities in those areas and animals being present (especially for the North Pacific right whale). Finally, effects to gray whale migration or North Pacific right whale feeding are unlikely to result from any Navy training activities that might take place (such as vessel transit) in those BIAs. Specifically with respect to the North Pacific Right Whale feeding area, the endangered status of the species and extremely small number of North Pacific right whales in the population has caused NMFS to ask the Navy to reconsider whether any mitigation is practicable and warranted in the North Pacific Right Whale feeding area. Taking that into account, Navy has re-evaluated and agreed to establish the overlapped North Pacific Right Whale feeding area within the TMAA (an area measuring approximately 2,050 km²) as a North Pacific Right Whale Cautionary Area between June and September. In that June to September time period in the North Pacific Right Whale Cautionary Area, the Navy will not use surface ship hull-mounted mid-frequency sonar or explosives during the proposed training events. However, the Navy does reserve the right to use surface ship hull-mounted mid-frequency sonar or explosives in the event of national security needs requiring such training in that area between June and September during any Northern Edge exercise. Navy will require a command requesting such training in that timeframe to seek approval in advance from Commander, U.S. Third Fleet. The Navy has also agreed to implement area and activity mitigation measures precluding a SINKEX event from occurring in Habitats of Particular Concern and prohibiting use of explosives during training in the Portlock Bank area.
CWA-05	For example, no protection areas are proposed for harbor porpoises, which are acutely sensitive to sound; for endangered gray whales, which migrate directly through the TMAA; for endangered humpback whales and blue whales, which gather to feed in the TMAA; for the critically endangered North Pacific right whale, whose critical habitat is directly adjacent to the TMAA; or for any other species or habitat. The Navy does not properly analyze environmental impacts. For instance, it completely disregards the serious impacts its sonar training will have on the critically endangered North Pacific right whales, whose critical habitat is only 12 nautical miles from the training area or the endangered gray whales, which migrate through the training area.	See Section 3.8.2.15 (Harbor Porpoise) regarding information on harbor porpoises. Harbor porpoises are generally found nearshore (they occur most frequently in waters less than 328 ft. [100 m] deep; see Section 3.8.2.15.3, Distribution) and should not be present where the majority of the proposed training will take place. While the analysis presented in the Supplemental EIS/OEIS indicates behavioral effects to harbor porpoises, these should not have long term individual or population level impact. Regarding analysis for North Pacific right whale, see Sections 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]); 3.8.3.3.4.1 (Mysticetes); 3.8.3.3.5.1 (Mysticetes); 3.8.3.3.8.1 (Mysticetes), etc. of the Supplemental EIS/OEIS. Navy is aware of the designated North Pacific right whale

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		Critical Habitat as discussed in those sections and as shown on Figure 3.8-1 of the Supplemental EIS/OEIS. It is incorrect to characterize the North Pacific right whale Critical Habitat as being “directly adjacent” to the TMAA since the nearest edge of the Critical Habitat is roughly 12 miles from the corner of the TMAA. The Navy has established an area measuring approximately 2,050 km² as a North Pacific Right Whale Cautionary Area between June and September, when they may be feeding in the general area identified by NMFS as a feeding area. The majority of the endangered Western North Pacific gray whales feed and migrate within the Western Pacific. There has been no indication that Western North Pacific gray whales use any of the Gulf of Alaska nearshore gray whale feeding areas. These feeding areas are also outside of the GOA TMAA. A few individuals (n = 3) tagged with long-term satellite tracking tags did migrate briefly through the Gulf of Alaska on their way to breeding grounds off the Pacific coast of Mexico (Mate et al. 2015). However, these animals moved quickly through the shelf and offshore waters of GOA and would not be resident, foraging, or in GOA for more than a number of days during their transit. Over 99 percent of all gray whales in the vicinity of TMAA are Eastern North Pacific gray whale, and they have recovered to the point that they are no longer listed as endangered. Furthermore, the timing of these migrations to and from the Mexico breeding grounds (December to February and February to May) (Mate et al. 2015) is outside of the window in which Navy training activities have been proposed (May to October with highest probability of June to July for Northern Edge). Therefore, there would be minimum to no overlap between Navy training activities and Western Pacific gray whales. Finally, Mate et al. (2015) went on to hypothesize that the gray whales tagged could also be individuals from the Eastern North Pacific gray whale stock that have expanded their distribution to feeding grounds off Russia, where they co-mingle with the true Western North Pacific stock whose migration is solely along the coast of Asia. No gray whales were detected in the TMAA Study Area during the GOALS II survey (Rone et al. 2013). Gray whales, humpback whale, and blue whales have largely recovered (see discussions in Section 3.8 of the Supplemental EIS/OEIS), and there is no evidence that Navy training activities have had any impact on these populations in the Pacific in areas such as Southern California or Hawaii where Navy training has been occurring year-round for decades (see the Supplemental EIS/OEIS Section 3.8.5, Summary of Observations During Previous Navy Activities).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
CWA-06	Furthermore, it fails to discuss and analyze the cumulative effects its activities may have in conjunction with other projects and activities in the area. The Navy underestimates the number of marine mammals (and fish) that will be harassed, injured and killed because it simply does not have the density estimates needed in order to accurately make this determination. The National Environmental Policy Act (NEPA) specifically requires federal agencies to obtain the data necessary to their analysis. The simple assertion that "no information exists" will not suffice; unless the costs of obtaining the information are exorbitant, NEPA requires that it be obtained. See 40 C.F.R. § 1502.22(a).	Please see Chapter 4 (Cumulative Impacts) in both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS for a discussion and analysis of cumulative effects. As presented in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) of the Supplemental EIS/OEIS, modeling assumptions believed to overestimate the number of exposures were chosen. Please see Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding impacts to fish. See the Supplemental EIS/OEIS Section 3.8.2.5 (Marine Mammal Density Estimates) Section 3.8.3.1.6.1 (Marine Species Density Data) and the referenced "Pacific Navy Marine Species Density Database Technical Report" (available on the GOA website) regarding the availability of data used in the acoustic effects modeling. The analysis of impacts to marine mammals in GOA uses the best available science and was undertaken with National Marine Fisheries Service (NMFS) in a role as a cooperating agency for the EIS/OEIS. This included review and comment by NMFS staff marine biologists in their role as the federal regulator for the Marine Mammal Protection Act (MMPA). Full and complete information was provided in the EIS/OEIS with regard to the present knowledge regarding stocks of marine mammals. This includes coordination with NMFS regional scientists on the latest emergent data presented in their Pacific Stock Assessment Reports. Navy used the best available science from NMFS and other scientific literature for marine mammal densities in the development of the GOA EIS/OEIS; therefore, it is incorrect to assume that the existing marine mammal density data is somehow insufficient and does not allow for accurate estimations of impacts to marine mammals.
CWA-07	The Navy's acoustics impact analysis ignores scientific studies contrary to its interests and uses methodologies not supported by the scientific community. Thus, the thresholds it sets for permanent injury, temporary injury (hearing loss) and behavioral change (which we would argue are too high and thus completely underestimate the actual number of wildlife that will be impacted) are invalid as a matter of science.	Please see Section 3.8 (Marine Mammals) for a discussion of the scientific studies forming the basis of the analysis presented in the Supplemental EIS/OEIS. The Navy's acoustic analysis and modeling reflect the current best available science as evidenced by recent NMFS rulemaking actions on other Navy documents.
CWA-08	The Navy's alternative analysis is inadequate. The Navy only presents three options - maintain the status quo, add more training, or add even more training. It does not consider - or blithely dismisses - any other alternatives, some employed by the Navy itself in other training exercises and ranges.	The range of alternatives presented in the 2011 GOA Final EIS/OEIS includes reasonable alternatives. To be reasonable, an alternative must meet the stated purpose of and need for the Proposed Action. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission, achieved in part by conducting training within the Study Area. The alternatives carried forward meet the Navy's purpose and need (see the 2011 GOA Final EIS/OEIS Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities) to ensure that it can fulfill its obligation

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		under Title 10 of U.S. Code. See Section 2.3 (Proposed Action and Alternatives) of the 2011 GOA Final EIS/OEIS for more detailed information on the development of alternatives. The Navy complied with NEPA requirements in the development and consideration of alternatives. This Supplemental EIS/OEIS analyzes all alternatives in the 2011 GOA Final EIS/OEIS. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
CWA-09	Most critically, the Navy does not set forth adequate measures to mitigate the harmful effects of sonar. Its proposed mitigation measures basically boil down to "safety zones" (1,000 yard power-down and 200 yard shut down) around the sonar maintained primarily by on-board visual monitors. These are the same measures that federal courts have found to be "woefully inadequate and ineffectual." (For instance, studies show that visual monitoring only spots about 5% of marine mammals. Statistically, a 5% "success" rate clearly does not cut it.) The Navy's refusal to employ better mitigation measures is astounding, because it has used more protective measures during previous training.	Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) provides a comprehensive discussion of proposed mitigation measures. The comment references studies pertaining to visual monitoring; however, it does not cite to or otherwise identify particular studies. Please see the presentation in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) of the Supplemental EIS/OEIS discussing how Navy training and visual detection differs from the conditions present during a line transect marine mammal survey, from which most detection data has been derived. The Navy does not claim or expect 100% of the animals present in the vicinity of training events will be detected; however, mitigation measures based on detection of marine mammals by exercise participants anywhere in the exercise area will result in the mitigation of some potential impacts. Please see the Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) for more details in this regard. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) regarding monitoring reports from exercises since 2006 that have demonstrated the ability to detect marine mammals, the success of these mitigation measures, and a lack of observable impacts to marine species as a result of Navy training events. As detailed in the introduction to Chapter 5 in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the Navy and NMFS as a cooperating agency have reviewed other potential mitigations measures as described. The Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern, (2) prohibiting use of explosives during training in the Portlock Bank area, and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull-mounted mid-frequency sonar or explosives

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		will not occur in the June to September timeframe. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
Cordova District Fishermen United (CDFU)-01 (Written)	Dear Ms. Burt, I am writing in response to both the Final Environmental Impact Statement (2011) and the Supplemental Environmental Impact Statement relating to the Gulf of Alaska Navy Training activities. Cordova District Fishermen United (CDFU) would like to clearly state for the record that we support the U.S. Navy in their efforts to defend our country, however we are opposed to reauthorization of the Preferred Alternative in U.S Navy training exercises in the Gulf of Alaska (GOA). We again support the No Action Alternative and at the very least, request the Navy incorporate all conservation recommendations submitted by NMFS and referenced in the 2011 Record of Decision.	Regarding the 2011 NMFS conservation recommendations referenced in the comment, the same rationale Navy provided in response is still applicable; the Navy's 2011 response letter to the EFH recommendations from NMFS Alaska can be found in our current 2011 GOA Final EIS/OEIS document, Appendix C (Regulatory Consultations), and on the GOA EIS website under the documents tab, GOA Final EIS/OEIS May 2011 sub tab, Appendix C – Regulatory Consultations (Entire Document) drop down link, “National Oceanic and Atmospheric Administration – National Marine Fisheries Service, Magnuson-Stevens Fisher Conservation and Management Act,” pages 137–141 in the PDF. This is available at www.goaeis.com website (http://goaeis.com/Documents/GOAFinalEISOEISMay2011.aspx).
CDFU-02	CDFU is a nonprofit advocacy organization that directly represents the commercial fishing interests of over 1,000 fishermen in Prince William Sound and the Gulf of Alaska, and directly supports the economic livelihood of the community of Cordova. For over 75 years, CDFU has strived to protect the health and sustainability of species that inhabit our waters and errs on the side of caution when assessing potential risks to these species. As you are aware through your extensive EIS process, Alaska has one of the richest ocean environments in the world, and the sustainability of our fisheries resources is of highest priority to our State -both from an economic and cultural perspective. Included in the following are current CDFU comments as well as those submitted in January 2010 regarding the Draft EIS. After review of the topics in the Final & Supplemental EIS, the comments concerning PWS Herring and the impact of cumulative effects of expended materials on GOA ecosystems are still relevant. Thank you for the opportunity to comment on the Supplemental EIS. CDFU looks forward to reviewing the updated Record of Decision. We also request continued inclusion on the Navy postal mailing list to receive updates and notices as they are published. Sincerely, A. Cooper Executive Director Director@cdfu.org 2014 CDFU COMMENTS <u>Final EIS and 2011 Record of Decision (ROD)</u>	Please see Section 1.2 through 1.4, and 1.6 of the Draft and Final Supplemental EIS/OEIS explaining that the Supplemental EIS/OEIS is being prepared to supplement the 2011 GOA Final EIS/OEIS due to new information from which the predicted effects to marine mammal resources is expected to change from those quantified in the 2011 GOA Final EIS/OEIS. However, for all other resource areas evaluated in the 2011 GOA Final EIS/OEIS, this new information does not alter the Navy's original alternatives analysis as presented in the 2011 GOA Final EIS/OEIS and subsequent ROD. For this reason, the other resource areas are not carried forward for alternatives reanalysis in this Supplemental EIS/OEIS. As described in this Final Supplemental EIS/OEIS, there is updated information such as fish stock assessment reports and information on fish hearing. However, upon a comprehensive review of this new information there are no changes to the affected environment (e.g., species present) or to the impact conclusions that form the environmental baseline of the fish analysis in the 2011 GOA Final EIS/OEIS. Instead, a review of best available science on fish hearing indicates that most species are less likely to be affected than previously thought. Additionally, no new Navy training activities are being proposed in this Supplemental EIS/OEIS that would affect fishes in the TMAA. Therefore, conclusions for fish species impacts made for the alternatives analyzed in the 2011 GOA Final EIS/OEIS remain unchanged in this Supplemental EIS/OEIS, and training activities do not compromise productivity of fishes or impact their

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	The approval of Alternative 2, the Preferred Alternative was published in 2011 ROD, so there is little expectation of a reduction in allowable training activities resulting from this comment opportunity. However, it is important to participate in the process and communicate our region's concerns as a matter of public record. Upon review of the associated documents regarding the requested reauthorization of the Navy's Preferred Alternative it appears consideration of impacts to marine species occurring in the TMAA focuses on those species whose protection falls under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). It is concerning that impacts to non-threatened fish species occurring in the TMAA are not equally addressed and appropriate mitigations developed. The 2011 ROD Section Fish notes the National Marine Fisheries Service (NMFS) disagreed with the Navy's determination that exercise activities under the Preferred Alternative would have no adverse effects on fish populations and Essential Fish Habitat as defined under the Magnuson Stevens Fisheries Conservation & Management Act (MSFCMA). NMFS submitted conservation recommendations to the Navy contained in the 2011 ROD, which resulted in Navy non-concurrence with 3 of 4 suggested measures. However, in the Final EIS it is identified that the TMAA contains designated EFH of 18 species groundfish and 5 species of Pacific salmon as well as several Habitat Areas of Particular Concern (HAPCS). Contained within those designations are 13 species of groundfish and 5 species of P. salmon identified by MSFCMA Fishery Management Plans (FMP) as "target species" in existing, viable & sustainable domestic commercial fisheries. The approved level of training activities represents a vast increase in scope of allowable exercises than have occurred in the GOA TMAA. Even though the Navy has been authorized, since 2011, to perform training activities in the GOA at the level presented in the Preferred Alternative, actual training events have been limited by various factors and the total allowable annual activities have yet to occur. Should the Navy be able to fully utilize the scope of training in the GOA as permitted in the Preferred Alternative the livelihoods of many regional families could be jeopardized. It is our concern that potential for negative impacts to non-threatened fish species and viable Essential Fish Habitat (EFH) contained in the TMAA does exist. We hope, at a minimum, the Navy reconsider the 2011 decision and implement all 4 conservation recommendations submitted by NMFS. Additionally, we request the Navy consider allowing budget for improved research and mitigation to quantify the effects these training exercises may have on our existing commercially viable and sustainable fish stocks.	habitats. For a summary of effects of the No Action Alternative, Alternative 1, and Alternative 2 on fishes under both the National Environmental Policy Act and Executive Order 12114, please refer to Table 3.6-11 (Summary of Effects by Alternative) in the 2011 GOA Final EIS/OEIS. As the 2011 GOA Final EIS/OEIS demonstrated, the proposed actions should have no measurable impact on fisheries or Essential Fish Habitat. Please See Section 3.8.5.1 (Alaska Specific Monitoring and Research) discussing research and monitoring in the Study Area. Regarding the 2011 NMFS conservation recommendations referenced in the comment, the same rationale Navy provided in response is still applicable; the Navy's 2011 response letter to the EFH recommendations from NMFS Alaska can be found in our current 2011 GOA Final EIS/OEIS document, Appendix C (Regulatory Consultations), and on the GOA EIS website under the documents tab, GOA Final EIS/OEIS May 2011 sub tab, Appendix C – Regulatory Consultations (Entire Document) drop down link, "National Oceanic and Atmospheric Administration – National Marine Fisheries Service, Magnuson-Stevens Fishery Conservation and Management Act," pages 137–141 in the PDF. This is available at www.goaeis.com website (http://goaeis.com/Documents/GOAFinalEISOEISMay2011.aspx).
CDFU-03	2010 CDFU COMMENTS Section: 4.1.3.1 Fishing & Section 2.6 FISH During the explanation of commercial fishing activities there is a <i>vague</i> mention that a	The Navy concurs that Pacific Herring are an ecologically and commercially significant species in the Gulf of Alaska. The 2011 GOA Final EIS/OEIS analyzed potential impacts to fish. As was described

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	number of fisheries are at very depressed levels or are closed (referencing Richardson and Erickson 2005). The remainder of this section goes on to describe those fisheries that are currently in operation. As acknowledged in the Draft EIS, Pacific Herring (<i>Clupea Pallasii</i>) are present in the GOA. Despite the fact that this commercial fishery is currently not in operation, Pacific Herring are an ecologically and commercially significant species in the Gulf of Alaska and Prince William Sound ecosystem. Few species are of greater combined ecological and economic importance in Prince William Sound (and in many other coastal ecosystems) than is the Pacific herringⁱ. Notes: ⁱ – Brown ED and MG Carls. 1998. Pacific Herring <i>Clupea Pallasii</i>. Restoration Notebook, Sept. 1998. Exxon Valdez Oil Spill Trustee Council.	in Sections 3.6.1.4 of that document (Hearing in Fish), fish have very limited hearing in the frequency range of Navy sonar, and the body of research indicates they are not negatively impacted by Navy sonar. Specifically, a study of herring (one of the few fish that can hear mid-frequency sonar) Doksæter et al. (2009) determined that “Military sonars of such frequencies and source levels may thus be operated in areas of overwintering herring without substantially affecting herring behavior or herring fishery” (2009:554). More recently, Sivle et al. (2015) reported on possible population-level effects to Atlantic herring (<i>Clupae harengus</i>) from active naval sonar. The herring were exposed to source levels up 235 dB re 1 µPa at 1 m for durations exceeding 24 hours with frequencies of 1–2 kHz. The authors concluded that the use of naval sonar poses little risk to populations of herring even when the herring are aggregated during sonar exposure. In a related study, herring were exposed to both low-frequency (1–2 kHz) and mid-frequency (6–7 kHz) sonar as well as killer whale feeding calls (Sivle et al. 2012). The results were similar to Sivle et al. (2015) in that the herring did not respond to either the low- or mid-frequency sonar, but did show obvious avoidance behavior (diving) when exposed to the killer whale feeding sounds, which were at lower received sound pressure levels than the sonar (150 dB re 1 µPa for the killer whale calls, 176 dB re 1 µPa for the low-frequency sonar, and 162 dB re 1 µPa for the mid-frequency sonar). As such, the impact conclusion in the 2011 GOA Final EIS/OEIS, that there is no significant impact to population levels for fish, including Pacific Herring, from Navy activities, is fully supported by scientific research. Sivle, L. D., Kvadsheim, P. H., and Ainslie, M. A. (2015). Potential for population-level disturbance by active sonar in herring. ICES Journal of Marine Science: Journal du Conseil, 72(2), 558-567. Sivle, L. D., Kvadsheim, P. H., Ainslie, M. A., Solow, A., Handegard, N. O., Nordlund, N., and Lam, F. P. A. (2012). Impact of naval sonar signals on Atlantic herring (<i>Clupea harengus</i>) during summer feeding. ICES Journal of Marine Science: Journal du Conseil, fss080.
CDFU-04	Pacific Herring are central to the marine food web; providing food to marine mammals, birds, invertebrates and other fish. The Exxon Valdez Oil Spill Trustee Council (EVOSTC), a council charged with overseeing the restoration of the injured ecosystem through the use of the \$900 million civil settlement and which consists of three state and three federal trustees (or their designees), has classified Pacific Herring as damaged and “Not Recovering”ⁱⁱⁱ Pacific herring have not met their recovery objective. No strongly successful year class has been recruited into the population and health indices suggest	The Navy concurs that Pacific Herring are an ecologically and commercially significant species in the Gulf of Alaska. The 2011 GOA Final EIS/OEIS analyzed potential impacts to fish. As was described in Sections 3.6.1.4 of that document (Hearing in Fish), fish have very limited hearing in the frequency range of Navy sonar, and the body of research indicates they are not negatively impacted by Navy sonar. Specifically, a study of herring (one of the few fish that can hear mid-

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	that herring in the Sound are not fit. Pacific herring are the subject of ongoing Trustee Council-funded research. Through this research, and the work of the Alaska Department of Fish and Game, Prince William Sound communities are hopeful for the return of a viable herring fishery in the future and are actively working towards this goal. The collapse of the Pacific Herring fishery following the <i>Exxon Valdez</i> oil spill indicates that this species is not particularly resilient to changes in their immediate marine environment. CDFU is concerned that the effects of mid-frequency sonar use in the GOA will stress an already weakened population and do not feel that this species was adequately addressed in the Draft EIS. <u>Acoustic Effects of Underwater Sounds to Fish</u> Despite their lack of resilience to changes in their environment, Pacific Herring (Clupeidae) have the highest hearing range indicated of all marine species identified in the GOA, at 5 kHz. Some studies, however, demonstrate that the hearing range of the Pacific Herring is in fact much greater. Wilson and Dill (2002) reported that Pacific herring (<i>Clupea pallasii</i>) responded to sounds up to 140 kHz. As hearing "specialists", Pacific Herring have the ability to hear over a much wider frequency range than most other fish. Notes: ¹ –Exxon Valdez Oil Spill Trustee Council. Nov, 2006. Exxon Valdez Oil Spill Restoration Plan. Update on Injured Resources and Services 2006.	frequency sonar) by Doksaeter et al. (2009) determined that "Military sonars of such frequencies and source levels may thus be operated in areas of overwintering herring without substantially affecting herring behavior or herring fishery" (2009:554). More recently, Sivle et al. (2015) reported on possible population-level effects to Atlantic herring (<i>Clupea harengus</i>) from active naval sonar. The herring were exposed to source levels up 235 dB re 1 μPa at 1 m for durations exceeding 24 hours with frequencies of 1–2 kHz. The authors concluded that the use of naval sonar poses little risk to populations of herring even when the herring are aggregated during sonar exposure. In a related study, herring were exposed to both low-frequency (1–2 kHz) and mid-frequency (6–7 kHz) sonar as well as killer whale feeding calls (Sivle et al. 2012). The results were similar to Sivle et al. (2015) in that the herring did not respond to either the low- or mid frequency sonar, but did show obvious avoidance behavior (diving) when exposed to the killer whale feeding sounds, which were at lower received sound pressure levels than the sonar (150 dB re 1 μPa for the killer whale calls, 176 dB re 1 μPa for the low-frequency sonar, and 162 dB re 1 μPa for the mid-frequency sonar). As such, the impact conclusion in the 2011 GOA Final EIS/OEIS, that there is no significant impact to population levels for fish, including Pacific Herring, from Navy activities, is fully supported by scientific research. Sivle, L. D., Kvadsheim, P. H., and Ainslie, M. A. (2015). Potential for population-level disturbance by active sonar in herring. <i>ICES Journal of Marine Science: Journal du Conseil</i>, 72(2), 558-567. Sivle, L. D., Kvadsheim, P. H., Ainslie, M. A., Solow, A., Handegard, N. O., Nordlund, N., and Lam, F. P. A. (2012). Impact of naval sonar signals on Atlantic herring (<i>Clupea harengus</i>) during summer feeding. <i>ICES Journal of Marine Science: Journal du Conseil</i>, fss080.
CDFU-05	Of grave concern to CDFU is the lack of available research that demonstrates the short and long term impacts to fish and marine mammals. It is apparent that there is very limited research available that focuses on the impacts of mid-frequency sonar use to fish, Pacific Herring in particular and the limited research that is available suggests that there is not only variation in effects of intense sound sources on different species of fish, but that there may also be differences based on genetics or development. Indeed, one can go even further and suggest that there may ultimately be differences in effects of sound on fish (or lack of effects) that are related to fish age as well as development and genetics, as was demonstrated by Popper et al. (2005). Many references included in this section cite data based on freshwater fish, species not	There is in fact, a great deal of scientific research available on the short-term and long-term impacts of sound on fish and marine mammals, as detailed in the Navy's analysis. As discussed within the 2011 GOA Final EIS/OEIS on pages 3.6-39 to 3.6-43 and the analysis within Popper (2008), most fish species found in the TMAA are hearing "generalists" that do not hear sound in the mid-frequency range. Even for fish species that are hearing specialists, such as herring, recent work by Silve et al. (2015) concluded that the use of naval sonar poses little risk to populations of herring since any reaction is expected to be brief and not biologically meaningful. This is consistent with the analysis in the 2011 GOA EIS/OEIS and the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	included in the GOA, and entirely different environmental conditions. These references do not fully describe the impacts to GOA specific species as there simply is not research available in this area.	findings presented in the GOA Supplemental EIS/OEIS. There is also a great deal of research with regard to both short- and long-term impacts to marine mammals (see in general Section 3.8.3.1.2, Analysis Background and Framework). Regarding short-term impacts, see, for example, the discussion presented in Section 3.8.3.1.2.6 (Behavioral Reactions). With regard to long-term consequences, see, for example, Section 3.8.3.1.3 (Long-Term Consequences to the Individual and the Population). The Navy has conducted training with the current mid-frequency sonar system since the 1970s. Comprehensive monitoring, reporting, and scientific observations since 2006 have found no evidence of any short-term or long-term population-level effects to fish or marine mammals in any Navy training areas. Based on the analysis in the EIS/OEIS and monitoring conducted during actual training events, the Navy has concluded that the proposed training will not pose a risk to whales, fish, and other wildlife given that these same activities have been conducted for many years in the TMAA and in other Range Complexes with no indications of population-level effects to marine mammals, fish, or wildlife at those locations. Please see the recent results supporting this as presented in training ranges monitoring reports available at the Navy website (www.navymarinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications).
CDFU-06	Since the collapse of the herring fishery in 1996, millions of dollars have been expended to help scientists understand more about the inability of Pacific Herring to fully recover from the impacts of the <i>Exxon Valdez</i> oil spill. The ultimate goal of this research is to work towards the restoration of the Pacific Herring fishery returning it to its former abundance. The lack of adequate research on mid-frequency sonar on Pacific Herring, and other fish species in the Gulf of Alaska is alarming. It is incomprehensible that a Department of U.S. Government (EPA or the DOD) would support any alternative other than the <u>No Action</u> alternative based on this lack of information and available research.	With respect to existing studies completed to date on sonar effects on herring, the Navy and NMFS have reviewed existing literature and studies on this subject.
CDFU-07	4.2.8.2 Ship Strikes This section states that releasing individual expended materials would not have any significant effects on the environment, but does not indicate whether the cumulative effect of adding specific contaminants into the marine environment was fully analyzed. Elevated concentrations of certain chemicals can cause adverse effects on aquatic biota including reduced survival, impaired reproduction, and reduced growth. Release of toxic substances in the water may be quickly diluted; however, some toxic substances have	In the 2011 GOA Final EIS/OEIS, the Navy did not include a table describing each chemical's tendency to bioaccumulate because bioaccumulation effects must be analyzed according to impact to individual species. Section 3.2 (Expended Materials) of the 2011 GOA Final EIS/OEIS identifies the expended materials that are part of the proposed action and the effects known to date of these chemicals. A detailed species by species analysis of bioaccumulation potential for

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	the potential to bioaccumulate in the food chain. Information included in the Draft EIS is not sufficient to detail the myriad of toxic chemicals that will be released into GOA waters, and the tendency of each specific chemical to bioaccumulate. A table describing each chemical's tendency to bioaccumulate (or not) would more accurately demonstrate the long-term environmental impacts of the proposed training activities. Currently, this area is severely lacking despite the extreme quantities of foreign chemicals that are proposed to be expended in the GOA. It is likely that this too is an area where research is lacking.	all possible contaminants is not possible with the best available scientific data at this time. Impacts from bioaccumulation present a large and complex set of variables, including marine mammal and fish occurrence in the TMAA, population size, toxicity to each individual species, and habitat types and characteristics of the TMAA. Due to the short-term duration and impacts of Navy training activities in the GOA, bioaccumulation impacts are not significant.
CDFU-08	Table 3.2-2: Failure and Low-Order Detonation Rates of Military Ordnance The failure rate of guns, grenades, rockets, etc. ranges from 1.78% to 8.23%. Representation as a percentage does not clearly articulate the amount of ordnance that is left in an unexploded state. As indicated in the Draft EIS, the training activities will take place in an area frequented by commercial fishermen. An increase in training activities will increase the percentage of unexploded ordnance left on the ocean floor. While the training area is large, there is no way to predict where a commercial fisherman will place their net. The fishing process can include dragging nets across the ocean floor. Unstable, unexploded ordnance poses the potential for significant risk to commercial fishermen. It is incomprehensible that the Draft EIS does not include any information on this inherent risk to public safety.	The 2011 GOA Final EIS/OEIS addresses the use of live ordnance and the potential for ordnance items to not function as designed (i.e., dud) in Section 3.2 (Expended Materials). Undetonated ordnance on the seafloor could potentially pose a risk to fishermen engaged in bottom trawling if the net dug deep enough into the seafloor sediments to encounter that ordnance. Given the ordnance did not detonate as intended and was subjected to the corrosive effects of seawater, it is most likely that the ordnance would not detonate for the same reason it failed to detonate upon impact with a training target or the water surface. Based on the number of live explosive ordnance used under Alternative 2 and the estimated failure rate, there would be approximately 0.007 undetonated explosive items per square nautical or one undetonated explosive item per 140 square nautical miles. While fisherman could contact undetonated ordnance, it would be unlikely given the large area of the TMAA and their likely resting place deep below any seafloor sediments. Should there be interaction, all maritime claims arising from operation of a Navy vessel are handled by the Office of the Judge Advocate General (Code 11). If the situation arises, information on how to submit an Admiralty Claim can be found at http://www.jag.navy.mil/organization/code_11.htm. Text describing potential effects on public safety from undetonated ordnance was added to Sections 3.14.2.3, 3.14.2.4, and 3.14.2.5 of the 2011 GOA Final EIS/OEIS as a result of this same comment in 2011.
CDFU-09	3.7.8 At-Sea Explosions Mitigation measures used to protect marine mammals may be inadequate. The Navy uses visual inspection and passive sonar to detect marine mammals prior to and during training activities. Passive sonar does not indicate the location of marine mammals, only that they are in the vicinity. The Navy will not cease training activities simply because they detect a marine mammal on the passive sonar; they will primarily rely on visual inspections to detect marine mammals and will only cease activities if the marine mammal comes within 200 yards. Marine mammals will only be detected when they	The Navy does not claim or expect 100 percent of the animals present in the vicinity of training events will be detected; however, mitigation measures based on detection of marine mammals by exercise participants anywhere in the exercise area will result in the mitigation of some potential impacts. Please see the Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) for more details in this regard. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) regarding monitoring reports from

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	come to the water's surface, thus they may have already entered the critical threshold area before they are spotted. Migration patterns should be studied and training exercises should occur outside of their migration routes. Ordnance cannot be released and explosives cannot be detonated until the target area is determined to be clear. Training activities are halted immediately if cetaceans, pinnipeds, or sea turtles are observed in the target area. The Gulf of Alaska is prone to extreme weather and severe storms occurring regularly during the intended training exercise timeframe. The Draft EIS is lacking information relating to adverse weather conditions and how this would significantly impede Navy's ability to visually detect marine mammals and large schools of fish. This topic is briefly mentioned in <i>Operating Procedures & Collision Avoidance</i> however mitigation in this scenario is not well defined.	exercises since 2006 that have demonstrated the ability to detect marine mammals, the success of these mitigation measures, and a lack of observable impacts to marine species as a result of Navy training events. As detailed in the introduction to Chapter 5 in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the Navy and NMFS as a cooperating agency have reviewed other potential mitigations measures as described. The Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern, (2) prohibiting use of explosives during training in the Portlock Bank area, and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull-mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
CDFU-10	Other Information on the migration patterns of fish is not sufficient. More information is needed in this area to fully describe the potential impact an increase in training activities might have to salmon returning to Prince William Sound and the Copper River.	Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar, and therefore it would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		(within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions).
Deep Sea Fishermen's Union of the Pacific (DFSU-01) (Written)	Dear Ms. Burt: The Deep Sea Fishermen's Union (DSFU) is a labor Union representing commercial long line fishermen who operate primarily on the waters of the Pacific Ocean and Bering Sea. Since our inception in 1912, the majority of our members have been employed on the decks of vessels owned and home ported primarily in Seattle and the Puget Sound basin. Our base of operations is located in the historic Norwegian community of Ballard.	Thank you for participating in the NEPA process.
DSFU-02	Many of our members fondly reflect back on Navy training exercises held in the Gulf of Alaska (GOA) over a decade ago. It was during these training exercises that our	Navy continues to fund research investigating marine mammal responses to activities at sea, including the use of sonar for anti-

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	members experienced some of the best fishing of their careers. We feel the reason for this spectacular fishing was a direct result of the Navy's use of sonar. Navy sonar seemed to have spooked off our greatest adversaries, sperm and killer whales. Since the Navy's training exercises that I mention, whale predation has grown to near exponential levels. As a result, fishermen are hauling a lot more hooks by the whales in order to harvest their quota. We are very concerned for the well-being and future of our fisheries. The DSFU is afraid that fisheries leaders may take whale predation into account when setting future quotas.	submarine warfare, mine avoidance, and other tactical applications. See discussion in Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS. Navy exercises in the Gulf of Alaska prior to 2011 did not typically involve anti-submarine warfare events or the use of hull mounted surface ship sonar. Therefore, any prior fishing trends cannot be correlated to Navy activities or sonar use in the Gulf of Alaska. Additionally, recent science involving behavioral response study research indicates that if there are any reactions at all to Navy sonar, those reactions are likely to be localized and temporary and that science does not indicate any reactions on the order of magnitude such as sperm whales or killer whales leaving an area such as the Gulf of Alaska.
DSFU-03	Thus the DSFU strongly encourages the use of the Navy's sonar in a co-operative effort with the fishing industry. This could be good publicity. In addition, the DSFU highly recommends that the Navy conduct its training operations during the peak fishing months of April and May in the vicinity of position 58 degrees North 147 degrees West. The DSFU would also applaud any and all efforts in the Navy sharing sonar technology within the limits of national security for the civilian market in deterring whales. Should the civilian market develop a product that would truly deter whales, the outcome would be a win for both commercial fishermen and the Navy. The reason being, fewer whales for fishermen would also mean fewer whales for the general public to be concerned about when the Navy conducts its training operations. We are not talking about culling the herd, but rather simply deterring the herd. The DSFU would appreciate being involved in any future sonar developments. Please let us know earlier rather than later if the Navy would be willing to co-ordinate efforts with the hook and line fishing industry to help deter whale predation. Sincerely, //ss// S. McManus Vice President	The Navy's use of sonar is for training and proficiency. Uses of sonar outside of training and proficiency would only needlessly increase the level of "takes" in our permitting process. As a steward of the ocean, the Navy takes great pride in its ability to limit its environmental footprint and potential impact from its activities to only that which is required to fulfill its training requirements under Title 10 of U.S. Code.
C. Hoover on behalf of the Eyak Preservation Council C.Hoover-EPC-01 (Electronic)	I have been coming to Cordova, Alaska every year for six months – from May to October - since 1992. I come and work in Cordova, and helped create the Eyak Preservation Council. I love the area, and support its wildness and productive ecosystems. As an American, I have a right to land, water and air and a surrounding that provides for my livelihood. This region does that for me and has for many years. I became aware of the region after the Exxon Valdez oil spill, as my best friend went there to help with the attempted oil spill cleanup. Which brings me to my first point.	Thank you for participating in the NEPA process.
C.Hoover-	It is absolutely UNACCEPTABLE to conduct military trainings and not take out, clean up	It is impractical to retrieve most and impossible to retrieve some of the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
EPC-02	and remove ALL that you destroy and train with – you cannot just LEAVE it there – or anywhere. When are we, as a people, as a Nation, going to lead the way to truly respect the impacts OUR waste and war has on our only home, the Earth?	expended items proposed for use in the TMAA. As explained in the 2011 GOA Final EIS/OEIS (Section 3.2 Expended Materials), no biologically meaningful impacts related to expended materials would occur as a result of the proposed action.
C.Hoover-EPC-03	We, I speak for the many I have spoken with about this training, do not want this training anywhere near the Gulf of Alaska. The region has not recovered from the Exxon oil spill, and will not “recover” from this. I am not a scientist; I have not studied the effects of war games on environments, yet I am not a young person – I am 66. And I have seen the effects and the denial of what violence does to ecosystems, and I am not going to stay silent. Violence includes war training, the preparation for war and the killing that ensues. And the havoc it lays on the land and waters, whether it be training or the real deal.	Please note that the proposed action has nothing in common with the Exxon Valdez oil spill in Prince William Sound and that the nearest edge of the TMAA is, for example, approximately 80 miles from Cordova. Additionally, Navy training activities have been occurring in the Gulf of Alaska for decades, and the Navy training activities detailed in Alternative 2 of the proposed action have been authorized since 2011. The analysis presented by the Navy and the training authorized by National Marine Fisheries service will not affect the ecosystem in the Gulf of Alaska or have long-term consequences for populations of marine species.
C.Hoover-EPC-04	We trust the Navy is aware that where the training area is planned is just south of Prince William Sound, which supports one of the largest sought after wild and wild caught salmon fisheries in Alaska and in North America. The Gulf of Alaska, where the trainings are proposed, hosts one of the verifiable richest marine environments in Alaska (at the very least), and is directly inline and on time (spring and summer) with the regions that all species of returning salmon will be going through in order to return to their spawning grounds and the commercial fishing catch areas. It is difficult not to resort to hyperbole when commenting on this proposal as it is indeed, ludicrous bordering on idiocy to consider this area for these kinds of military trainings. This is a mistake. Heed my words – the Navy is NOT going to conduct these exercises in one of the richest marine environments we have in our United States’ waters – in the spring and summer (I am repeating)?! When the wild and hatchery salmon are returning to their birthplaces? When the marine mammals are feeding and coming to their summer harbors? When the commercial fishers of Prince William Sound are counting on their livelihoods for their sustenance and families? When you, the Navy and all your researchers, really don’t know, as is evidenced by the EIS what the long-term effects are? When you REALLY don’t know the impacts to the fish- to our beloved salmon and wild creatures?	The Navy is aware of the location of Prince William Sound (see Figure 1.1 in the 2011 GOA Final EIS/OEIS) and has described the location of the Temporary Maritime Activities Area in relation to Prince William Sound (see Section 1.3.2, Primary Components, of the 2011 GOA Final EIS/OEIS). The Navy is also aware of the resources present in the Gulf of Alaska (see Section 3, Affected Environment and Environmental Consequences, of the 2011 GOA Final EIS/OEIS). As stated above, Navy training activities have been occurring in the Gulf of Alaska for decades, Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been severely injured or died as a result of Navy training. With regard to long-term effects, please see for example Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. In the Supplemental EIS/OEIS, the Navy has assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy, including the TMAA. Regarding impacts to salmon, fish in general, and the commercial fishers, as presented in Section 3.6 (Fish) and Section 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, Navy is aware of the importance of fisheries

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		in Alaska. The proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska.
C.Hoover-EPC-05	You presume, the Navy, are going to shoot our bombs (I do realize I help pay for them), improve and tune up the Navy's killing skills, and leave the waste and toxics to quietly float down to the blue bottom of the unseen ocean floor. Be damned what is taken along the way. To leave it there, to form piles, here and there. To be deconstructed in the thousands of years to come. And for the Navy, to be allowed to do that, year after year, as long as the need for war and defense continues in our short spans of life. I personally respect the need for defense, but as an elder, I am concerned for the human condition on so very many levels. And this location, and this year after year permission, is not coming from me, on any level. I deny and do not approve all alternatives. I appreciate the right to comment. More to come.	As presented in the 2011 GOA Final EIS/OEIS (Section 3.2 Expended Materials), no significant impacts related to expended materials would occur as a result of the proposed action and the way those materials are used would not result in piles of material on the seafloor. There are numerous studies involving the fate of expended munitions, including locations where the expended materials are much more concentrated and have been in place for many decades. Those studies do not indicate there is any significant impact on the environment or the sea life living in proximity to those materials. The range of alternatives presented in the Supplemental EIS/OEIS includes reasonable alternatives, including the continuation of training as authorized since completion of the 2011 GOA Final EIS/OEIS. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission, achieved in part by conducting training within the Study Area. The alternatives carried forward meet the Navy's purpose and need (see the Supplemental EIS/OEIS Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities) to ensure that it can fulfill its obligation under Title 10. The Navy complied with NEPA requirements in the development and consideration of alternatives. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk on behalf of the Eyak Preservation Council (E. Stolarczyk EPC-01) (Electronic)	The Eyak Preservation Council (EPC) is a non-profit 501(c)3 organization based in Cordova, Alaska. EPC represents citizens, residents, tribal members, fishermen, subsistence users and people from all walks of life across Alaska and the United States that are concerned with the preservation of wild salmon and wild salmon habitat and the way of life that this sustainable renewable resource supports. EPC was conceptually founded on the day of the Exxon Valdez oil spill, 25-years ago. There is still oil on the beaches, and many species have not recovered from the spill. The once lucrative herring fishery has never reopened. People's lives were destroyed, financially and spiritually. We view these training exercises as analogous to that disaster.	Please see Chapter 2 (Description of Proposed Action and Alternatives) of both documents which describes the ongoing training activity Navy has proposed to continue. The proposed action has no features in common with the Exxon Valdez oil spill in Prince William Sound. The Navy's proposed action would not transport large amounts of oil as like those ships involved in prior spills in Alaska or interact with the production or transportation of oil for commercial sale while training in the TMAA. Nevertheless, oil spill prevention is a high priority for the Navy. Throughout its spill prevention program, Navy concentrates on the entire spectrum of oil handling. Navy maintains in-house capability to respond to spills of all sizes. Every ship is equipped with an oil spill kit that is designed to prevent spills from entering the water. Navy activities report oil spills through Navy chain to the National Response Center. Navy personnel are highly trained in

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		containment and cleanup of spills, and equipment is pre-staged worldwide should it be necessary. The Navy conducts periodic training with all response agencies, federal, state, and local. A search of the USCG's National Response Center Annual reports indicates that out of the countless number of reported spills in the state of Alaska, from small amounts of oil sheen to large spills, there have been very few from government vessels (predominately USCG vessels) in Alaska. The probability of a Navy ship oil spill is extremely minimal given standard operating procedures.
E. Stolarcyk EPC-02	We trust the Navy is aware that where the Temporary Maritime Activities Area (TMAA) is planned is just south of Prince William Sound, which supports a large wild and wild caught salmon fishery with some of the best salmon in Alaska, in North America and the world. The Gulf of Alaska (and the TMAA) hosts one of the richest marine environments on earth and Essential Fish Habitat (ESH) for many species of fish, including all five species of Pacific Salmon and is not a sacrifice zone for war games. As if to add insult to injury, the proposed timing of the trainings are planned to take place during fishing season.	Navy is aware of the location of Prince William Sound (see Figure 1.1 in the 2011 GOA Final EIS/OEIS) and has described the location of the Temporary Maritime Activities Area in relation to Prince William Sound (see Section 1.3.2, Primary Components of the 2011 GOA Final EIS/OEIS). There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
E. Stolarcyk EPC-03	EPC does not approve of the purposed action or support any of the alternatives. If Navy trainings take place, the Navy must provide more data on fish impacts beforehand, and needs to include a Navy funded plan for expended materials recovery and removal. The lack of information about the long-term affects of these training exercises and the expended materials left behind in the EIS is unacceptable. The fact that the TMAA is the absolute minimum distance from the jurisdiction of the USA's environmental laws and that expended materials will be dispersed over a large area and subject to ocean currents pushing these materials (even in dissolved molecular form) closer to shore is also unacceptable.	The range of alternatives presented in the Supplemental EIS/OEIS includes reasonable alternatives, including the continuation of training as authorized since completion of the 2011 GOA Final EIS/OEIS. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission, achieved in part by conducting training within the Study Area. The alternatives carried forward meet the Navy's purpose and need (see the Supplemental EIS/OEIS Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities) to ensure that it can fulfill its obligation under Title 10. See Section 2.3.1 (Alternatives Development) of the 2011 GOA Final EIS/OEIS for more detailed information on the development of alternatives. The Navy complied with NEPA requirements in the development and consideration of alternatives. This Supplemental EIS/OEIS analyzes all alternatives in Section 2.3 (Proposed Action and Alternatives) carried forward in the 2011 GOA Final EIS/OEIS. It is not feasible to retrieve most of the expended items proposed for

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		use in the TMAA. As explained in the 2011 GOA Final EIS/OEIS (Section 3.2 Expended Materials), no significant impacts related to expended materials would occur as a result of the proposed action. Section 3.6 (Fish) in the 2011 GOA Final EIS/OEIS thoroughly discusses potential impacts to fish and Essential Fish Habitat. That analysis showed that in general, the proposed training activities would not adversely affect fish populations or Essential Fish Habitat. With regard to long-term effects, please see for example Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. In the Supplemental EIS/OEIS, the Navy has assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy including the TMAA.
E. Stolarcyk EPC-04	Wild salmon, and indeed all ocean life forms, are threatened by a wide variety of factors. EPC does rely on scientific associates to expand on these matters with technical verbiage. EPC concentrates on what we know traditionally, what we have experienced and what is obvious. It is EPC's mission and therefore our responsibility to protect every single wild and returning salmon we can to Prince William Sound and the Copper River Delta. They have a right to return, and we have a right to protect them, for not only the health of the environment, but also for the people that depend on their safe return. People all over the world depend on and enjoy the bountiful salmon harvests that traverse through the Gulf of Alaska on the way to their birthing regions.	Your comment is noted. Thank you for participating in the NEPA process.
E. Stolarcyk EPC-05	We state that there is no need for these toxic trainings in the Gulf of Alaska or anywhere bombs, missiles, sinking of ships and toxic chemicals that will be dumped, propellant releases (which do not evaporate quickly, and will kill marine life) and the use of sonar which will disrupt thousands of marine mammals and fish.	Please note that the proposed action does not involve dumping of any materials or chemicals, and as stated earlier, as presented in the 2011 GOA Final EIS/OEIS (Section 3.2 Expended Materials), no significant impacts related to expended materials would occur as a result of the proposed action. Also note that as described in the 2011 EIS/OEIS, sonar use will not disturb fish since most fish cannot hear sonar at the frequencies in the proposed action and science indicates that the few fish that can hear in those frequencies have no significant, if any, reaction to sonar. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort has found no evidence that Navy training activities have had any impact on marine mammal and fish populations in the Pacific in areas such as Southern California or Hawaii where Navy training has

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
E. Stolarcyk EPC-06	EPC respectfully demands that you delay and move the proposed training exercises 100 miles (minimum) from any designated EFH, and complete the necessary research on the long term impacts on fish, especially Pacific salmon. Also treat the world's oceans respectfully by developing and enacting methods for the retrieval and removal of all (100%) of expended materials left by training exercises.	been occurring year-round for decades. As presented in the EIS/OEIS, the best available science, and the past history of having conducted these same training events for years in the area, the continuation of training in the Gulf of Alaska will have no significant impact on fish harvests or fish resources in the area. As described in Section 2.3.2.1 (Alternatives Locations) of the 2011 GOA Final EIS/OEIS, the Navy considered, but rejected, alternatives that included holding the training in the winter and moving this exercise to other locations. Such alternatives fail to meet the purpose of and need for the proposed action. Additionally, as discussed in Chapter 2, Section 2.3.2.1 of the 2011 GOA Final EIS/OEIS, the GOA TMAA provides a strategically important and unique venue for conducting required Navy training activities and meeting the mission of Alaskan Command. As stated above, it is not technically feasible to recover most materials expended during training.
InterTribal Sinkiyone Wilderness Council (ITSWC)-01 (Electronic)	The Navy has not demonstrated by any reasonable standard that significant harm to a multitude of marine mammals, fin fish, invertebrates, humans, and other forms of life will not occur as a result of its proposed activities. Although it is as yet unknown exactly how harmful these activities will be, the likelihood of significant harm is extremely high; yet, no mitigations or other measures are proposed that would adequately address such harm.	Using the best available science and based on the history of having conducted Navy training in the same area for many years, the Navy has determined that there is not a likelihood of significant harm. Please see the analysis presented in the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) regarding impacts to marine mammals. Based on the facts presented in the 2011 GOA Final EIS/OEIS and the best available science, it was determined (Section 3.6 Fish) that training is not anticipated to result in adverse effects to fish populations and would result in minimal harm to fish or fish habitat. For Invertebrates, please see the 2011 GOA Final EIS/OEIS Section 3.5 (Marine Plants and Invertebrates) and for humans see Section 3.12 (Socioeconomics). Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) indicating the likelihood of significant harm is extremely low. For the currently proposed mitigations or other measures, see Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS. Additionally, the Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern; (2) prohibiting use of explosives during training in the Portlock Bank area; and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
ITSWC-02	The activities proposed, and the debris remaining at the testing and training sites will cause serious and lasting damage to sea mammals, fin fish, and other life forms. Unless and until measures to ensure adequate protections are in place, no proposed activities should be allowed to go forward. Permits that would enable the activities to proceed should not be issued by any regulatory agencies; and, if such permits already have been issued, they should be rescinded until it is clear that measures are in place to prevent serious harm to sea life and the human populations that depend upon this area for their way of life—especially Native Alaskans whose ancestral and aboriginal rights and traditional subsistence lifeways will be violated and significantly impacted by the proposed activities.	impacts while safely meeting its training requirements. The Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. See the analysis presented in the 2011 GOA Final EIS/OEIS regarding the proposed action in relation to the use of expended materials. A Letter of Authorization under the Marine Mammal Protection Act and a Biological Opinion under the Endangered Species Act were issued in conjunction with the 2011 GOA Final EIS/OEIS. The mitigation measures presented in Chapter 5 of both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS were developed in coordination with the National Marine Fisheries Service as a cooperating agency on this Supplemental EIS/OEIS and as part of the process under the Marine Mammal Protection Act and Endangered Species Act. No impacts to traditional subsistence practices or resources are predicted to result from the proposed activities and there have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. Additionally, and in consultation with NMFS, the Navy has agreed to preclude a SINKEX from occurring in Habitats of Particular Concern and has established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe.
Natural Resources Defense Council (NRDC)-01 (Written)	On behalf of the Natural Resources Defense Council ("NRDC"), Center for Biological Diversity, Defenders of Wildlife, Humane Society of the United States, OceanCare, and Whale and Dolphin Conservation, and our millions of members, many of whom reside in the State of Alaska, I am writing to submit comments on the Navy's Draft Supplemental Environmental Impact Statement ("DSEIS")/ Overseas EIS for its training activities in the Gulf of Alaska. See 79 Fed. Reg. 49769 (Aug. 22, 2014). The Navy's preferred alternative is the same as that chosen in 2011, in the Navy's original EIS, and would dramatically increase the amount of training in the Temporary Maritime Activity Area ("TMAA") across 42,146 square nautical miles across the GOA south of Prince William Sound and east of Kodiak Island. The Navy plans to introduce—for the first time—extensive sonar training in the GOA. Its preferred alternative would use many different sources of active sonar, totaling over 1,160 hours of sonar use every year, and employ a battery of other acoustic sources, ordnance firings, and underwater	The Supplemental EIS/OEIS is a supplement to the 2011 GOA Final EIS/OEIS for which a Record of Decision (ROD) was issued. The activities that are being proposed in the Supplemental EIS/OEIS are the same activities that were identified, analyzed, and subject to a ROD in the 2011 GOA Final EIS/OEIS document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). Sonar use was part of the proposed action and has been authorized since 2011.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	detonations. In addition, the Navy plans to use a Portable Undersea Tracking Range, add a second carrier strike group exercise, and conduct ship-sinking exercises in the TMAA.	
NRDC-02	The National Environmental Policy Act (“NEPA”) requires the Navy to employ rigorous standards of environmental review, including a full explanation of potential impacts, a comprehensive analysis of all reasonable alternatives, a fair and objective accounting of cumulative impacts, and a thorough description of measures to mitigate harm. Unfortunately, the DSEIS released by the Navy falls far short of these mandates and fails to satisfy the Navy’s legal obligations under NEPA, nor can it properly serve as NMFS’ EIS for the new five-year MMPA authorization the Navy now seeks.	The Navy complies with all applicable environmental laws, including NEPA. As such, the Navy has developed this Supplemental EIS/OEIS to meet the requirements of these laws. Please see Chapter 2 (Description of Proposed Action and Alternatives), which includes a comprehensive analysis of reasonable alternatives, selection criteria used to establish alternatives that meet the purpose and need for the proposed action, and alternatives considered but eliminated (see Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities, and Section 2.5.1, Alternatives Eliminated from Further Consideration). See the 2011 GOA Final EIS/OEIS Section 2.3.1 (Alternatives Development) for more detailed information on the development of alternatives. This Supplemental EIS/OEIS (Section 2.3, Proposed Action and Alternatives) notes that the alternatives have not changed from those presented in the 2011 GOA Final EIS/OEIS. Please see Chapter 3 (Affected Environment and Environmental Consequences) for the description of the affected environment and analysis of potential impacts of the Navy’s Proposed Action on the affected environment. Chapter 4 (Cumulative Impacts) presents a comprehensive cumulative impacts analysis conducted in accordance with CEQ guidance, and information on mitigation measures that have been shown to be protective of marine species is found in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS.
NRDC-03	Among our primary concerns are the Navy’s density estimates, which do not account for substantial uncertainty in its modeling; its take thresholds and weighting systems, which contain significant errors and underestimate take; its post-modeling adjustment in mortality and injury estimates, based on patently optimistic or unsupported assumptions about the effectiveness of the Navy’s monitoring system and the likelihood of marine mammal avoidance; and its treatment of North Pacific right whales, possibly the most endangered baleen whale species on earth, which occurs on the TMAA to an degree underestimated by the Navy and requires more stringent mitigation measures to reduce the potential for catastrophic harm. We are also deeply concerned about the potential impacts of expanded training activities on the Gulf’s comparatively naïve populations of beaked whales. We strongly urge the Navy to revise its present DSEIS and reissue a draft for public comment.	Please see the Supplemental EIS/OEIS Section 3.8.2.5 (Marine Mammal Density Estimates), Section 3.8.3.1.6.1 (Marine Species Density Data), and the referenced Pacific Marine Species Density Database Technical Report (available on the GOA EIS webpage). The comment implies there may be a fundamental misunderstanding of what a statistical measure of uncertainty represents. Using the coefficients of variation (CVs) or otherwise adjusting the mean estimates as has been suggested would result in unreasonable measures, particularly given the very high CVs associated with most marine mammal density estimates. Using the upper bound of the 95 percent confidence interval (as suggested in other MMC and NRDC comments) would result in an extremely large and unrepresentative overestimate of the expected effects (takes) from the proposed action. A confidence interval is only meant to be an indication of the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		uncertainty associated with a point estimate, and should not be used to derive any absolute number within the confidence interval. Using the upper limit of the range as an input would do nothing to decrease the level of uncertainty. The use of a mean density estimate is consistent with the approach taken by NMFS to estimate and report the populations of marine mammals in their Stock Assessment Reports, and the estimated mean is thus considered the best available data. As detailed in the Supplemental EIS/OEIS, Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) the Navy's acoustic model already includes conservative estimates of all parameters (e.g., assumes that the animals do not move horizontally, assumes they are always head-on to the sound source so that they receive the maximum amount of energy), resulting in a more conservative (i.e., greater) assessment of potential impacts. Regarding the thresholds and weighting functions, the Navy's acoustic analysis and modeling reflect the best available science, as evidenced by recent NMFS rulemaking actions on other Navy documents. There are no known "significant errors" in these thresholds or the weighting functions. Regarding the general approach to modeling, in the Supplemental EIS/OEIS Section 3.8.3.1.6.3 (Navy Acoustic Effects Model), when there was a lack of definitive data to support an aspect of the modeling (such as lack of well-described diving behavior for all marine species), modeling assumptions believed to overestimate the number of exposures were chosen. It is therefore incorrect to assume that the analysis presented is an underestimate, when in fact the analysis is intended to be a conservative overestimate of predicted effects. See the Supplemental EIS/OEIS Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) and Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) to understand the mathematically conservative assumptions made with regard to assessment of the unprocessed acoustic effect modeling results. As is evident from the "Determination of Acoustic Effects on Marine Mammals and Sea Turtles for the Gulf of Alaska Training Activities Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement" (Marine Species Modeling Team 2015) technical report referenced in the Supplemental EIS/OEIS, the procedures for modeling involving ESA listed species result in an overestimate of effects to those species. Please also see Section 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]) in the Supplemental EIS/OEIS for up to date data regarding the presence of North Pacific right whale in the TMAA. Please note that the Navy is not proposing to expand training activities in the TMAA. The activities

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and presented in the record of decision in the 2011 GOA Final EIS/OEIS document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Navy has been training in the TMAA for over a decade in addition to NMFS research involving acoustic trawl integration surveys that use powerful mid-frequency sonar. This suggests it is unlikely there would be naïve populations of beaked whales in the TMAA area.
NRDC-04	I. THE NATIONAL ENVIRONMENTAL POLICY ACT The National Environmental Policy Act of 1969 (“NEPA”) “declares a broad national commitment to protecting and promoting environmental quality.” <i>Robertson v. Methow Valley Citizens Council</i>, 490 U.S. 332, 348 (1989). NEPA establishes a national policy to “encourage productive and enjoyable harmony between man and his environment” and “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. In order to achieve its broad goals, NEPA mandates that “to the fullest extent possible” the “policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with [it].” 42 U.S.C. § 4332. Central to NEPA is its requirement that, before any federal action that “may significantly degrade some human environmental factor” can be undertaken, agencies must prepare an EIS. <i>Steamboaters v. F.E.R.C.</i>, 759 F.2d 1382, 1392 (9th Cir. 1985) (emphasis in original). The requirement to prepare an EIS “serves NEPA’s action-forcing purpose in two important respects.” <i>Robertson</i>, 490 U.S. at 349. First, “the agency, in reaching its decision, will have available, and will <i>carefully consider, detailed information</i> concerning significant environmental impacts[.]” and second, “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” <i>Id.</i> (emphasis added). As the Supreme Court explained: “NEPA’s instruction that all federal agencies comply with the impact statement requirement... ‘to the fullest extent possible’ [cit. omit.] is neither accidental nor hyperbolic. Rather the phrase is a deliberate command that the duty NEPA imposes upon the agencies to consider environmental factors not be shunted aside in the bureaucratic shuffle.” <i>Flint Ridge Development Co. v. Scenic Rivers Ass’n</i>, 426 U.S. 776, 787 (1976).	The Navy complies with all applicable environmental laws, including NEPA. The Navy has developed this Supplemental EIS/OEIS to meet the requirements of these laws.
NRDC-05	The fundamental purpose of an EIS is to force the decision-maker to take a “hard look” at a particular action – at the agency’s need for it, at the environmental consequences it will have, and at more environmentally benign alternatives that may substitute for it – before the decision to proceed is made. 40 C.F.R. §§ 1500.1(b), 1502.1; <i>Baltimore Gas & Electric v. NRDC</i> , 462 U.S. 87, 97 (1983). This “hard look” requires agencies to obtain	Please see Section 1.7 (Scope and Content) of the Supplemental EIS/OEIS to understand the development of this supplemental analysis. The proposed action is the same as the Proposed Action presented in the 2011 GOA Final EIS/OEIS and Record of Decision for Final Environmental Impact Statement/Overseas Environmental

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	high quality information and accurate scientific analysis. 40 C.F.R. § 1500.1(b). “General statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided.” <i>Klamath-Siskiyou Wilderness Center v. Bureau of Land Management</i>, 387 F.3d 989, 994 (9th Cir. 2004) (quoting <i>Neighbors of Cuddy Mountain v. United States Forest Service</i>, 137 F.3d 1372, 1380 (9th Cir. 1998)). The law is clear that the EIS must be a pre-decisional, objective, rigorous, and neutral document, not a work of advocacy to justify an outcome that has been foreordained. In nearly every respect, the Navy’s DSEIS fails to meet the high standards of rigor and objectivity required under NEPA, and to conduct the “hard look” necessary to thoroughly examine the many environmental consequences of its proposed action.	Impact Statement for the Gulf of Alaska Navy Training Activities and involves the continuation of training that, in the majority, has been ongoing for more than a decade. This Supplemental EIS/OEIS has taken a “hard look” at potential environmental consequences of the Proposed Action and alternatives, and has considered new information from which the predicted effects to marine mammal resources is expected to change from those quantified in the 2011 GOA Final EIS/OEIS. The Navy considered the best available science in preparation of this Supplemental EIS/OEIS and is in consultation with NMFS as the regulator and a cooperating agency with regard to the Proposed Action, the potential environmental impacts, and any resultant mitigation measures as conditions of anticipated authorizations under the MMPA or reasonable and prudent measures resulting from issuance of a Biological Opinion under the Endangered Species Act (ESA). The range of alternatives presented in the Supplemental EIS/OEIS includes reasonable alternatives. To be reasonable, an alternative must meet the stated purpose of and need for the Proposed Action. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission, achieved in part by conducting training within the Study Area. The alternatives carried forward meet the Navy’s purpose and need as stated in the Supplemental EIS/OEIS (Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities) to ensure that it can fulfill its obligation under Title 10. See the 2011 GOA Final EIS/OEIS Section 2.3.1 (Alternatives Development) for more detailed information on the development of alternatives. This Supplemental EIS/OEIS (Section 2.3) notes that the alternatives have not changed from those presented in the 2011 GOA Final EIS/OEIS. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
NRDC-06	II. ANALYSIS OF REASONABLY FORESEEABLE IMPACTS <i>A. Density Estimates</i> The dramatic decrease in the Navy’s take estimates, dropping from more than 400,000 takes in the 2011 EIS to roughly 36,000 under Alternative II in the DSEIS (see DSEIS at 3.8-139), appears primarily due to changes in the Navy’s density estimates. We agree with the Marine Mammal Commission’s comments, suggesting that stratified density	The decrease in the 2011 estimate of potential effects is a combination of newly integrated science, more accurate acoustic effects modeling, integration of new marine mammal survey data, and more accurate overall density data. The Navy coordinated with scientists at the Southwest Fisheries Science Center (SWFSC) and the National Marine Mammal Laboratory (NMML) to help identify the best available density estimates for marine mammals occurring in the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	estimation, based on actual sighting data, can provide more accurate data for impact assessment and mitigation than those produced through RES models and extrapolations from other regions. And, like the Commission, we are deeply concerned about applying values based on highly limited survey effort without taking account of uncertainty. Here the Navy is doing so despite high coefficients of variability for many Gulf populations, extremely low survey effort outside a few months of the year, and other obvious limitations in the empirical data. We support the Commission's general recommendation to use instead either the upper bound of the 95 percent confidence interval or the arithmetic mean plus two standard deviations as the basis for population density.¹ Notes: 1 Comments from R.J. Lent, Executive Director, MMC, to J. Harrison, MMPA permitting officer, Office of Protected Resources NMFS (Sept. 15, 2014).	Study Area. As noted above, the suggestion that the MMC's concern over, "applying values based on highly limited survey effort without taking account of uncertainty," may indicate a fundamental misunderstanding of statistical uncertainty. Using the coefficients of variation (CVs) or otherwise adjusting the mean estimates as has been suggested would result in unreasonable measures, particularly given the very high CVs associated with most marine mammal density estimates. Using the upper bound of the 95 percent confidence interval would result in an extremely large and unrepresentative overestimate of the expected effects (takes) from the proposed action. A confidence interval is only meant to be an indication of the uncertainty associated with a point estimate, and should not be used to derive any absolute number within the confidence interval. Using the upper limit of the range as an input would do nothing to decrease the level of uncertainty. The use of a mean density estimate is consistent with the approach taken by NMFS to estimate and report the populations of marine mammals in their Stock Assessment Reports, and the estimated mean is thus considered the best available data. As detailed in the Supplemental EIS/OEIS, Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) the Navy's acoustic model already includes conservative estimates of all parameters (e.g., assumes that the animals do not move horizontally, assumes they are always head-on to the sound source so that they receive the maximum amount of energy), resulting in a more conservative (i.e., greater) assessment of potential impacts. There have been two dedicated surveys specific to the Study Area, and both surveys took place in the months when Navy training activities are most likely to occur. In addition, Navy monitoring using passive acoustic devices and integration of other regional survey efforts and scientific research (such as tagging studies) have all been used in the analysis presented in the Supplemental EIS/OEIS Sections 3.8.2.6 through 3.8.3.26 regarding all the data used in the analysis. The Rone et al. (2014) data collected in July was used to model impacts for training that would most likely occur in July. Also, the future application of this survey data as representative for year-round densities has no bearing on the Supplemental EIS since the proposed action and analysis only covers the summer months. Navy's intent in the Supplemental EIS/OEIS is to provide the public with most accurate estimate of impacts possible, and vastly overestimating the most likely density of marine mammals in the area as suggested by this comment, would be contrary to that intent.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
NRDC-07	Remarkably, for some species, density data from areas biologically incommensurate to the Gulf of Alaska, such as Baja California, the central Pacific, Hawaii, or the Mariana Islands, are used. Yet such tropical areas are not able to support the richness and productivity of colder waters, as a function of basic animal physiology and metabolism along with oceanography (e.g., thermal stratification in the tropics rather than the existence of mixing layers, which can increase productivity). Additionally, due to ocean climate change, more formerly temperate species will be moving to colder waters such as the Gulf, meaning the Gulf ecosystem will be in flux, contributing to more uncertainty. Thus, comparing densities between tropical areas and the Gulf appears risky and fraught with problems.	Section 3.8.3.1.6.1 (Marine Species Density Data) and the referenced Pacific Marine Species Density Database Technical Report (available on the GOA EIS webpage) describe the process and data used to estimate marine mammal densities in the Study Area. Please note that while the density database technical report covers the entire Pacific Ocean where Navy trains and tests, data for the GOA study area did not make use of data from areas (such as tropical locations) that are not applicable to the GOA Study Area. As Navy has done with the current Supplemental EIS/OEIS, if significant new information is presented in the future (such as the potential redistribution of marine species as a result of global climate change), Navy will again evaluate the need for additional analyses.
NRDC-08	Of greatest concern, perhaps, in the Navy's occurrence and density estimations is the Navy's treatment of North Pacific right whales. The DSEIS misleadingly characterizes the right whales as "rare" within the TMAA (DSEIS at 3.8-3), which surely understates the occurrence of this critically endangered species. Its presence in the area is predictable. As Rone et al. (2014) observe, Soviet whaling records demonstrate the reliable, historic distribution of right whales across the northwest Gulf; and indeed, these catches and sightings occur throughout a substantial portion of the TMAA.² More recently, the Navy's acoustic surveys and monitoring are indicative of the whales' ongoing use of the area. Multiple sonobuoys deployed during the GOALS II survey picked up possible right whale calls within the TMAA's inshore stratum, and additional right whale calls were detected by the Navy HARP located on Quinn Seamount, near the southern edge of the operations area.³ In interpreting these acoustic data, it should be noted that right whale calls are generally detectable at shorter distances than those of many other species of baleen whale. Sonobuoys deployed in the Bering Sea readily detected right whale calls at 19 km distance, with further detectability out to about 30 km.⁴ Notes: 2 Y.V. Ivashchenko and P.J. Clapham, Soviet catches of right whales <i>Eubalaena japonica</i> and bowhead whales <i>Balaena mysticetus</i> in the North Pacific Ocean and the Okhotsk Sea, <i>Endangered Species Research</i> 18: 201-217 (2012). 3 B.K. Rone, A.B. Douglas, T.M. Yack, A.N. Zerbini, T.N. Norris, E. Ferguson, and J. Calambokidis, Report for the Gulf of Alaska line-transect survey (GOALS) II: Marine mammal occurrence in the Temporary Maritime Activities Area (TMAA) (2014) (submitted to NAVFAC Pacific); DSEIS at 3-185. 4 M.A. McDonald and S.E. Moore, Calls recorded from North Pacific right whales (<i>Eubalaena japonica</i>) in the eastern Bering Sea, <i>Journal of Cetacean Research and Management</i> 4: 261-266 (2002).	Please see the information presented in the Supplemental EIS/OEIS Section 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]). Please also see Table 3.8.1 of the same document, where the definition of rare is given as: "The distribution of the species is near enough to the area that the species could occur there, or there are a few confirmed sightings," which reflects the best available science with regard to right whales and the Study Area. While it is true that before whaling decimated right whale populations, they used to be present in greater numbers and throughout a substantial portion of the TMAA, the present analysis correctly reflects the best available density data to analyze impacts from the proposed action rather than whaling accounts from the previous century. The citation to Rone et al. (2014) in the comment leaves off the critical information Rone et al. (2014; page 1) presented as follows: "The North Pacific right whale was devastated by illegal Soviet whaling in the 1960s (Ivashchenko and Clapham 2012) and has been rarely sighted in the GOA in recent years (Wade et al. 2011)." Rone et al. (2014) note that the "gunshot-like sounds" detected on sonobuoys deployed within the inshore stratum could result from a variety of sources (see specifically Rone et al. 2014, pages 69 and 70) and could not be attributed to a right whale. Within Section 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]), Navy discusses acoustic detections of right whales by sonobuoys and other passive acoustic devices. The sonobuoy detections were within Barnabus Trough region on Albatross Bank and not in the TMAA. Researchers who deployed the HARP on Quinn Seamount specifically said (as presented in the Supplemental EIS/OEIS Section 3.8.2.6, North Pacific Right Whale [<i>Eubalaena japonica</i>]) that calls detected from the device on Quinn Seamount could have originated over 100 km from

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		the sensor's location at the southwestern edge of the TMAA. Researchers involved with the HARP data analysis acknowledged to the Navy that given the omnidirectional nature of the hydrophone and up to 100 km detection range, they could not conclusively state if the North Pacific Right Whale detection was within or outside of the TMAA. Finally, despite over 5 years of Navy-funded passive acoustic monitoring in the TMAA from 2011 to 2015, representing 50,972 hours of passive acoustic data, there was very limited North Pacific Right Whale detection (cumulatively for only 3 hours over 2 days) (Sirovic et al. 2015). These 3 hours of detection represent only 0.006 percent of the total passive acoustic record.
NRDC-09	Given the right whales' historic use of the northwest Gulf, the repeated contemporary sightings of right whales just west of the TMAA, on Albatross Bank, and the confirmed and potential acoustic detection during the very limited survey effort that the Navy has made in the Gulf, it is simply not reasonable to assume, for purposes of impact assessment, that the species' presence on the range is "highly unlikely" (e.g., DSEIS at 3.8-165) with vanishingly small density numbers (i.e., 0.00001 whales/ km²).⁵ That assumption is all the more unreasonable given the species' desperately low abundance, which militates even more than for other marine mammals in favor of a highly conservative approach. Accordingly, the Navy should reanalyze potential impacts on right whales using the most precautionary metrics for their occurrence within the TMAA. Notes: 5 S. Hanser, E. Becker, and A. Kumar, Pacific Navy Marine Species Density Database: Final Gulf of Alaska Technical Report (2014).	All modern data presented in Section 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]) of the Supplemental EIS/OEIS indicates no detections of North Pacific right whales in the TMAA. The best count is that there are only 28 - 31 individuals of this species and they are most often found in the Bering Sea. The confirmed detections of right whales by Rone et al. (2014) were for locations where they have been sighted in recent years (near the designated Critical Habitat off Kodiak), which is not in the TMAA. As noted at the cited location within the Supplemental EIS/OEIS, a North Pacific right whale has not been seen in the Study Area since at least the 1960s. Furthermore, despite over 5 years, representing approximately 50,000 hours, of Navy-funded passive acoustic monitoring in the TMAA, only 3 hours of North Pacific Right Whale detections were made over 2 days. Researchers involved with the data analysis acknowledged to the Navy that given the omnidirectional nature of the hydrophone and up to 100 km detection range, they could not conclusively state if the North Pacific Right Whale detection was within or outside of the TMAA. It is therefore reasonable to assume it highly unlikely that a North Pacific right whale would be present in the TMAA during the limited period of time when the proposed Navy training activities are occurring. Please see the referenced technical report "Pre-Final Determination of Acoustic Effects on Marine Mammals for the Gulf of Alaska Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement" Section 6.5.4.3 (Computation of the Total Population in the Modeling Area) explaining how the acoustic effects modeling estimate for an ESA listed species uses as input the rounding up of a fractional animal abundance (a few 100ths) to a single animal for modeling purposes. As a result, the current modeling is a highly conservative approach and an overestimate of the potential effects to North Pacific right whale. Also note that as detailed in

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas), Navy has agreed to establish a North Pacific Right Whale Cautionary Area between June and September and will not use surface ship hull mounted mid-frequency sonar or explosives during the proposed training events.
NRDC-10	<i>B. Mortalities and Serious Injuries</i> The Navy assumes unreasonably that no serious injuries or mortalities would result from its more than 1000 hours of annual active sonar use or its deployment of underwater explosives. In March 2000, sixteen whales from at least three species stranded over 150 miles of shoreline along the northern channels of the Bahamas. The beachings occurred within 24 hours of Navy ships using mid-frequency sonar in those same channels.⁶ Post-mortem examinations found, in all whales examined, hemorrhaging in and around the ears and other tissues related to sound conduction or production, such as the larynx and auditory fats, some of which was debilitating and potentially severe.⁷ It is now accepted that these mortalities were caused, through an unknown mechanism, by the Navy's use of mid-frequency sonar. The Bahamas event is merely one of numerous mortality events coincident with military activities and/or active sonar that have now been documented, including⁸ Almeria (2006),⁹ the Canary Islands (1985, 1988, 1989, 1991, 2002, 2004),¹⁰ Cornwall (2008),¹¹ Greece (1996, 1997, 2011, 2014),¹² Hawaii (2004),¹³ Madagascar (2008),¹⁴ Madeira (2000),¹⁵ the Virgin Islands (1999),¹⁶ and Washington State (2003).¹⁷ While most of these events have involved beaked whales, and that family of species has received most of the scientific attention, melon-headed whales, minke whales, and harbor porpoises have also been implicated. Notes: 6 Commerce and Navy, Joint interim report: Bahamas marine mammal stranding event of 15-16 March 2000 (2001). 7 Id. 8 The following is not a complete list, as other relevant events have been reported in Bonaire, Japan, Taiwan, and other locations. See, e.g., R.L. Brownell, Jr., T. Yamada, J.G. Mead, and A.L. van Helden, Mass strandings of Cuvier's beaked whales in Japan: U.S. naval acoustic link? (2004) (IWC SC/56E37); J.Y. Wang and S.-C. Yang, Unusual cetacean stranding events of Taiwan in 2004 and 2005, <i>Journal of Cetacean Research and Management</i> 8: 283-292 (2006); P.J.H. van Bree and I. Kristensen, On the intriguing stranding of four Cuvier's beaked whales, <i>Ziphius cavirostris</i>, G. Cuvier, 1823, on the lesser Antillean island of Bonaire, <i>Bijdragen tot de Dierkunde</i> 44: 235-238 (1974). 9 International Whaling Commission, Report of the Scientific Committee, Annex K at 28 (2006) (IWC/ 58/Rep1). 10 M. Simmonds and L.F. Lopez-Jurado, Whales and the military, <i>Nature</i> 337: 448 (1991); V. Martín, A. Servidio, and S. García, Mass strandings of beaked whales in the Canary Islands, in P.G.H. Evans and L.A. Miller, <i>Proceedings of the Workshop on Active Sonar and Cetaceans</i> 33-36 (2004); A. Fernández, A., J.F. Edwards, F. Rodríguez, A. Espinosa de los Monteros, P. Herráez, P. Castro, J.R. Jaber, V. Martín, and M. Arbelo, M., 'Gas and fat embolic syndrome' involving a mass stranding of beaked whales (family <i>Ziphiidae</i>) exposed to anthropogenic sonar signals, <i>Veterinary Pathology</i> 42: 446-57 (2005). 11 P.D. Jepson, R. Deaville, K. Acevado-Whitehouse, J. Barnett, A. Brownlow, R.L. Brownell, Jr., F.C. Clare, N. Davison, R.J. Law, J. Loveridge, S.K. Macgregor, S. Morris, S. Murphy, R. Penrose, M.W. Perkins, E. Pinn, H. Seibel, U. Siebert, E. Sierra, V. Simpson, M.L. Tasker, N. Tregenza, A.A. Cunningham, and A. Fernandez, What caused the UK's largest common dolphin (<i>Delphinus delphis</i>) mass stranding event? <i>PLoS ONE</i> doi:	Section 3.8.3.3 (Analysis of Effects on Marine Mammals) in the Supplemental EIS/OEIS discusses the process for quantifying the predicted acoustic effects from the proposed training activities, which involved use of an acoustic effects modeling program. As reviewed in the 2011 GOA Final EIS/OEIS and its accompanying Appendix F (Cetacean Stranding Report) and in the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) and referenced technical report (an updated "Cetacean Stranding Report"; U.S. Department of the Navy 2013c), the Navy is aware of and considered the facts surrounding the stranding of beaked whales in the Bahamas in 2000 and other stranding events in other parts of the world. Many of the references cited in the comment (especially many of those more than a decade old) have been superseded by newer science. See for example the "Washington State (2003)" event involving harbor porpoise strandings that is thoroughly discussed in Department of the Navy (2013c). That series of strandings in the Northwest Region in April and May of 2003 clearly had no relation to Navy sonar use and was later attributed to an Unusual Mortality Event for harbor porpoise in the region that lasted at least until 2006. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort has found no evidence that Navy training activities have had any impact on these populations in the Pacific in areas such as Southern California or Hawaii where Navy training has been occurring year-round for decades.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	10.1371/journal.pone.0060953 (2013). 12 A. Frantzis, Does acoustic testing strand whales? <i>Nature</i> 392: 29 (1998); SACLANT Undersea Research Center, Summary Record, La Spezia, Italy, 15-17 June 1998, SACLANTCEN Bioacoustics Panel, SACLANTCEN M-133 (1998); A. Frantzis, The first mass stranding that was associated with the use of active sonar (Kyparissiakos Gulf, Greece, 1996), in P.G.H. Evans and L.A. Miller, <i>Proceedings of the Workshop on Active Sonar and Cetaceans</i> 14-20 (2004); A. Frantzis, "Growing numbers – Update on the mass stranding of Ziphius in the Ionian Sea, Greece" (posting of Greek biologist to the MARMAM academic listserv, with previous updates embedded) (Dec. 7, 2011); G. Notarbartolo di Sciara, S. Panigada, and R.L. Brownell, Jr., Notes on the recent stranding of beaked whales off Crete, Greece during military exercises (2014) (submitted, with annex, to IWC Scientific Committee). 13 B.L. Southall, R. Braun, F.M.D. Gulland, A.D. Heard, R.W. Baird, S.M. Wilkin, and T.K. Rowles, Hawaiian melon-headed whale (<i>Peponacephala electra</i>) mass stranding event of July 3-4, 2004 (2006) (NOAA Tech. Memo. NMFS-OPR-31); see also R.L. Brownell, Jr., K Ralls, S. Baumann-Pickering and M.M. Poole, Behavior of melon-headed whales, <i>Peponocephalia electra</i>, near oceanic islands, <i>Marine Mammal Science</i> 25: 639-658 (2009). 14 B.L. Southall, T. Rowles, F. Gulland, R.W. Baird, and P.D. Jepson, Final report of the Independent Scientific Review Panel investigating potential contributing factors to a 2008 mass stranding of melon-headed whales (<i>Peponocephala electra</i>) in Antsohihy, Madagascar (2013). 15 D.R. Ketten, Beaked whale necropsy findings 22 (2002) (paper submitted to NMFS); L. Freitas, The stranding of three Cuvier's beaked whales <i>Ziphius Cavirostris</i> in Madeira Archipelago—May 2000, in P.G.H. Evans and L.A. Miller, <i>Proceedings of the Workshop on Active Sonar and Cetaceans</i> 28-32 (2004). 16 Personal communication of Dr. David Nellis, U.S. Virgin Island Department of Fish and Game, to Eric Hawk, NMFS (Oct. 1999); personal communication from Ken Hollingshead, NMFS, to John Mayer, Marine Acoustics Inc. (March 19, 2002); Letter from William T. Hogarth, Regional Administrator, NMFS Southeast Regional Office, to RADM J. Kevin Moran, Navy Region Southeast (undated); personal communication from Ken Hollingshead, NMFS, to John Mayer, Marine Acoustics Inc. (March 19, 2002). 17 NMFS, Assessment of acoustic exposures on marine mammals, <i>supra</i>; NMFS, Preliminary Report: Multidisciplinary Investigation of Harbor Porpoises (<i>Phocoena phocoena</i>) Stranded in Washington State from 2 May – 2 June 2003 Coinciding with the Mid-Range Sonar Exercises of the USS Shoup 53-55 (2004) (conclusions unchanged in final report).	
NRDC-11	The Navy once again dismisses the leading explanation about the mechanism of sonar-related injuries—that whales suffer from bubble growth in organs that is similar to decompression sickness, or "the bends" in human divers—as one of several controversial hypotheses. But this explanation has now been supported by numerous papers, including pathological investigations, laboratory study of organ tissue, and theoretical work on dive physiology, and by expert reviews, and is best available science.¹⁸ Even if it were controversial, there is no serious debate that sonar can cause severe injuries to at least some species (<i>i.e.</i>, beaked whales) at sea, independent of any stranding event.¹⁹ Contrary to the Navy's analysis, most beaked whale casualties are bound to go undocumented because of the species' preference for deep water and the small chance that a dead or injured animal would actually strand.²⁰ At the same time, the Navy fails to acknowledge that sonar can seriously injure or kill marine mammals at distances well beyond those established for permanent hearing loss and direct tissue injury; assumes without evidence that such effects can realistically transpire only under the same set of circumstances that occurred during the 2000 Bahamas mortality event; and does not consider the potential for acoustic sources other than mid-frequency naval sonar—such as high-frequency sonar—to cause these effects even while it modifies its	Discussion of direct injury is presented in the Supplemental EIS/OEIS Section 3.8.3.1.2.1 (Direct Injury). However, many of the citations referenced in the comment are in general old, out dated, and do not constitute the best available science given the emergent work as summarized, referenced, and considered in the Supplemental EIS/OEIS (see Section 3.8.3.1.2.2 [Nitrogen Decompression]). The comment also misses the point raised by much of the newer research showing the presence of bubbles postmortem, particularly after decompression, is not necessarily indicative of bubble pathology (Bernaldo de Quiros et al. 2012, 2013a, 2013b; Dennison et al. 2011; Moore et al. 2009; Danil et al. 2014). In some of the earlier studies, the presence of bubbles postmortem caused by putrefaction in stranded carcasses may have been confused with gas embolism, are not necessarily indicative of bubble pathology, and may also result from invasive investigative procedures. Moore and Early (2004) demonstrated that sperm whales that died over a century ago have bubble lesions indicating them to be naturally occurring and clearly

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	hearing loss thresholds to account for the greater sensitivity of some cetacean species to high-frequency sound. None of these assumptions is supported by the record, and all lead to an underestimation of impacts.²¹ Notes: 18 See, e.g., P.D. Jepson, M. Arbelo, R. Deaville, I.A.P. Patterson, P. Castro, J.R. Baker, E. Degollada, H.M. Ross, P. Herráez, A.M. Pocknell, F. Rodríguez, F.E. Howie, A. Espinosa, R.J. Reid, J.R. Jaber, V. Martín, A.A. Cunningham, A. Fernández, Gas-bubble lesions in stranded cetaceans, <i>Nature</i> 425: 575-576 (2003); Fernández <i>et al.</i>, 'Gas and fat embolic syndrome', <i>Veterinary Pathology</i> 42 at 415; S.K. Hooker, R.W. Baird, and A. Fahlman, Could beaked whales get the bends? Effect of diving behavior and physiology on modeled gas exchange for three species: <i>Ziphius cavirostris</i>, <i>Mesoplodon densirostris</i>, and <i>Hyperoodon ampullatus</i>, <i>Respiratory Physiology and Neurobiology</i> (2009); S.K. Hooker, A. Fahlman, M.J. Moore, N. Aguilar de Soto, Y. Bernaldo de Quiros, A.O. Brubakk, D.P. Costa, A.M. Costidis, S. Dennison, K.J. Falke, A. Fernandez, M. Ferrigno, J.R. Fitz-Clarke, M.M. Garner, D.S. Houser, P.D. Jepson, D.R. Ketten, P.H. Kvadsheim, P.T. Madsen, N.W. Pollock, D.S. Rotstein, T.K. Rowles, S.E. Simmons, W. van Bonn, P.K. Weathersby, M.J. Weise, T.M. Williams, and P.L. Tyack, Deadly diving? Physiological and behavioural management of decompression stress in diving mammals, <i>Proceedings of the Royal Society Part B: Biological Sciences</i> (2011); P.D. Jepson, R. Deaville, I.A.P. Patterson, A.M. Pocknell, H.M. Ross, J.R. Baker, F.E. Howie, R.J. Reid, A. Colloff, and A.A. Cunningham, Acute and chronic gas bubble lesions in cetaceans stranded in the United Kingdom, <i>Vet. Pathol.</i> 42: 291-305 (2005); E.C.M. Parsons, S.J. Dolman, A.J. Wright, N.A. Rose, and W.C.G. Burns, Navy sonar and cetaceans: just how much does the gun need to smoke before we act? <i>Marine Pollution Bulletin</i> 56: 1248 (2008); Y.B. de Quiros, O. Gonzalez-Diaz, A. Mollerlokken, A.O. Brubakk, A. Hjelde, P. Saavedra, and A. Fernandez, Differentiation at autopsy between in vivo gas embolism and putrefaction using gas composition analysis, <i>International Journal of Legal Medicine</i> doi: 10.1007/s00414-012-0783-6 (2012); Y.B. de Quiros, O. Gonzalez-Diaz, M. Arbelo, E. Sierra, S. Sacchini, and A. Fernandez, Decompression vs. decomposition: distribution, amount, and gas composition of bubbles in stranded marine mammals, <i>Frontiers in Physiology</i> doi: 10.3389/fphys.2012.00177. 19 E.g., Cox <i>et al.</i>, Understanding the Impacts, at 177-187; Fernández <i>et al.</i>, 'Gas and Fat Embolic Syndrome', at 446-457; International Whaling Commission, Report of the Scientific Committee Annex K at 27-28 (2006); P.A. Allison, C.R. Smith, H. Kukert, J.W. Denning, B.A. Bennett, Deep-water taphonomy of vertebrate carcasses: A whale skeleton in the bathyal Santa Catalina Basin, <i>Paleobiology</i> 17: 78-89 (1991); G. Wobeser, <i>Investigation and Management of Disease in Wild Animals</i> (2007). 20 J.V. Carretta, K.A. Forney, M.M. Muto, J. Barlow, J. Baker, and M. Lowry, U.S. Pacific Marine Mammal Stock Assessments: 2006 (2007); G. Wobeser, <i>Investigation and Management of Disease in Wild Animals</i> 13-15 (1994); P.A. Alison, C.R. Smith, H. Kukert, J.W. Deming, B.A. Bennett, Deep-water taphonomy of vertebrate carcasses: a whale skeleton in the bathyal Santa Catalina Basin, 17 <i>Paleobiology</i> 78-89 (1991). 21 See, e.g., Commerce and Navy, Joint Interim Report at 7-11; SACLANT Undersea Research Centre, Summary Record SACLANTCEN Bioacoustics Panel, La Spezia, Italy, 15-17 June 1998, at 2-6, 2-35 to 36 (1998); International Whaling Commission, Report of the Scientific Committee Annex K at 27-28 (2006); Cox <i>et al.</i>, Understanding the Impacts, at 179; Fernández <i>et al.</i>, 'Gas and Fat Embolic Syndrome', at 446-457; B. Taylor, J. Barlow, R. Pitman, L. Balance, T. Klinger, D. DeMaster, J. Hildebrand, J. Urban, D. Pacacios, and J. Mead, A Call for Research to Assess Risk of Acoustic Impact on Beaked Whale Populations (2004) (IWC SC/56/E36).	unrelated to sonar being a cause. The newer findings cited above are why there has been a call for better controlled necropsy procedures and why the conclusions reached by some of these older citations must be viewed in the context of more recent findings. This is especially true of older citations that suggest the presence of bubbles found in stranded animals is indicative of exposure to sonar and the cause of bubble formation. Navy has acknowledged that sonar use was a contributing factor in the stranding of marine mammals in a number of cases as is presented in the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding). As the record for U.S. Navy training and testing activities shows and as presented in Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS, 8 years of monitoring and research at various range complexes indicate the potential for a stranding to occur as a result of sonar use or other U.S. Navy activities is rare. M.J. Moore and G.A. Early, Cumulative sperm whale bone damage and the bends, 306 <i>Science</i> 2215 (2004)
NRDC-12	As the literature repeatedly has noted, marine mammal populations that are naïve to an acoustic stressor may be particularly susceptible to acute behavioral responses, especially to those maladaptive responses that lead to decompression sickness or stranding.²² In this light, it is worth noting that, while monitoring effort within the Gulf of Alaska was and remains extremely limited, six beaked whales were reported to have stranded in connection with the 2004 Northern Edge exercise.²³ The Navy's assumption that the proposed massive ramp-up in acoustic activity, with ASW and other events added for the first time to Northern Edge and a second major exercise planned, will result in no mortalities of beaked whales or other marine mammals is not credible. Nor is NMFS' estimation of mortalities from underwater detonations any more	Given the number of commercial and private vessels using sonar for fishing, navigation, and research in the Gulf of Alaska and Navy's authorized use of sonar in training events since 2011, it is unlikely that there are "marine mammal populations in the Gulf of Alaska that are naïve to an acoustic stressor," especially in the Navy's historically used Temporary Maritime Activities Area (TMAA). The facts regarding the beaked whales found stranded in 2004 were presented in the 2011 GOA Final EIS/OEIS and are also presented in the referenced technical report accompanying the Supplemental EIS/OEIS. In 2004 between 27 June and 19 July, five beaked whales were discovered

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	persuasive. It defies credulity that an activity involving roughly 400 underwater detonations per year—more than 300 of which exceed the net explosive weight that caused three to four dolphin mortalities on the Navy's Silver Strand Range Complex in 2011, and 180 of which have a net explosive weight surpassing 100 pounds (DSEIS at 3.0-10)—would result in only three cases of permanent auditory injury, and no serious injuries or mortalities, each year (see DSEIS at 3.8-175 to 176). To reach these numbers, the Navy has made several post-modeling adjustments to its estimates, based on the potential for marine mammals to vacate the area upon exposure to harassing noise, and the ability of Navy lookouts to spot marine mammals in the water. Yet, as discussed below in our comments on the Navy's auditory impacts, these adjustments grossly exceed what the literature justifies and are based on erroneous applications of the existing science. Notes: 22 See, e.g., Cox et al., Understanding the Impacts; A.J. Wright, N. Aguilar Soto, A.L. Baldwin, M. Bateson, C.M. Beale, C. Clark, T. Deak, E.F. Edwards, A. Fernández, A. Godinho, L. Hatch, A. Kakuschke, D. Lusseau, D. Martineau, L.M. Romero, L. Weilgart, B. Wintle, G. Notarbartolo di Sciara, and V. Martin, Do marine mammals experience stress related to anthropogenic noise?, 20 <i>International Journal of Comparative Psychology</i> 20: 274-316 (2007). 23 S.E. Moore and K.M. Stafford, Habitat modeling, ambient noise budgets, and acoustic detection of cetaceans in the North Pacific and Gulf of Alaska (2005) (presentation made to Navy ECOUS 2005 Symposium, Mar. 16-18, 2005). In previous requests to the Navy, NRDC asked the Pacific Fleet to review its logs for active sonar use occurring in the GoA between June 1, 2004 and July 20, 2004, which corresponded to an unusual mortality of beaked whales in the area, and indicate in its DEIS whether mid-frequency sonar was used. The Navy did review the 2004 event in Appendix F of the 2011 EIS and found that "[t]here was no ASW component.... There were no events in the Alaska Shield/Northern Edge exercise that could have caused or been related to any of the strandings." DEIS at F-27. Just because the exercises during Northern Edge did not involve mid-frequency sonar, however, does not mean that individual units were not using sonar opportunistically, as part of its readiness certification requirements, for example, or that other components of the exercise did not contribute to the stranding event. See, e.g., Jepson et al., What caused the UK's largest common dolphin (<i>Delphinus delphis</i>) mass stranding event?, <i>supra</i>. We repeat our request that the Navy disclose whether any sonar is or has been used in the GoA over a reasonable time period (at least as far back as 2004), including for sustainment training, unit-level exercises, equipment testing or calibration, and that the Navy publicly report on the location and timing of its activities, both ASW and non-ASW, in the GoA during and proximate to Alaska Shield/ Northern Edge 2004.	stranded at various locations along 1,600 mi (2,625 km) of the Alaskan coastline and one was found floating (dead) at sea. Sonar training events had not been part of an exercise which took place in that general timeframe in the TMAA and there are no Navy vessels stationed in Alaska or otherwise using those waters for training purposes. It is incorrect to refer to these strandings as an "unusual mortality" given that beaked whale strandings do occur routinely in Alaska waters. NMFS did not consider these strandings unusual or otherwise declare them to be an Unusual Mortality Event. With regard to the incident at the Silver Strand Range Complex in California and as discussed in Section 3.8.3.1.2.8 (Stranding) of the Supplemental EIS/OEIS, those dolphin mortalities are the only known occurrence of a U.S. Navy training event involving impulse energy (underwater detonation) that has resulted in injury to a marine mammal. Furthermore, that incident involved a training activity that is not part of the proposed action in the Gulf of Alaska. Therefore and for a variety of analytical reasons, it is invalid to compare (as in the comment) predicted or actual effects based only net explosive weight when the comparison involves events as different as a SINTEX in Alaska and a diver placing underwater explosive in relatively shallow water off Southern California. The long-beaked common dolphins involved in the Silver Strand do not occur in Alaska waters. Please see Section 3.8.3.1.6 (Quantitative Analysis) of the Supplemental EIS/OEIS to fully understand the acoustic effects modeling process and the integration of likely marine mammal behaviors and implemented mitigation into the predicted effects used in this analysis. With the exception of sonar use during ASW training events prior to 2011, many of the other training activities in the TMAA have been ongoing for more than a decade. Although the first At-Sea EIS/OEIS analysis of that ongoing Navy training was presented in the 2011 GOA Final EIS/OEIS, in the majority these were not new events nor do they constitute part of a "massive ramp-up" in activities.
NRDC-13	<i>C. Auditory Impacts and Injuries</i> The Navy continues to use auditory impact and injury thresholds, and an auditory weighting scheme, that are rife with error and are likely to result in significant underestimations of marine mammal take. Many of our groups submitted extensive technical comments on these thresholds and weighting functions when NMFS proposed adopting them, in somewhat more conservative form, as agency guidance last December.²⁴ To begin with, we would observe that the Navy's approach is at variance with NMFS' proposal in several ways, most significantly with respect to low-frequency cetaceans. In particular, the DSEIS	Regarding the thresholds and weighting functions, the Navy's acoustic analysis and modeling reflect the current best available science, as evidenced by recent NMFS rulemaking action on other Navy documents. Regarding the approach to low-frequency cetaceans, the perceived difference between Navy and NMFS is semantics. The Navy's current modeling includes analysis for sources up to 30 kHz for low-frequency cetaceans. Additionally, due to how the sound source bins are defined, the overwhelming number of sources between 22 and 30 kHz are included in bins that encompass

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	places sperm whales within the category of mid-frequency cetacean notwithstanding considerable evidence demonstrating its substantial use and responsiveness to lower-frequency vocalizations, an assignment that NMFS reconsidered in both its 2012 LFA rulemaking and its draft auditory criteria. And it disregards NMFS' use of a modified Type I weighting scheme for low-frequency cetaceans in general, as opposed to the Navy's ongoing preference, despite the complete lack of mysticete hearing data, for a non-precautionary hybridized Type I/ Type II scheme based on its questionable analysis of one mid-frequency species. Notes: 24 NOAA, Draft guidance for assessing the effects of anthropogenic sound on marine mammals: Acoustic threshold levels for onset of permanent and temporary threshold shifts (Dec. 23, 2013).	the stated hearing ranges of low-frequency cetaceans and were therefore included in the analysis of potential acoustic effects to low-frequency cetaceans; there is no variance from NMFS' proposed guidelines. There are no known "significant errors" in these thresholds or the weighting functions. Regarding the general approach to modeling, in the Supplemental EIS/OEIS Section 3.8.3.1.6.3 (Navy Acoustic Effects Model), when there was a lack of definitive data to support an aspect of the modeling (such as lack of well-described diving behavior for all marine species), modeling assumptions believed to overestimate the number of exposures were chosen. It is therefore incorrect to assume that the analysis presented is an underestimate, when in point of fact the analysis is intended to be a conservative overestimate of predicted effects. See the Supplemental EIS/OEIS Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) and Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) to understand the mathematically conservative assumptions made with regard assessment of the unprocessed acoustic effect modeling results. Note also that NMFS has been a cooperating agency in the development of the thresholds used for other Navy EIS/OEIS and consistent with the analysis presented in the Supplemental EIS/OEIS. Therefore, it is incorrect to assume that the thresholds and weighting used in the Navy's analysis presented in the Supplemental EIS/OEIS are at significant variance from those Draft guidelines which are still being discussed and developed. To understand the development of the weighting functions, please see the Supplemental EIS/OEIS's cited Finneran and Jenkins (2012) paper that is used by Navy and NMFS in that regard. Regarding sperm whales as mid-frequency cetaceans, the NMFS draft guidelines note, "NOAA considered separating sperm whales from other MF cetaceans, but there are currently not enough data to stipulate exactly how this should be done." It is premature given the available science to consider sperm whales as low-frequency cetaceans as the comment suggests. See the referenced Finneran and Jenkins (2012) regarding the derivation of the current criteria and thresholds, including those used for sperm whales in the analysis presented in the Supplemental EIS/OEIS.
NRDC-14	Beyond this, however, the comments we submitted on NMFS' proposed thresholds and weighting functions, which in other ways are identical with the Navy's here, are highly critical of the way they were derived and applied and make specific recommendations for improving them. These comments are attached to the present letter and incorporated	Please note that PTS is related to and dependent on hearing sensitivity. In the simplest of explanations, if a sound is not in the hearing range of an animal, then the permanent loss of hearing sensitivity (PTS) cannot occur as a result of exposure to that sound.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	herein as comments on the analogous sections of the DSEIS. Additionally, we would note—insofar as the Navy intends to use permanent threshold shift (“PTS”) as a proxy for direct tissue injury—that no weighting scheme should apply at all in such cases, since tissue injury is not in any way dependent on hearing sensitivity. Furthermore, the Navy has improperly discounted the effects of marine mammal avoidance and monitoring on the temporary threshold shift (“TTS”) and PTS estimates it has made. For example, in accounting for the effectiveness of its shut-down zones, which remain its primary mitigation measure, the DSEIS applies the species-specific g(0) factors used in professional marine mammal abundance surveys—primarily undertaken by NMFS biologists—as their basis of analysis for the Navy’s safety zone mitigation. It should go without saying that the Navy’s sighting effectiveness is likely to be much poorer than that of experienced biologists dedicated exclusively to marine mammal detection, operating under conditions aimed at maximizing sightings. Furthermore, its attempt to account for uncertainty by applying a “mitigation effectiveness factor” to g(0) values appears to address only “the type of surveillance platform(s), number of Lookouts, and size of the mitigation zone” and occurrence of an activity at night. DSEIS at 3.8-103. Yet this omits other obvious factors influencing g(0) values, such as the professional experience of marine mammal observers, vessel speeds, and the Gulf’s routinely high sea states and fog.²⁵ These significant impediments to detection are not considered. Barlow (2013), for example, notes that g(0) decreases with increasing Beaufort state, even from Beaufort 0 to 2, and even for visually conspicuous species like dolphins and large whales—producing values that are inconsistent with the Beaufort-independent values presented by the Navy.²⁶ Notes: 25 While unclear, it appears that the Navy may also have improperly discounted behavioral impacts, as opposed to mortalities and auditory impacts, based on shut-downs for marine mammal observed within the safety zone. See DSEIS at 3.8-107. 26 Barlow, J., g(0) bias in estimating abundance: It’s bigger than you imagined, <i>Abstracts of the 20th Biennial Conference on the Biology of Marine Mammals, Dunedin, N.Z., 9-13 Dec. (2013)</i>.	Please see the discussion in Section 3.8.3.1.4.3 (Temporary and Permanent Threshold Shift – Loss of Hearing Sensitivity) in the Supplemental EIS/OEIS. The suggestion that a weighting function should not be applied to the analysis of potential PTS effects indicates a lack of familiarity with the subject being discussed. For a discussion of the adjustments made to modeling to account for marine mammal avoidance and implemented mitigation, see the Supplemental EIS/OEIS Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) and Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures). Likely marine mammal avoidance of intense activity or repeated exposures to sound is also part of the adjustment made to the modeling, given that this likely behavior is not otherwise factored into the raw modeling results. Specifically with regard to the use of g(0) as the best statistically-derived factor for assessing the likelihood of marine mammal detection by Navy Lookouts see Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) in the Supplemental EIS/OEIS. As presented in that section, Navy training events differ from systematic line-transect marine mammal surveys in several important respects and these differences suggest the use of g(0), as a sightability factor is likely to result in an underestimate of the protection afforded by the implementation of mitigation. The g(0) factor is used as an approximation for the detectability of marine mammals, as described in the Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures), the Navy goes into great detail pointing out the differences between line transect surveys (undertaken by “experienced biologists” referenced in the comment) and Navy lookouts. Results from the Navy’s Lookout effectiveness study will be reviewed and any recommendations for improving Lookout effectiveness will be considered at that time. The Navy is aware of the limitations to visual detection of marine mammals at sea and notes that adjustments result in an adjustment to some (not all) model predicted effects. In the interim, please note that the Navy’s visual mitigation has been demonstrated to be effective over the 8 years of monitoring associated with Navy training and testing at sea in publically available reports submitted to NMFS since 2006 and accessible on the NMFS Office of Protected Resources website.
NRDC-15	Similarly, the Navy’s strong assumptions about avoidance—that mid-frequency cetaceans would not experience PTS and that only other marine mammals model-estimated to remain within the PTS radius after three or four pings would—is predicated	As presented in Section 3.8.3.3.1.1 (Range to Effects) of the Supplemental EIS/OEIS, the range to PTS for a 235 dB sonar ping from the most powerful surface ship hull-mounted sonar does not

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	on both misapplications of its thresholds and weighting systems (discussed above) and on assumptions about animal behavior that may not apply under difficult propagation conditions, in the complex sound fields or disturbance regimes that may occur around multi-platform exercises, or in highly important foraging or other habitat.	exceed 11 yd. (10 m) from the sonar located at the bow of a ship for mid-frequency cetaceans (the majority of marine mammals present in the Study Area). All other sources presented in the Supplemental EIS/OEIS having output less than 235 dB will have a shorter range to PTS. Factors such as “difficult propagation conditions, in the complex sound fields or disturbance regimes that may occur around multi-platform exercises” do not apply given they have no meaningful effect over the very short distance the sound energy would travel for a PTS exposure to most likely occur.
NRDC-16	The Navy’s reliance on g(0), and its application of a highly non-conservative avoidance factor in determining numbers of mortalities and permanent injuries, is arbitrary and capricious and underestimates near-source auditory effects.	Regarding the comment’s assertion that the modeling of “... mortalities and permanent injuries, is arbitrary and capricious and underestimates near-source auditory effects,” please see the Supplemental EIS/OEIS Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) regarding the rationale and science supporting the adjustments made to the initial modeling predictions. Specifically with regard to the use of g(0), see Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) of the Supplemental EIS/OEIS explaining why the use of g(0) is the best statistically derived factor for assessing the likelihood of marine mammal detection by Navy Lookouts. As discussed in Section 5.3.3.1.15 (Increasing Reporting Requirements), Navy lookouts are not required to conduct taxonomic species identification of marine mammals as part of their observation procedures because it is has no applicability as a mission requirement. Navy lookouts are observing a relatively small area for the presence of marine mammals, which is not the same as conducting a line transect survey. For example, for a stationary dipping sonar deployed from a hovering helicopter, as presented in the Supplemental EIS/OEIS in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) (Table 5.3-2), the longest range to PTS is approximately 20 yards (Level A harassment). As the MMC is aware, g(0) are derived from the results of line transect surveys, which encompass much larger geographic areas and require species identification. If an animal is observed within a mitigation zone defined for a Navy activity, the activity is halted and only resumes once the zone has been clear from any additional sightings for a specified period of time depending on the activity. For these reasons, the Navy believes that the use of g(0) is a reasonable yet still conservative component of the analysis. Additionally, see Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) of the Supplemental EIS/OEIS describing factoring in marine mammal avoidance of intense activity or repeated

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		exposures. As described in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) of the Supplemental EIS/OEIS, given that these factors are not otherwise considered in the initial modeling results, they are further analyzed as part of the adjustment made to the initial modeling results to provide the an accurate prediction of effects. As presented in the sub-section “<i>Model Assumptions and Limitations</i>,” when there was a lack of definitive data to support an aspect of the modeling, assumptions believed to overestimate the number of exposures were chosen. In addition, the use of g(0), as a sightability factor is likely to result in an underestimate of the protection afforded by the implementation of mitigation. There are additional protections offered by mitigation procedures that will further reduce effects to marine mammals but were not considered in the quantitative adjustment to the initial modeling, and the adjustments made to factor in behavioral response only apply to PTS and injury although avoidance of activity could also reduce the number of predicted TTS. In short the comment is incorrect in the assertion that the predicted effects presented in the Supplemental EIS are “underestimates” when in fact there were many assumptions (e.g., the bullet list presentation in sub-section “<i>Model Assumptions and Limitations</i>”) that were believed to overestimate the number of effects predicted.
NRDC-17	Hearing loss remains a significant risk where, as here, the agency has not required aerial or passive acoustic monitoring as mandatory mitigation, appears unwilling to restrict operations in low-visibility conditions, has set safety-zone bounds that are inadequate to protect high-frequency cetaceans even from permanent threshold shift, and has not established restrictions on activities in biologically important habitat. The Navy must revise its erroneous and non-precautionary standards.	Please see Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS, discussing the 8 years of monitoring and research at various range complexes that included aerial surveys and monitoring, passive acoustic monitoring, behavioral response studies, tagging, and vessel-based monitoring including before, during, and after Navy training and testing activities. Please also see the Supplemental EIS/OEIS Section 5.5.2 (Reporting) and specifically 5.5.2.1 (Exercise Monitoring and Reporting) in this regard. The Navy, through two dedicated marine mammal research programs, has and continues to support research to increase understanding of marine mammal responses, including the potential for hearing loss, to sonar. The Navy has been training with sonar and other systems for decades in the vicinity of bathymetric features, such as seamounts and the continental shelf break, where marine species including marine mammals are known to occur. To date, there has been no evidence of any long-term consequences for individuals or populations of marine mammals. This finding is based on years of research and monitoring that show, for example, higher densities and long-term residency by species such as beaked whales in Southern California, where the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		Navy trains and tests, than in other adjacent areas (Falcone et al. 2009, Falcone and Schorr 2012, 2014; Hildebrand and McDonald 2009). Restricting Navy training to areas away from these habitats would therefore eliminate the ability to train in those complex environments and would not be effective as a mitigation measure, given there are no long-term consequences to individuals or populations of marine mammals tied to specific bathymetric features. The Navy believes that the mitigation zones based on quantitatively derived ranges to PTS effects are protective of marine mammals. The Navy observes areas beyond the mitigation zones as well, providing further protection against TTS level effects. Please see Section 3.8.3.3.1.1 (Range to Effects) for a discussion on the derivation of these ranges and mitigation zones. Regarding restrictions to ongoing Navy training authorized since 2011, please read the Supplemental EIS/OEIS Section 5.3.3 (Mitigations Measures Considered but Eliminated). Regarding the proposal to “restrict operations in low-visibility conditions,” specifically see the Supplemental EIS/OEIS Section 5.3.3.1.8 (Avoiding or Reducing Active Sonar at Night and During Periods of Low Visibility). The comment’s assertion that Navy, “... has set safety-zone bounds that are inadequate to protect high-frequency cetaceans even from permanent threshold shift ...” is incorrect. See for example the Supplemental EIS/OEIS Section 5.3.2.1.1.2 (High-Frequency and Non-Hull Mounted Mid-Frequency Active Sonar) describing the predicted average range to onset of PTS for high-frequency and non-hull mounted mid-frequency active sonar sources is 20 yd. (18 m) for one ping, which was determined by the high-frequency cetacean functional hearing group. The series of measures described in the Supplemental EIS/OEIS Section 5.3.2.1.1.1 (Hull Mounted Mid-Frequency Active Sonar) for when a marine mammals has been detected starting with a power down at 1,000 yd. (914 m) and including the ceasing of active transmission at 200 yards (183 m) are intended to prevent PTS from occurring. Regarding “restrictions on activities in biologically important habitat”, please note that the stated intention of the newly designated biologically important areas (see Ferguson et al. 2015) was not to restrict anthropogenic activities. As was the intention of the important area identification effort, the Navy did do an analysis considering the need and efficacy of additional mitigations in those areas. As the analyses demonstrated, Navy training activities are unlikely to meaningfully effect the behaviors for which the various areas were

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		established so any additional mitigation or restrictions would be ineffective and would have impacts Navy training. Navy has additionally, agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEK event from occurring in Habitats of Particular Concern; (2) prohibiting use of explosives during training in the Portlock Bank area; and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements. Navy disagrees with the comment's assertion that the proposed actions are "erroneous and non-precautionary" and suggests that a review of the sections in the Supplemental EIS suggested in this response will clear up the commenter's misunderstandings regarding the science upon which the analysis has been based.
NRDC-18	<i>D. Behavioral Impacts</i> The risk curves used in the Navy's DSEIS are substantially similar to those applied in its 2011 EIS, with the exception of a special threshold established for beaked whales, now acknowledged to constitute particularly sensitive species. These risk functions are flawed and continue to underestimate take. <i>First</i>, the Navy again relies on inapposite studies of temporary threshold shift in captive animals for one of their primary sources of data. Marine mammal scientists have long recognized the deficiencies of using captive subjects in behavioral experiments, and to blindly rely on this material, to the exclusion of copious data on animals in the wild, is not supportable by any standard of scientific inquiry. <i>Cf.</i> 40 C.F.R. § 1502.22. The problem is exacerbated further by the fact that the subjects of the captive research in question—roughly two belugas and five bottlenose dolphins—are highly trained animals that have been working in the Navy's research program in the SPAWAR complex for years.²⁷ Indeed, the disruptions observed by Navy scientists, which included pronounced, aggressive behavior ("attacking" the source) and avoidance of feeding areas associated with the exposure, occurred during a research protocol that the animals had been rigorously trained to complete.²⁸ The SPAWAR studies have several other major deficiencies that NMFS, among others, has repeatedly pointed out; and, in relying so heavily on them, the Navy has ignored numerous marine mammal behaviorists who commented on the Navy's original USWTR DEIS and sharply criticize the Navy for putting any serious stock in them.²⁹ Notes: 27 See, e.g., S.H. Ridgway, D.A. Carder, R.R. Smith, T. Kamolnick, C.E. Schlundt, and W.R. Elsberry, Behavioral responses and temporary shift in masked hearing threshold of bottlenose dolphins, <i>Tursiops truncatus</i>, to 1-second tones of 141 to 201 dB re 1 μPa (1997) (SPAWAR Tech. Rep. 1751, Rev. 1). 28 C.E. Schlundt, J.J. Finneran, D.A. Carder, and S.H. Ridgway, Temporary shift in masked hearing thresholds of	The criteria and thresholds for determining potential effects on marine species were carefully revised based on best available science since the 2011 GOA Final EIS/OEIS and the comment's referenced 2006 USWTR DEIS. The basis for this comment seems to be an outdated and therefore incorrect characterization of old information based on other documents that are either not relevant or have been superseded by emergent science and the Supplemental EIS/OEIS. Additionally, it is substantially similar to a NRDC comment provided in January 2010 and responded to in the 2011 GOA Final EIS/OEIS Appendix I (see Appendix I page I-361). Please see the Supplemental EIS/OEIS for an understanding of the science that has been developed since the material characterized in the comment from 2006 and 2010 (see for example the cited Finneran and Jenkins 2012). Note specifically that the present analysis now incorporates data from behavioral response studies (in the wild; see the Supplemental EIS/OEIS Section 3.8.3.1.2.6 Behavioral Reactions) and data from electrophysiological audiometry measures (see the Supplemental EIS/OEIS Section 3.8.2.3 Vocalization and Hearing of Marine Mammals) that record actual hearing sensitivity in a species that is unrelated to the captive or wild state of an animal. Additionally, as presented in the Supplemental EIS/OEIS Section 3.8.3.1.2.3 (Hearing Loss), studies of temporary threshold shift used in the analysis now include five more species and 12 more individuals than the "two belugas and five bottlenose dolphins" provided in the comment. Also, in the 2011 GOA Final EIS/OEIS, there were additional data sets from wild animals that

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	bottlenose dolphins, <i>Tursiops truncatus</i>, and white whales, <i>Delphinapterus leucas</i>, after exposure to intense tones, <i>Journal of the Acoustical Society of America</i> 107: 3496, 3504 (2000). 29 See comments from M. Johnson, D. Mann, D. Nowacek, N. Soto, P. Tyack, P. Madsen, M. Wahlberg, and B. Møhl, received by the Navy on the Undersea Warfare Training Range DEIS. See also Letter from Rodney F. Weiher, NOAA, to Keith Jenkins, Naval Facilities Engineering Command Atlantic (Jan. 30, 2006).	were incorporated into the development of the risk function parameters specifically to address that older initial concern. Additionally, as discussed in the 2011 GOA Final EIS/OEIS Section 3.8.7.4 (Assessing MMPA Level B Non-TTS Behavioral Harassment Using Risk Function; specifically page 3.8-98), even the previous analysis included data on North Atlantic right whales and killer whales in the wild while also noting the citation to Domjan (1998), indicating that animals in captivity can be more or less sensitive than those found in the wild. In summary, the Navy believes that the risk functions are not flawed and do not underestimate take based on the best available science.
NRDC-19	<i>Second</i>, the Navy appears to have misused data garnered from the Haro Strait incident—one of only three data sets it considers—by including only those levels of sound received by the “J” pod of killer whales when the USS <i>Shoup</i> was at its closest approach. These numbers represent the maximum level at which the pod was harassed; in fact, the whales were reported to have broken off their foraging and to have engaged in significant avoidance behavior at far greater distances from the ship, where received levels would have been orders of magnitude lower.³⁰ Not surprisingly, then, the agencies’ results are inconsistent with other studies of the effects of various noise sources, including mid-frequency sonar, on killer whales. We must insist again that the Navy provide the public with its propagation analysis for the Haro Strait event, which it used in preparing its 2005 Assessment of the incident. Notes: 30 See, e.g., NMFS, Assessment of Acoustic Exposures on Marine Mammals in Conjunction with USS Shoup Active Sonar Transmissions in the Eastern Strait of Juan de Fuca and Haro Strait, Washington—5 May 2003, at 4-6 (2005); Declaration of David E. Bain, NRDC v. Winter, CV 07-0335 FMC (FMOx) (C.D. Cal. 2007).	The comment is incorrect in asserting that there are only three data sets used in the analysis in the Supplemental EIS/OEIS and seems to be based on outdated information given it is similar to a comment NRDC provided in January 2010 and that was responded to in Appendix I of the 2011 GOA Final EIS/OEIS. Regarding the Haro Strait incident and as detailed in Appendix F of the 2011 GOA Final EIS/OEIS, observer reported killer whale behavior during the Haro Strait incident was extremely variable and ranged from the orca resting along the shoreline, to having “high rates of active surface behavior,” to a determination they were “annoyed” (see the cited U.S. Department of the Navy (2004) for accurate details regarding the reported behaviors of the “J” pod killer whales). The killer whales of J-pod were exposed to multiple stimuli, and it is impossible to assess a precise sound level at which the animals reacted due to all the other stimuli such as the presence of whale watching vessels. See the cited From 2004a, b; U.S. Department of the Navy 2004; National Marine Fisheries Service 2005b for the propagation analysis for the Haro Strait event.
NRDC-20	<i>Third</i>, the Navy excludes a substantial body of controlled exposure research and opportunistic study on wild animals (and some research on other experimental animals as well, within a behavioral experimental protocol). For example, the agency’s behavioral risk function fails to include data from the July 2004 Hanalei Bay event, in which 150-200 melon-headed whales were embayed for more than 24 hours during the Navy’s Rim of the Pacific exercise. According to the Navy’s analysis, predicted mean received levels (from mid-frequency sonar) inside and at the mouth of Hanalei Bay ranged from 137.9 dB to 149.2 dB.³¹ Notes: 31 Navy, 2006 Supplement to the 2002 Rim of the Pacific (RIMPAC) Programmatic Environmental Assessment D-1 to D-2 (May 2006). See also B.L. Southall, R. Braun, F.M.D. Gulland, A.D. Heard, R.W. Baird, S.M. Wilkin, and T.K. Rowles, Hawaiian Melon-Headed Whale (<i>Peponacephala electra</i>) Mass Stranding Event of July 3-4, 2004 (2006) (NOAA Tech. Memo. NMFS-OPR-31).	See the Final Supplemental EIS/OEIS cited U.S. Department of the Navy (2013) from Section 3.8.3.1.2.8 (Stranding) for a full understanding of the Hanalei Bay event. In short, the “contributing factor” link between sonar use and melon-headed whales entering Hanalei Bay is highly speculative at best and ignores critical facts such as the presence of a newborn calf as part of the pod and people in the bay interacting with the animals. Sonar use did not cause the Hanalei event.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
NRDC-21	Similarly, the Navy does not include the Melcon et al. (2013) blue whale study as a basis for its risk function, wrongly asserting that its findings are consistent with the present parameters.³² The agency's failure to incorporate these numbers into its methodology as another data set, and its failure to include the results of other plainly relevant studies,³³ is not justifiable. 32 M.L. Melcon, A.J. Cummins, S.M. Kerosky, L.K. Roche, S.M. Wiggins, Blue whales respond to anthropogenic noise, <i>PLoS ONE</i> 7(2): e32681 (2012). 33 E.g., P.J.O. Miller, R.N. Antunes, P.J. Wensveen, F.I.P. Samarra, A.C. Alves, and P.L. Tyack, Dose-response relationships for the onset of avoidance of sonar by free-ranging killer whales, <i>Journal of the Acoustical Society of America</i> 135: 975-993 (2014); S.L. DeRuiter, B.L. Southall, J. Calambokidis, W.M.X. Zimmer, D. Sadykova, E.A. Falcone, A.S. Friedlaender, J.E. Joseph, D. Moretti, G.S. Schorr, L. Thomas, and P.L. Tyack, First direct measurements of behavioural responses by Cuvier's beaked whales to mid-frequency active sonar, <i>Biology Letters</i> 9: 20130223 (2013); R.A. Kastelein, N. Steen, R. Gransier, P.J. Wensveen, and C.A.F. de Jong, Threshold received sound pressure levels of single 1–2 kHz and 6–7 kHz up-sweeps and down-sweeps causing startle responses in a harbor porpoise (<i>Phocoena phocoena</i>), <i>Journal of the Acoustical Society of America</i> 131: 2325–2333 (2012).	Regarding the results from Melcon et al. (2012; the comment cites the incorrect date of publication), as detailed in the Supplemental EIS/OEIS in Section 3.8.3.1.2.6 (Behavioral Reactions), this reference is cited and the results are discussed as part of the analysis. Navy therefore disagrees with the comment's assertion that the preliminary findings from Melcon et al. (2012) have not been considered by the current response function. Specifically see Section 3.8.3.1.2.6 (Behavioral Reactions) and Section 3.8.3.1.6, (Quantitative Analysis) of the Supplemental EIS/OEIS, noting that the behavioral response function predicts a probability of a substantive behavioral reaction for individuals exposed to a received sound pressure level of 120 dB re 1 µPa or greater, with an increasing probability of reaction with increased received level as demonstrated in Melcon et al. (2012). In addition, while Melcon et al. (2012) discussed the probability of call modification, this conclusion was based on passive acoustic detections and not visual observations. It therefore remains inconclusive if there were any actual changes to blue whale foraging. In addition, the other findings of Melcon et al. (2012) (see for example the Supplemental EIS/OEIS Section 3.8.3.4.1, Mysticetes) and the supportive data from Globogen et al. (2013) are also considered for blue whales. The Miller et al. (2014) and DeRuiter et al. (2013) references cited in the comment are discussed in the section on "Behavioral Reactions to Sonar and Other Active Acoustic Sources" under the "Odontocetes" subheading, and several studies by Kastelein et al. on harbor porpoise hearing thresholds are cited in Section 3.8 (Marine Mammals) of the Supplemental EIS/OEIS.
NRDC-22	<i>Fourth</i>, the Navy acknowledges the strong sensitivity of certain species, particularly harbor porpoises and beaked whales, by assigning them species-specific take thresholds; however, the agencies fail to include any of the underlying studies on harbor porpoises and beaked whales in their general data set. The result is clear bias, for even if one assumes (for argument's sake) that the SPAWAR data on bottlenose dolphin behavior has value, the Navy has included a relatively insensitive species in setting its general standard for marine mammals while excluding relatively sensitive ones. By placing great weight on the SPAWAR data, excluding other relevant data, and misusing the Haro Strait data, the agency has produced a risk function that is belied by the existing record: one that clearly demonstrates high risk of significant behavioral impacts from mid-frequency sources, including mid-frequency sonar, on a diverse range of wild species at levels below the function curve.³⁴ Given the high sensitivity in the Navy's model, standards that more accurately reflect existing data would produce take numbers far in excess of those calculated here. Notes: 34 See, e.g., R.A. Kastelein, H.T. Rippe, N. Vaughan, N.M. Schooneman, W.C. Verboom, and D. de	Regarding a presentation of the relevant information to date with respect to studies of harbor porpoise and beaked whales, see for example the Supplemental EIS/OEIS Section 3.8.3.1.2.6 (Behavioral Reactions) and Section 3.8.3.1.5 (Behavioral Responses). Studies cited or considered in the analysis and development of the criteria and thresholds involving harbor porpoise or beaked whales include for example but were not limited to (as presented in the Supplemental EIS/OEIS) De Ruiter et al. 2013a; Johnston 2002; Kastelein et al. 2001, 2005b, 2006, 2012b; Lucke et al. 2009; Schorr et al. 2014; Southall et al. 2007 2009a; Tyack et al. 2011; U.S. Department of the Navy 2013c. It is therefore incorrect to state that sensitive species were excluded from the analysis. It is also incorrect to characterize the analysis as being based on "SPAWAR data on bottlenose dolphin behavior" given the present analysis in the Supplemental EIS/OEIS includes data from seven species and other researchers (see

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	Haan, The effects of acoustic alarms on the behavior of harbor porpoises in a floating pen, <i>Marine Mammal Science</i> 16: 46 (2000); P.F. Olesiuk, L.M. Nichol, M.J. Sowden, and J.K.B. Ford, Effect of the sound generated by an acoustic harassment device on the relative abundance of harbor porpoises in Retreat Passage, British Columbia, <i>Marine Mammal Science</i> 18: 843 (2002); NMFS, Assessment of Acoustic Exposures, at 10 (2005); D.P. Nowacek, M.P. Johnson, and P.L. Tyack, North Atlantic right whales (<i>Eubalaena glacialis</i>) ignore ships but respond to alerting stimuli, <i>Proceedings of the Royal Society of London, Part B: Biological Sciences</i> 271: 227 (2004); Statements of D. Bain, K. Balcomb, and R. Osborne (May 28, 2003) (taken by NMFS enforcement on Haro Strait incident); Letter from D. Bain to California Coastal Commission (Jan. 9, 2007); E.C.M. Parsons, I. Birks, P.G.H. Evans, J.C.D. Gordon, J.H. Shrimpton, and S. Pooley, The possible impacts of military activity on cetaceans in West Scotland, <i>European Research on Cetaceans</i> 14: 185-190 (2000); P. Kvadsheim, F. Benders, P. Miller, L. Doksaeter, F. Knudsen, P. Tyack, N. Nordlund, F.-P. Lam, F. Samarra, L. Kleivane, and O.R. Godø, Herring (Sild), Killer Whales (Spekkhogger) and Sonar—the 3S-2006 Cruise Report with Preliminary Results (2007).	Finneran and Jenkins 2012 for a summary). Finally, as detailed in the Supplemental EIS/OEIS Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) the Navy's acoustic model includes conservative estimates of all input parameters and there is no reason to believe that improvements to the data would result in "take numbers far in excess" of those Navy has presented.
NRDC-23	<i>Fifth</i>, any risk calculation must take account of the social ecology of some marine mammal species. For species that travel in tight-knit groups, an effect on certain individuals can adversely influence the behavior of the whole. Pilot whales, for example, are prone to mass strand for precisely this reason, and recent studies have shown that they respond to sonar as a group, in what seems like a socialized anti-predator response; the plight of the 200 melon-headed whales in Hanalei Bay, and of the "J" pod of killer whales in Haro Strait, may be other pertinent examples. Should those key individuals fall on the more sensitive end of the spectrum, the entire group or pod can suffer significant harm at levels below what the Navy would take as the mean. In developing its risk function, the Navy must take account of such potential indirect effects.	As presented in Section 3.8.3.1.6.1 (Marine Species Density Data), animals are not evenly distributed as the comment indicates, but are distributed based on density differences which vary across the area. As presented in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model), the group (pod) size has been factored into the modeling. There is no basis for assuming the "effects" of social structure would "magnify" any predicted effects any more than they might potentially diminish effects (e.g., experienced animals fail to react and so the entire pod continues with normal behavior). Also, because the model output does not consider the many mitigation measures that the Navy implements to minimize effects, including sonar power-down and power-off requirements should animals be spotted, the model output overestimates the number of predicted effects. Given that animals in pods are generally easier to detect, especially when in large pods, it is even more likely that mitigation would result in the identification of animals and the implementation of measures to eliminate or reduce effects. The use of a mathematical function to predict potential behavioral responses to marine mammals (a risk function) has been supported by the best available science for many years (see for example, National Marine Fisheries Service [2008], Taking and Importing of Marine Mammals: U.S. Navy Training in the Hawaii Range Complex; Proposed Rule; Federal Register, Monday, June 23, 2008, 73(121):35510-35577). The use of an absolute threshold would not in any way be representative of social structure (or any other factor) in acoustic effects modeling.
NRDC-24	<i>Sixth</i>, the Navy's threshold is applied in such a way as to preclude any assessment of long-term behavioral impacts on marine mammals. It does not account, to any degree, for the problem of repetition: the way that apparently insignificant impacts, such as subtle changes in dive times or vocalization patterns, can become significant if experienced repeatedly or over time.³⁵ This is especially problematic where species may be exposed repeatedly to noise levels that interrupt their behavior briefly, to a	See Section 3.8.3.1.2.7 (Repeated Exposures), Chapter 4.0 (Cumulative Impacts), Section 3.8.3.1.3 (Long-Term Consequences to the Individual and the Population), and Section 3.8.4 (Summary of Impacts (Combined Impacts of all Stressors) on Marine Mammals) where cumulative impacts are addressed. Specifically for marine mammals, assessment of long-term cumulative impacts to species

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	degree that the Navy believes does not constitute take, but which cumulatively, over the course of major exercises, would amount to take if the disruption were aggregated. Notes: 35 E.g., National Research Council, <i>Marine Mammal Populations and Ocean Noise: Determining When Noise Causes Biologically Significant Effects</i>, at 35-68 (2005).	and stocks is best represented by the discussion in Section 3.8.5 (Summary of Monitoring and Observations During Navy Activities). In addition, the citation to this comment is approximately 9 years old and since that time, research and monitoring at Navy range complexes has contributed greatly to the science in this regard. Finally, in a recent biological opinion, NMFS has concluded that, “the vast majority of impacts expected from sonar exposure and underwater detonations are behavioral in nature, temporary and comparatively short in duration, relatively infrequent, and not of the type or severity that would be expected to be additive for the small portion of the stocks and species likely to be exposed” (NMFS 2014; as referenced in the Final Supplemental EIS/OEIS).
NRDC-25	<i>Seventh</i>, while the Navy has assigned a specific threshold to beaked whales, in light of Tyack et al. (2011), it is clear that some beaked whales have been taken by exposure to mid-frequency sonar at levels below 140 decibels (SPL). The beaked whale threshold should incorporate a function below 140 decibels to reflect these data.	The cited Tyack et al. (2011) study, as well as others, regarding beaked whales were incorporated into the analysis presented in the Supplemental EIS/OEIS (see Section 3.8.3.1.2.6 (Behavioral Reactions) and the referenced Finneran and Jenkins (2012). Based on the best available science, 140 dB re 1µPa (root mean square) is a conservative threshold for predicting potential behavioral effects on beaked whales from sonar signals.
NRDC-26	<i>Eighth</i>, the Navy must reconsider impact thresholds, and possibly propagation analysis, for certain high-frequency sources. Recent investigation into a mass stranding of melon-headed whales raises strong concerns about the impacts of some of these acoustic systems. On May 30, 2008, a pod of some 100 to 200 whales stranded in Loza Lagoon, a large mangrove estuary on the northwest end of Madagascar; despite rescue efforts, at least half are believed to have died, with unknown consequences for the larger population. The report of an Independent Scientific Review Panel ruled out nearly all potential causes of this pelagic species entering the lagoon, and found that the “most plausible and likely behavioral trigger” was an industrial multibeam echosounder employed by Exxon, in close spatial and temporal association with the stranding event.³⁶ The multibeam echosounder associated with that event, the Kongsberg Simrad EM120, has an output carrier frequency of 12 kHz, with 191 directional but overlapping sound beams, an across-track beam fan width of 150°, and an output source level of 236-242 dB (RMS). The relevant characteristics of the Kongsberg system are comparable with some hull-mounted naval sonar systems, e.g., the AN/SQS-25. Even though echosounders, as opposed to ASW systems, are directed towards the seafloor, such equipment could still easily propagate noise at levels above 120 decibels over a greater than 30 km radius, as the Madagascar report found. Notes: 36 Southall, B.L., Rowles, T., Gulland, F., Baird, R. W., and Jepson, P.D. 2013. Final report of the Independent Scientific Review Panel investigating potential contributing factors to a 2008 mass stranding of melon-headed whales (<i>Peponocephala electra</i>) in Antsohihy, Madagascar.	The use of and output from the Kongsberg system during petroleum prospecting having frequent and overlapping sound waves that penetrate the floor of the ocean are nothing like sonar used by the U.S. Navy in the proposed training events in the TMAA. Furthermore, the Navy Acoustic Effects Model already accurately models the propagation of high frequency sources as well as all other proposed sources based on their output characteristics as well as environmental factors affecting acoustic propagation. In short, the stranding in Madagascar has no relevant new information to improve upon the process for accurate modeling of high frequency sources. For more details regarding the modeling, see the discussion in Section 3.8.3.1.6 (Quantitative Analysis) and the referenced Navy Marine Species Modeling Team (2015) technical report.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
NRDC-27	Additionally, two recent papers document the significant frequency “leakage” that can occur in some high-frequency sound sources, particularly sources that combine high source levels with rapid rise times. The leakage is so significant that tested sources with peak frequencies at and above 200 kHz, well beyond the range of marine mammal hearing, produced substantial noise within marine mammal hearing ranges in much lower bands.³⁷ For example, a BioSonics sonar system was found to produce 165 dB (SPL) in the 1/3-octave band centered at 20 kHz, and comparable levels of sound across much of the frequency spectrum below 100 kHz. While these source levels are appreciably lower, at relevant frequencies, than those generated by hull-mounted, mid-frequency ASW systems, their amplitude is sufficient to induce behavioral effects. Furthermore, the short rise times found in some of these sources are correlated across mammalian species with startle response, raising the same concerns about sensitization that have been raised about mid-frequency ASW systems.³⁸ In light of these recent findings, the Navy should field-test and re-evaluate noise output from higher-frequency systems. Notes: 37 Deng, Z.D., Southall, B.L., Carlson, T.J., Xu, J., Martinez, J.J., Weiland, M.A., and Ingraham, J.M., 200 kHz commercial sonar systems generate lower frequency side lobes audible to some marine mammals, <i>PLoS ONE</i> 9(4): e95315.doi:10.1371/journal.pone.0095315 (2014); Hastie, G.D., Donovan, C., Götz, T., and Janik, V.M, Behavioral responses by grey seals (<i>Halichoerus grypus</i>) to high frequency sonar, <i>Marine Pollution Bulletin</i> 79: 205-210 (2014). 38 Götz, T., and Janik, V.M, Repeated elicitation of the acoustic startle reflex leads to sensitisation in subsequent avoidance behaviour and induces fear conditioning, <i>BMC Neurosci</i> 12:30. doi:10.1186/1471-2202-12-30 (2011); Hastie et al., Behavioral responses by grey seals.	Regarding the nature of commercial off-the-shelf sound sources, in general, commercial sound sources do not necessarily have finely calibrated output or necessarily provide specifications on all their output characteristics. Other factors that can affect the output of commercial sources includes the generating uniformly and correctly supplied electrical power meeting the fixed frequency and voltage a sound source needs to operate as designed. On a commercial vessel, an advertised source with a 200 kHz fundamental frequency will likely provide a 200 kHz signal, but it may also have extraneous output beyond what the label provides as was the case described by Deng et al. (2014) and Hastie et al (2014). In particular, Hastie et al (2014) showed reactions to the lower frequency sound output of that source which is well within the pinniped hearing range. The point of these two papers is that a source advertised as a 200 kHz source may also be putting out much lower frequencies which can be heard by animals under investigation and that must be accounted for by experimental procedures or when being considered for regulatory oversight. In the Navy modeling, and as described in detail in the referenced Navy Marine Species Modeling Team (2015) technical report, a source bin is modeled based on its frequency, source level, beam pattern, and duty cycle and then characterized by parameters that are the most conservative from an acoustic propagation perspective including assuming the highest source level, lowest geometric mean frequency, highest duty cycle, and largest horizontal and vertical beam patterns. See discussion of Götz and Janik (2011) in the Supplemental EIS/OEIS Section 3.8.3.1.2.6 (Behavioral Reactions) for further information.
NRDC-28	<i>Ninth</i>, the Navy improperly applies weighting systems to behavioral take, including hybridized Type II weighting for explosives (DSEIS at 3.8-92). At this stage, however, using a specific auditory weighting function for behavioral responses is problematic, as there are numerous instances of species reacting differently than we would expect based on their audiograms. For example, Miller et al. (2012) found that exposure to a European naval sonar system called Low Frequency Active Sonar (LFAS), using frequencies of 1-2 kHz, resulted in both a greater number and more severe scored responses in killer whales than for Mid-Frequency Active Sonar (6-7 kHz), despite the behavioral and electrophysiological audiograms of 3 killer whales showing 10-40 dB less sensitivity at 1-2 kHz than 6-7 kHz. The same study also noted that sperm whales showed greater auditory sensitivity at MFAS frequencies than LFAS frequencies based on electrophysiological data, yet responded more often and at greater severity to the 1-2 kHz LFAS than the 6-7 kHz MFAS, thus mimicking the trend for killer whales, yet in an even stronger way.³⁹ Similarly, although seismic airgun surveys emit predominantly low-	Please see the discussion as detailed in the cited Finneran and Jenkins (2012) regarding thresholds and weighting functions presented in the Supplemental EIS/OEIS. The Navy is confident that the thresholds and criteria used in the GOA Draft and Final Supplemental EIS/OEIS analysis have already incorporated the correct balance of conservative assumptions that tend towards overestimation in the face of uncertainty. Details regarding the process are provided in Section 3.8.3.1.6 (Quantitative Analysis). Also see the summary of the thresholds used in the analysis are presented in Section 3.8.3.1.4 (Thresholds and Criteria for Predicting Acoustic and Explosive Impacts on Marine Mammals). As noted in introductory Section of the GOA Supplemental EIS/OEIS, the National Marine Fisheries Service is a cooperating agency in the development of the supplemental analysis because of its expertise and regulatory

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	frequency noise, small odontocetes have demonstrated stronger lateral spatial avoidance in some cases than have mysticetes.⁴⁰ All of these cases illustrate strong responses to frequencies to which species were not expected to be very sensitive, and do not include harbor porpoises or beaked whales. Auditory weighting functions are not yet appropriate as indicators of behavioral response. Notes: 39 P.J.O. Miller, P.H. Kvadsheim, F.-P.A. Lam, P.J. Wensveen, R. Antunes, A. Catarina Alves, F. Visser, L. Kleivane, P.L. Tyack, and L. Doksæter Sivle, The severity of behavioral changes observed during experimental exposures of killer (<i>Orcinus orca</i>), long-finned pilot (<i>Globicephala melas</i>), and sperm (<i>Physeter macrocephalus</i>) whales to naval sonar, <i>Aquatic Mammals</i> 38: 362-401 (2012). 40 C.J. Stone and M.L. Tasker, The effect of seismic airguns on cetaceans in UK waters, <i>Journal of Cetacean Research and Management</i> 8: 255–263 (2006); C.R. Weir, Overt responses of humpback whales (<i>Megaptera novaeangliae</i>), sperm whales (<i>Physeter macrocephalus</i>), and Atlantic spotted dolphins (<i>Stenella frontalis</i>) to seismic exploration off Angola, <i>Aquatic Mammals</i> 34: 71-83 (2008). See also S.E. Cosens, and L.P. Dueck, Ice breaker noise in Lancaster Sound, NWT, Canada: Implications for marine mammal behavior, <i>Marine Mammal Science</i> 9: 285–300 (1993); K.J. Finley, G.W. Miller, R.A. Davis, and C.R. Greene, Reactions of belugas, <i>Delphinapterus leucas</i>, and narwhals, <i>Monodon monoceros</i>, to ice-breaking ships in the Canadian high arctic, <i>Canadian Bulletin of Fisheries and Aquatic Science</i> 224: 97–117 (1990); M.L. Melcón, A.J. Cummins, S.M. Kerosky, L.K. Roche, S.M. Wiggins, et al., Blue whales respond to anthropogenic noise, <i>PLoS ONE</i> 7(2): e32681. doi:10.1371/journal.pone.0032681 (2013).	authority over marine resources. Additionally, the GOA Supplemental EIS/OEIS will serve as the NMFS's NEPA documentation for the rule-making process under the MMPA. Given this, NMFS was included in the development of the current thresholds. Furthermore, the thresholds and criteria used in the GOA Supplemental EIS/OEIS have been paralleled by the TTS and PTS thresholds NMFS recently proposed in its "Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals." For these reasons the thresholds used in the current analysis are the best available science although the Navy will continue to revise those thresholds based on emergent research and in cooperation with NMFS as the federal regulator. There is no Low Frequency Active Sonar, and no air gun use (seismic or otherwise) proposed for use in the Gulf of Alaska.
NRDC-29	Auditory weighting functions are not yet appropriate as indicators of behavioral response.	Navy believes that auditory weighting functions are appropriate given that weighting functions have been well accepted since first presented by Southall et al. (2007), have been continually refined with the emergence of new science (see Finneran and Jenkins 2012), and are required to realistically assess poorly detected sounds at the limits of a species hearing sensitivity.
NRDC-30	<i>Tenth</i>, the Navy's use of a function that requires an observable response contradicts the current literature on animal disturbance, where stress reactions, such as hormones, heart rate, and other non-outwardly visible signs are used if population health cannot be assessed. To this end, Lyamina et al. (2011) found that playbacks of 1-min duration noise at 150 dB caused a sharp and significant increase (208% of control values) in average heart rate in a beluga during the noise. In the first minute after the end of the noise, the heart rate decreased dramatically (58% on average compared to control, $p < 0.05$). There was stronger tachycardia at 150 dB playbacks than 140 dB ones, and no habituations to the noise playbacks occurred.⁴¹ The Navy rightly notes its shift to a stressor-based approach to impact analysis. Yet any stressor-based response function must take into account that precisely those animals that are most at risk for impacts on vital rates, such as those having poor body condition, are often the ones least likely to react to disturbance, for instance by fleeing, as they cannot afford to interrupt feeding. The Navy should enlarge or supplement its response function to take non-overt stress reactions into account. Notes: 41 O.I. Lyamina, S.M. Kornevab, V.V. Rozhnova, and L.M. Mukhametov, Cardiorespiratory changes in beluga in response to acoustic noise, <i>Doklady Biological Sciences</i> 440: 275–278 (2011).	Please see Section 3.8.3.1.2.5 (Physiological Stress) of the Supplemental EIS/OEIS where Lyamina et al. (2011) is discussed in context with other research. Navy's analysis of behavioral effects also includes TTS which may result in no outwardly visible signs of disturbance but may still have an impact on an animal's behavior until the animal's hearing sensitivity returns to its pre-exposure baseline. Navy will continue to review emergent research and modify its approach to analysis as warranted and in discussions with NMFS as a cooperating agency.
NRDC-31	<i>Eleventh</i> , the Navy's methodology is flawed and non-conservative for the numerous reasons discussed in the technical comments prepared by Dr. David Bain. These	As evidence from the title of the critique, it is in reference to an older (2007–2009) proposed action which analyzed activities in another

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	comments, which were previously sent to the Navy as public comments for inclusion in prior environmental reviews, are attached to this letter and hereby incorporated by reference.	location (the Hawaii Range Complex). Dr. Bain's critique is irrelevant, a duplicate of the critique originally presented in response to the July 2007 Hawaii Range Complex Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). All comments from Dr. Bain's critique (all comments within that critique) were previously responded to in the 2009 Hawaii Range Complex Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). Furthermore the Navy's analysis from 7 years ago has been superseded by an updated analysis presented in the Supplemental EIS/OEIS that includes (1) a change in the modeling methodology, (2) updated density data, (3) updated criteria and thresholds, (4) a discussion involving the science that has emerged since 2009, and (5) integration of data gathered from monitoring training and testing activities at Navy Range Complexes nationwide.
NRDC-32	For all these reasons, the Navy's risk curves for behavioral impacts are fundamentally inconsistent with the scientific literature on acoustic impacts and, if used to support an incidental take authorization, would violate the MMPA.	The reasons provided above are, in general, based on a flawed understanding of the material presented in the Supplemental EIS/OEIS. Please see the analysis presented in the Final Supplemental EIS/OEIS and the responses presented above for details.
NRDC-33	<i>E. Other Impacts on Marine Mammals</i> The Navy's activities have impacts that are not limited to the direct effects of ocean noise. Unfortunately, its analysis of these other impacts is cursory and inadequate. First, the Navy fails to adequately assess the impact of stress on marine mammals, a serious problem for animals exposed even to moderate levels of sound for extended periods.⁴² As the Navy has previously observed, stress from ocean noise—alone or in combination with other stressors, such as biotoxins—may weaken a cetacean's immune system, making it "more vulnerable to parasites and diseases that normally would not be fatal."⁴³ Moreover, according to studies on terrestrial mammals, chronic noise can interfere with brain development, increase the risk of myocardial infarctions, depress reproductive rates, and cause malformations and other defects in young—all at moderate levels of exposure.⁴⁴ Because physiological stress responses are highly conservative across species, it is reasonable to assume that marine mammals would be subject to the same effects and recent research is bearing this out. Indeed, a recent retrospective study of North Atlantic right whales indicated that exposures to low-frequency ship noise may well be associated with chronic stress in whales.⁴⁵ Nonetheless, despite the potential for stress in marine mammals and the significant consequences that can flow from it, the Navy unjustifiably assumes that such effects would be minimal. Notes: 42 See National Research Council, <i>Ocean Noise and Marine Mammals</i>. 43 Navy, Hawaii Range Complex Draft Environmental Impact Statement/ Overseas Environmental Impact	Please see the 2011 GOA Final EIS/OEIS for a discussion of stressors other than ocean noise, which is covered by the Supplemental EIS/OEIS. The proposed action is very different and should not be compared to chronic stressors such as low-frequency noise from ocean commerce in the Bay of Fundy resulting in impacts to Atlantic right whales as the comment suggests. The opinion on how stress affects individuals and more importantly marine mammal stocks or populations is still under scientific review and research. The Navy, via the Office of Naval Research basic research program, is a leading sponsor of ongoing stress-related studies. Please see the discussion in the Supplemental EIS/OEIS Section 3.8.2.4 (General Threats) and Section 3.8.3.1.2.5 (Physiological Stress) presenting Rolland et al. (2012) and other similar research regarding chronic stressors. See the discussion in Section 3.8.5 (Summary of Monitoring and Observations During Navy Activities) in the Supplemental EIS/OEIS regarding the justification for assuming population level effects will be minimal.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	Statement at 5-19 to 5-20 (2007). Additional evidence relevant to the problem of stress in marine mammals is summarized in A.J. Wright et al., Do marine mammals experience stress related to anthropogenic noise?, <i>supra</i>; see also T.A. Romano, M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.E. Schlundt, D.A. Carder, and J.J. Finneran, Anthropogenic sound and marine mammal health: measures of the nervous and immune systems before and after intense sound exposure, <i>Canadian Journal of Fisheries and Aquatic Sciences</i> 61: 1124, 1130-31 (2004). 44 See, e.g., E.F. Chang and M.M. Merzenich, Environmental noise retards auditory cortical development, <i>Science</i> 300: 498 (2003); S.N. Willich, K. Wegscheider, M. Stallmann, and T. Keil, Noise burden and the risk of myocardial infarction, <i>European Heart Journal</i> (Nov. 24, 2005); F.H. Harrington and A.M. Veitch, Calving success of woodland caribou exposed to low-level jet fighter overflights, <i>Arctic</i> 45: 213 (1992). 45 R. M. Rolland, S. E. Parks, K. E. Hunt, M. Castellote, P. J. Corkeron, D. P. Nowacek, S. K. Wasser, and S. D. Krauss, Evidence That Ship Noise Increases Stress in Right Whales, <i>Proceedings of the Royal Society of Biology</i>. 10. 1098/rspb.2011.2429 (2012).	
NRDC-34	<i>Second</i>, in the course of its training activities, the Navy would release a host of toxic chemicals, hazardous materials and waste into the marine environment that could pose a threat to marine mammals over the life of the range. For example, according to the EIS, under its preferred alternative, the Navy plans to abandon at least 352,000 pounds of spent material (both hazardous and non-hazardous) in the TMAA every year, including 360 bombs, 66 missiles, 644 targets and pyrotechnics, 26,376 gunshells, 11,400 small caliber rounds, and 1,587 sonobuoys. Over 10,300 pounds of this expended material is hazardous. 2011 EIS at ES-15 to 28; 3.2-28 to 34; 3.6-34. Nonetheless, the Navy has failed to adequately consider the cumulative impacts of these toxins on marine mammals from past, current, and proposed training exercises. Careful study is needed into the way toxins might disperse and circulate within the area and how they may affect marine wildlife. The Navy's assumption that expended materials and toxics would dissipate or become buried in sediment leads to a blithe conclusion that releases of hazardous material would have no adverse effects. Given the amount of both hazardous and nonhazardous materials, this discussion is inadequate. In addition, the Navy also plans to abandon cables, wires, and other items that could entangle marine wildlife, including parachutes. Acknowledging that entanglement is a serious issue for marine mammals, the DSEIS nonetheless dismisses the threat by claiming without support that a marine mammal that did become entangled could easily become free. Again, this discussion and analysis is inadequate under NEPA.	Please see the 2011 GOA Final EIS/OEIS for analysis of impacts other than acoustic stressors. Please note that the Navy is not releasing waste into the environment. Please see the 2011 GOA Final EIS/OEIS Section 3.2 (Expended Material) for details in this regard.
NRDC-35	<i>Third</i>, the Navy fails to consider the risk of ship collisions with large cetaceans, as exacerbated by the use of active acoustics. For example, right whales have been shown to engage in dramatic surfacing behavior, increasing their vulnerability to ship strikes, on exposure to mid-frequency alarms above 133 dB re 1 μPa (SPL)—a level of sound that can occur many tens of miles away from the sonar systems slated for the range.⁴⁶ It should be assumed that other large whales are subject to the same hazard. Notes: 46 Nowacek et al., North Atlantic Right Whales, at 227.	Please see the Section 3.8.2.4 (General Threats) of the Supplemental EIS/OEIS for a discussion of the potential for ship strike in general. Individual species write-ups in the Section 3.8.2 (Affected Environment) also discuss the threat of ship strikes on a species level. There has never been any association with Navy sonar use and ship strikes in over 30 years of worldwide Navy ship strike reporting to the NMFS. Therefore, it is erroneous to assume Navy sonar use in the GOA TMAA would increase marine mammal vulnerability to Navy ship strike. The disturbance reaction mentioned was from a single study where a novel broadband source was used to expose North

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		Atlantic right whale. There has been no indication from more frequent Navy sonar use in other areas of the Pacific outside of the GOA TMMA of significant large whale reactions such that ship strike risk would increase. The research by Nowacek et al. (2004) is discussed in the GOA Supplemental EIS/OEIS in the context of behavioral reactions to vessels and in the Supplemental EIS/OEIS Section 3.8.3.1.2.6 (Behavioral Reactions). Nowacek et al. (2004) used an alarm signal purposefully designed to provoke a response from the whales. The signal, which was long in duration, lasting several minutes, was intended to protect the whales from ship strikes. The frequency, duration, and temporal pattern of sound sources affected the whale's responses. The right whales did not respond to playbacks of either right whale social sounds or vessel noise, highlighting the importance of the sound characteristics, species differences, and individual sensitivity in producing a behavioral reaction. Navy activities using sonar would not be used in the same way as the sound source used by Nowacek et al. (2004), and similar reactions occurring miles from the sound source are not anticipated. There is no scientific basis for the suggestion that animals exposed to sonar would have greater susceptibility to vessel strike. Navy sonar is used intermittently for short durations and is not aimed at or designed to be an alarm signal for low-frequency mysticetes or other cetaceans.
NRDC-36	<i>Fourth</i>, the Navy does not adequately analyze the potential for and impact of oil spills. As evidenced by the 1989 <i>Exxon Valdez</i> oil spill and the 2010 BP <i>Deepwater Horizon</i> disaster, there is a risk of an oil spill in areas where oil is produced and transported, such as through the Gulf of Alaska. This risk is exacerbated by increasing the tempo and intensity of Navy training, which will involve more vessels, more transits, and longer missions.⁴⁷ Notes: 47 NMFS should include in its analysis and disclose to the public a chart that shows how the Navy's operating areas overlap shipping lanes, recommended routes, and Areas to Be Avoided as an indication of the potential for conflict with other vessels.	Please see the 2011 GOA Final EIS/OEIS for analysis of impacts other than acoustic stressors. The Navy's proposed action would not affect or interact with the production or transportation of oil for commercial sale.
NRDC-37	<i>Fifth</i>, and finally, the Navy's analysis cannot be limited only to direct effects, <i>i.e.</i>, effects that occur at the same time and place as the training exercises that would be authorized. It must also take into account the activity's indirect effects, which, though reasonably foreseeable may occur later in time or are further removed. <i>Cf.</i> 40 C.F.R. § 1508.8(b). This requirement is particularly critical in the present case given the potential for sonar exercises to cause significant long-term impacts not clearly observable in the short or immediate term (a serious problem, as the National Research Council has observed).⁴⁸ Thus, for example, the Navy must not only evaluate the potential for mother-calf separation but also the potential for indirect effects—on survivability—that might arise from that transient change.	The analysis is not limited to direct effects. See the Supplemental EIS/OEIS Section 3.8.3.1.3 (Long-Term Consequences to the Individual and the Population) where indirect effects are discussed. Also see Chapter 4 (Cumulative Impacts) of the documents for a general discussion of cumulative impacts. For marine mammals in particular, see the Supplemental EIS/OEIS Section 3.8.4 (Summary of Impacts [Combined Impacts of All Stressors] on Marine Mammals) and Section 3.8.5 (Summary of Observations During Previous Navy Activities), the latter of which contains a summary of research and monitoring over the last 8 years at various range complexes indicative

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	Notes: 48 "Even transient behavioral changes have the potential to separate mother-offspring pairs and lead to death of the young, although it has been difficult to confirm the death of the young." National Research Council, <i>Ocean Noise and Marine Mammals</i> at 96.	of long-term consequences to a variety of marine mammal species including many of those present in the Gulf of Alaska.
NRDC-38	<i>F. Cumulative Impacts</i> While the Navy recognizes the significant impacts that anthropogenic stressors have had, and continue to have, on Gulf of Alaska marine mammals (DSEIS at 4-25), its analysis of the additive impacts of its own activities is narrow and cursory. The Navy makes no attempt to analyze the cumulative and synergistic effects of mortality, injury, masking, energetic costs, stress, hearing loss, or any mechanism of cumulative impact, whether for its proposed training or for its training combined with other activities affecting the same marine mammal species and populations. Such mechanisms include but are not limited to quantitative or detailed qualitative assessment, including the use of reasonable proxies for population-level impact;⁴⁹ models of masking effects;⁵⁰ energetic models, such as on foraging success;⁵¹ chronic noise;⁵² and stress.⁵³ Notes: 49 <i>E.g.</i>, National Research Council, <i>Marine Mammal Populations and Ocean Noise: Determining When Noise Causes Biologically Significant Effects</i> (2005); Wright, A.J. ed., Report on the workshop on assessing the cumulative impacts of underwater noise with other anthropogenic stressors on marine mammals: from ideas to action, proceedings of workshop held by Okeanos Foundation, Monterey, California, August 26-29, 2009 (2009); California State Lands Commission, <i>Draft Environmental Impact Report for Central Coastal California Seismic Imaging Project</i> (2012). 50 <i>E.g.</i>, Clark, C.W., Ellison, W.T., Southall, B.L., Hatch, L., van Parijs, S., Frankel, A., and Ponirakis, D., Acoustic masking in marine ecosystems as a function of anthropogenic sound sources (2009) (IWC Sci. Comm. Doc. SC/61/E10); Clark, C.W., Ellison, W.T., Southall, B.L., Hatch, L., Van Parijs, S.M., Frankel, A., and Ponirakis, D., Acoustic masking in marine ecosystems: intuitions, analysis, and implication, <i>Marine Ecology Progress Series</i> 395: 201-222 (2009). 51 Lusseau, D., Bain, D.E., Williams, R., and Smith, J.C., Vessel traffic disrupts the foraging behavior of southern resident killer whales <i>Orcinus orca</i>, <i>Endangered Species Research</i> 6: 211-221 (2009); Williams, R., Lusseau, D. and Hammond, P.S., Estimating relative energetic costs of human disturbance to killer whales (<i>Orcinus orca</i>), <i>Biological Conservation</i> 133: 301-311 (2006); Miller, P.J.O., Johnson, M.P., Madsen, P.T., Biassoni, N., Quero, M., and Tyack, P.L., Using at-sea experiments to study the effects of airguns on the foraging behavior of sperm whales in the Gulf of Mexico, <i>Deep-Sea Research I</i> 56: 1168-1181 (2009). See also Mayo, C.S., Page, M., Osterberg, D., and Pershing, A., On the path to starvation: the effects of anthropogenic noise on right whale foraging success, North Atlantic Right Whale Consortium: Abstracts of the Annual Meeting (2008) (finding that decrements in North Atlantic right whale sensory range due to shipping noise have a larger impact on food intake than patch-density distribution and are likely to compromise fitness). 52 NOAA, <i>Cetecean and Sound Mapping</i>, available at www.st.nmfs.noaa.gov/cetsound (previewed at May NOAA symposium). 53 A special issue of the <i>International Journal of Comparative Psychology</i> (20:2-3) is devoted to the problem of noise-related stress response in marine mammals. For an overview published as part of that volume, see, <i>e.g.</i>, A.J. Wright, N. Aguilar Soto, A.L. Baldwin, M. Bateson, C.M. Beale, C. Clark, T. Deak, E.F. Edwards, A. Fernández, A. Godinho, L. Hatch, A. Kakuschke, D. Lusseau, D. Martineau, L.M. Romero, L. Weilgart, B. Wintle, G. Notarbartolo di Sciara, and V. Martin, Do marine mammals experience stress related to anthropogenic noise? (2007).	See Chapter 4 (Cumulative Impacts) and response above for NRDC-33. In particular and to understand the potential for population-level impact, see Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Draft and Final Supplemental EIS/OEIS. For masking effects see the discussion in Section 3.8.3.1.2.4 (Auditory Masking), and for energetic models, foraging, chronic noise and stress, see the discussion in 3.8.3.1.2.5 (Physiological Stress) in the Draft and Final Supplemental EIS/OEIS. The proposed actions are very limited in time and space and will not constitute "chronic noise and stress" analogous or comparable to the citations presented in the comment involving commercial shipping, seismic surveys, or whale watching.
NRDC-39	Nor does the Navy meaningfully consider the potential for acute synergistic effects from multiple activities taking place at one time, or from Navy activities in combination with other actions. For example, the agency does not consider the greater susceptibility to vessel strike of animals that have been temporarily harassed or disoriented.	As presented in the Supplemental EIS/OEIS Section 3.8.3.1.4.2 (Summation of Energy from Multiple Sources) and Section 3.8.3.1.6.3 (Navy Acoustic Effects Model), the model accounts for all sound sources used in the same activity at the same time. Additionally,

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) and the following sub-sections of the Supplemental EIS/OEIS consider likely marine mammal behavior in the analysis of impacts.
NRDC-40	The absence of analysis is particularly glaring in light of the 2004 Nowacek et al. study, which indicates that mid-frequency sources provoke surfacing and other behavior in North Atlantic right whales that increases the risk of vessel strike;⁵⁴ and the 2010 Mann et al. study, which found a substantial correlation between fishing gear entanglements and non-age-related hearing loss in bottlenose dolphins and rough-toothed dolphins.⁵⁵ Nor does the Navy consider (for example) the synergistic effects of noise with other stressors in producing or magnifying a stress-response, although it recognizes the potential that the response of a previously stressed marine animal may be more severe than that of an unstressed animal (DSEIS at 4-25).⁵⁶ To state, as the Navy does, that "...there is no evidence indicating that the co-occurrence of shipping noise and sounds associated with underwater explosions and sonar use would result in harmful additive impacts on marine mammals" (DSEIS at 4-25), fails to acknowledge the acoustic "scene" that is so essential to marine mammals and other marine life, where all their life functions rely on sensing the sound around them. Stating that no evidence exists when there has been no estimation or even investigation of the additive effect is disingenuous. Notes: 54 Nowacek et al., North Atlantic right whales, at 227-31. 55 D. Mann, M. Hill-Cook, C. Manire, D. Greenhow, E. Montie, Hearing loss in stranded odontocete dolphins and whales, <i>PLoS ONE</i> 5(11):e13824. doi:10.1371/journal.pone.0013824 (2010). 56 A.J. Wright, N. Aguilar Soto, A.L. Baldwin, M. Bateson, C.M. Beale, C.Clark, T. Deak, E.F. Edwards, A. Fernández, A. Godinho, L. Hatch, A. Kakuschke, D. Lusseau, D. Martineau, L.M. Romero, L. Weilgart, B. Wintle, G. Notarbartolo di Sciara, and V. Martin, "Do marine mammals experience stress related to anthropogenic noise?"; see also other papers published in same volume.	Nowacek et al. (2004) is discussed in the GOA Supplemental EIS/OEIS in the context of behavioral reactions to vessels and in the Supplemental EIS/OEIS Section 3.8.3.1.2.6 (Behavioral Reactions). Nowacek et al. (2004) used an alarm signal purposefully designed to provoke a response from the whales. The signal, which was long in duration, lasting several minutes, was intended to protect the whales from ship strikes. The frequency, duration, and temporal pattern of sound sources affected the whale's responses. The right whales did not respond to playbacks of either right whale social sounds or vessel noise, highlighting the importance of the sound characteristics, species differences, and individual sensitivity in producing a behavioral reaction. Navy activities using sonar would not be used in the same way as the sound source used by Nowacek et al. (2004), and similar reactions occurring miles from the sound source are not anticipated. Navy did consider the findings of Mann et al. (2010) as presented in the Cetacean Stranding Technical Report cited in the Supplemental EIS/OEIS (U.S. Department of the Navy 2013c). The comment's characterization of Mann et al. is factually incorrect. Mann did not note, "... a substantial correlation between fishing gear entanglements and non-age-related hearing loss ..." given only one of 34 stranded animals investigated was entangled. The results of Mann et al. (2010) showed that six of the stranded species investigated had no hearing loss while approximately 57 percent of stranded bottlenose dolphins and 36 percent of the rough-toothed dolphins had significant hearing deficits, so they were arguing for hearing testing to be standard protocol for all stranded cetaceans. Please see the previous responses to NRDC-33 and NRDC-34 regarding synergistic effects and in particular see the discussion in Section 3.8.3.1.2.5 (Physiological Stress) of the Supplemental EIS/OEIS. The cited summary statement from the Supplemental EIS/OEIS should not be considered the full analysis of the evidence. Please see Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Along with behavioral response studies and the results of research efforts and monitoring before, during, and after training and testing events across the Navy since 2006, the Navy's assessment is that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		continuation of training in the ocean areas historically used by the Navy including the TMAA.
NRDC-41	III. ALTERNATIVES ANALYSIS AND MITIGATION In this SDEIS, Pacific Fleet again relies on mitigation and monitoring measures that are completely inadequate for minimizing the vast majority of expected impacts on marine mammals and that are insufficient to ensure protection of marine mammals from injury and mortality. Virtually all of the mitigation that it has proposed for acoustic impacts boils down to a small safety zone around the sonar vessel, maintained primarily with visual monitoring by onboard lookouts, with aid from non-dedicated aircraft (when in the vicinity) and passive monitoring (through the vessel's generic sonar system). This approach disregards the best available science on the ineffectiveness of visual monitoring to prevent impacts on marine mammals. Indeed, the species perhaps most vulnerable to sonar-related injuries, beaked whales, are among the most difficult to detect because of their small size and diving behavior.⁵⁷ And, even with perfect detection rates, a kilometer-wide power-down zone will do nothing to minimize the vast majority of takes, which are expected to occur at much greater distances from the Navy's sonar arrays. The agency's reliance on visual observation as the mainstay of its mitigation plan is therefore profoundly insufficient and misplaced. Notes: 57 See J. Barlow and R. Gisiner, Mitigation and monitoring of beaked whales during acoustic events, <i>Journal of Cetacean Research and Management</i> 7: 239-249 (2006).	Chapter 5 of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS discusses mitigation measures. The proposed mitigation measures have been found to be adequate; please see the discussion presented in Section 5.2 (Introduction to Mitigation) of the Final Supplemental EIS/OEIS. The current mitigation measures were developed in collaboration between Navy scientists, acoustic experts, and marine mammal scientists with the National Marine Fisheries Service. Navy fully recognizes that there will be occasions when marine mammals may not be detected within the mitigation zone, which is why there are effects quantified and takes requested pursuant to MMPA and ESA. Navy is aware of the difficulties in detecting marine mammal species as presented in the Supplemental EIS/OEIS Section 5.3.1.2.4.1 (Detection Probabilities of Marine Mammals in the Study Area) and specifically the sub-section "Cryptic Species" with regard to beaked whales. Also, not all beaked whales are small in size as indicated by the comment given Baird's beaked whales (present in the Study Area) can be up to roughly 40 ft. in length.
NRDC-42	A. Time-Area Management There is strong consensus — at NOAA and in the scientific community — that spatio-temporal avoidance of high-value habitat represents the best available means to reduce the impacts of mid-frequency active sonar and certain other types of ocean noise on marine biota. Indeed, in a 2010 memorandum from Dr. Jane Lubchenco to the White House Council on Environmental Quality, NOAA recognized the need to improve its Navy mitigation and asserted the importance of time-area restrictions in biologically sensitive areas.⁵⁸ Here, despite additional survey effort (required as a condition of settling litigation) and the modeling of marine mammal densities within four reasonably distinct strata, the Navy has made no attempt to consider areas for potential avoidance, reduction in activities, or other measures.⁵⁹ Instead, it offers the same boilerplate rationale for declining to consider time-area closures for any of its activities as it offered in 2011. Notes: 58 Memorandum from Dr. Jane Lubchenco, Undersecretary of Commerce for Oceans and Atmosphere, to Nancy Sutley, Chair, Council on Environmental Quality at 2 (Jan. 19, 2010). 59 We recognize, as noted above, that density estimates are uncertain for many species, and that uncertainty should be considered by the Navy in formulating potential area closures.	In response to scoping comments during the 2011 GOA Final EIS/OEIS, the boundary of the TMAA was moved to the southwest to avoid Steller sea lion critical habitat. There is no other critical habitat within the TMAA. Regarding establishing "time-area restrictions" and suggesting that the survey data from four sampling strata within the TMAA could be used to effectively reduce impacts to marine mammals indicates a lack understanding of basic marine mammal science. In the most simplistic terms, a marine mammal line transect survey does not result in the identification of biologically sensitive areas. However, the Navy has considered the newly established NMFS identified areas in the GOA as presented in Chapter 3.8 (Marine Mammals; see for example Section 3.8.3.5 (Marine Mammal Density Estimates) and Chapter 5. Note that there are only two NMFS identified areas with overlap of the nearshore edge of the TMAA. An analysis was done for each of these identified areas to determine the efficacy of additional mitigation measures (see for example the discussion in Section 3.8.3.3.2 (Model Predicted Effects from Use of Sonar and Other Active Acoustic Sources). Most of the NMFS-identified areas (or BIAs) are outside of the Navy's GOA TMAA with minimum spatial overlap. For other areas within the GOA TMAA, call rate data cited as well as the Navy's more recent

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		and more robust passive acoustic data from 2011 to 2015 only provides occurrence specifically for that part of a given species' population that may be calling at a particular time. The Navy data set alone represents over 58,953 hours or 2,456 days' worth of passive acoustic data that have been collected and analyzed, and results reported. The science of density and relative density estimation from passive acoustic data is still being researched under funding from several different Navy programs. For example, the current Navy-funded research is focusing on aspects such as the proper characterization of calling rates, range of detection, and group size, all of which can vary by factors such as species, region, time of year/day, and sex. All of these variables can impact the resulting density estimate, and therefore the method of incorporating these variables needs to be investigated further. Based on the likely locations for training in the TMAA, the Navy anticipates that training would have very limited, if any, spatial overlap with the designated North Pacific right whale area or gray whale areas during the April to October timeframe for the proposed action. Sound from training activities in the TMAA would mostly result from hull-mounted sonar as vessels are in transit during ASW events in the TMAA. However, all acoustic emissions from training would be infrequent and transitory and would occur with a high degree of temporal variability. Given the overlap with the North Pacific right whale and gray whale areas' locations between or adjacent to Kodiak Island and Kenai Peninsula outside the TMAA, the vast majority of sound and disturbance in the area will be the result of non-Navy vessel activity. There would be little to no biological benefit from adopting avoidance measures for Navy vessels while not restricting other commercial or recreational vessels in these areas. It is unlikely that Navy training would have any biologically meaningful effect on North Pacific right whale feeding behavior or gray whale migration behavior in these areas. Avoidance of these areas by transiting Navy ships is not warranted when balanced against the fact that the Navy would constitute a small fraction of the activity in these areas. However, the Navy has agreed to establish the overlapped North Pacific Right Whale feeding area within the TMAA (an area measuring approximately 2,050 km²) as a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur between the June and September timeframe.
NRDC-43	In considering habitat for time-area management, the Navy should focus on species of	See the Supplemental EIS/OEIS Section 3.8.2.6 (North Pacific Right

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	particular vulnerability, such as the North Pacific right whale and acoustically naïve beaked whale populations.	Whale [<i>Eubalaena japonica</i>]) and Sections 3.8.2.17 through 3.8.2.19 regarding beaked whales. The navy has considered the new NMFS identified areas such as the North Pacific right whale feeding area. As the analysis presents, (1) Navy activities are very unlikely to occur in the NMFS-identified areas; (2) If Navy training was ever required in the area, it would be a very minor component to the overall human presence there; (3) Navy activities are unlikely to affect, let alone have any biologically meaningful effect, to the North Pacific right whale feeding behavior if these animals happened to be present in the areas; and (4) there are already activity specific mitigation measures in place to avoid or protect any detected marine mammals. As a result, no additional mitigation requirements are reasonable or practicable given the likely low risk of affecting North Pacific right whale feeding behavior in the designated areas. Given the number of vessels engaged in commercial shipping, fishing vessels using fish-finder sonar, seismic research undertaken, and authorized use of Navy sonar since 2011, it is unlikely there are “acoustically naïve” beaked whales in the TMAA.
NRDC-44	Furthermore, the Navy must ensure that its activities are not sited in a way that exceeds its modeled take estimates. Those estimates are predicated on the distribution of its training activities in particular ways over its four habitat strata, and shifts in location could have significant effects on species take. For example, Dall's porpoise densities differ among the Navy's four strata by well over one order of magnitude; a substantial shift in activity from a comparatively low-density to a high-density stratum could by itself bring the total annual take estimate closer to that originally calculated in the Navy's 2011 EIS.	The Supplemental EIS/OEIS Section 3.8.3.1.6 (Quantitative Analysis) and the referenced Marine Species Modeling Team (2015) technical report explain the details regarding the modeling. The estimated takes are in fact representative of the variations seen in all environmental variables, including marine mammal densities.
NRDC-45	The Navy should ensure, through planning and annual publicly available, post-exercise reporting to NMFS, that takes do not exceed its requested authorization numbers. This approach has been taken for SURTASS LFA operations and other activities.	The predicted effects present an annual maximum, and as described in the Supplemental EIS/OEIS Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) and specifically the sub-section titled <i>Model Assumptions and Limitations</i> , the estimated number of takes provided by the modeling is intended to be an overestimate so the actual number should never exceed the requested authorization. Please note that all at-sea permits have annual exercise reports. See Section 5.5 (Monitoring and Reporting) of the Supplemental EIS/OEIS regarding reporting requirements and note that publicly available reporting already completed over the previous 8 years (in excess of approximately 80 reports) can be reviewed at the Navy website (www.navy.marinespeciesmonitoring.us/) or the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
NRDC-46	<i>B. Operational Mitigation for North Pacific Right Whales</i> The Navy's real-time mitigation for its gunnery and explosives training do not provide sufficient protection to highly vulnerable species. For example, with the exception of SINKEX training, which uses explosives with net weights exceeding 500 lbs., neither the DSEIS nor existing regulations prescribe clear visibility conditions, such as a restriction to daylight-only conditions and sufficiently low sea states. Even SINKEX activities can take place, if not practicable to do otherwise, in conditions that the Navy cannot monitor. Yet the biological resources of the Gulf require that the Navy do more—especially to eliminate the potential for harm of North Pacific right whales, the loss of even a single one of which would unquestionably jeopardize the survival and recovery of the species. To this end, the sighting of any right whale, regardless of distance, should trigger a suspension of detonations or shut-down of active acoustic sources below 30 kHz. Further, we urge the Navy to restrict explosives and gunnery exercises at least from areas of more likely right whale occurrence, such as the southern half of the inshore stratum. And the Navy should apply visibility conditions and aerial monitoring requirements to a wider range of explosives and gunnery exercises. Finally, the Navy should carefully consider reducing or eliminating these exercises from the Gulf given its high sea states, and least in cases of exercises where good-visibility conditions cannot practicably be assured.	The Final Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) outlines the measures taken during training activities involving gunnery, use of explosives, and the SINKEX event. As noted in the Final Supplemental EIS/OEIS Section 5.2 (Introduction to Mitigation), the Navy considered additional sets of measures not otherwise considered previously such as those detailed in Section 5.3.3 (Mitigation Measures Considered but Eliminated). Please note that in consultation with NMFS, the Navy has agreed to preclude SINKEX from occurring in Habitats of Particular Concern. Please note that as described in the EIS/OEIS, the mitigation distances for suspension of activities are based on the applicable science providing for conservative distances at which injury could occur. These measures are put in effect for all cetaceans and do not require that a large whale be identified by species; the measures are implemented regardless of the species. The science and research regarding mysticete hearing and behavioral reactions do not indicate any basis for the suggested 30 kHz restriction as the comment suggests. As presented in the EIS/OEIS, mysticetes are low frequency hearing specialists and active acoustic sources are not capable of causing mortality to a right whale. As detailed in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring), the Navy must insure a target area is clear before commencing an event involving explosives. Due to the possible presence of non-Navy vessels and marine mammals in the inshore stratum in general, it is unlikely such training events would be scheduled to occur in the southern half of the inshore stratum. Navy has, however, established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe and agreed to prohibit use of explosives during training in the Portlock Bank area (see Section 5.3.3.1.11 [Avoiding Marine Species Habitats and Biologically Important Areas] for details in regard to these areas);
NRDC-47	<i>C. Other Mitigation Measures</i> As with time-area closures, any mitigation measure may be structured to take account of practicability, such as by setting standards for application that allow for deviations, by establishing procedures for exceptions, by discriminating among activities that may have different operational constraints, or by other means. Such measures include but are not limited to: 1) Use of sonar and other active acoustic systems at the lowest practicable source level, with clear standards and reporting requirements for different testing and training	Many, if not all of the numbered comments listed under “C Other Mitigation Measures” are discussed in Chapter 5 of the Supplemental EIS/OEIS as well as in the 2011 GOA Final EIS/OEIS in Section 5.2.1.6 (Alternative Mitigation Measures Considered but Eliminated). Please refer to the Supplemental EIS/OEIS Section 5.3.3.1.3 (Reducing Sonar Source Levels and Total Number of Hours) for a discussion on how the Navy uses active sonar at the lowest practicable source level consistent with mission requirements. See Section 5.5 (Monitoring and Reporting) of the Supplemental EIS/OEIS

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	scenarios;	regarding reporting requirements and note that publically available reporting already completed over the previous 8 years (in excess of approximately 80 reports), can be reviewed at the Navy website (www.navy.mil/speciesmonitoring.us/) or the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications). Also, testing is not part of the proposed action presented in Chapter 2 (Description of Proposed Action and Alternatives).
NRDC-48	2) Expansion of the marine species “safety zone” for hull-mounted mid-frequency sonar to a 4km shutdown, reflecting international best practice, or to a distance covering more of the zone of auditory impact;	Please refer to the Supplemental EIS/OEIS Section 5.3.3.1.12 (Increasing the Size of Observed Mitigation Zones) for a discussion on mitigation zone expansion. The Navy-recommended mitigation zones represent the maximum area the Navy can effectively observe based on the platform of observation, number of personnel that will be involved, and the number and type of assets and resources available. As mitigation zone sizes increase, the potential for reducing impacts decreases. For instance, if a mitigation zone increases from 1,000 to 4,000 yd. (914 to 3,658 m), the area that must be observed increases sixteen-fold. The Navy-recommended mitigation measures balance the need to reduce potential impacts with the ability to provide effective observations throughout a given mitigation zone. There is no internationally recognized best practice with regard to mitigation zone distance. The mitigation zones discussed throughout the Supplemental EIS/OEIS were developed using the best available science, are consistent with regulatory requirements and criteria, and are tailored to the Proposed Action; therefore, adopting other mitigation zones would neither be a practical nor effective mitigation scheme for the Proposed Action. See also Section 5.3.3.1.14 (Adopting Mitigation Measures of Foreign Navies) in the Supplemental EIS/OEIS.
NRDC-49	3) Delay or relocation of activities when beaked whales are detected through passive acoustic monitoring within the vicinity of an exercise, in cases where the Navy is unable to determine both range and bearing, even if potentially occurring beyond the established safety zone;	As provided in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS, mitigation measures will be implemented as appropriate whenever marine mammals are detected. In this manner, Navy mitigation measures will reduce impacts for all species.
NRDC-50	4) Delay or relocation of activities when significant aggregations of any species, or particularly vulnerable or endangered species, such as North Pacific right whales, are detected by any means within the vicinity of an exercise, even if occurring beyond the established safety zone;	As provided in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS, mitigation measures will be implemented as appropriate whenever marine mammals are detected. In this manner, Navy mitigation measures will reduce impacts for all species. The comment lacks all details and definitions necessary to further evaluate its efficacy or to understand the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		scientific basis for the suggested mitigation. For example, there is no indication for what constitutes “within the vicinity of an exercise” and there is no know basis for delaying a training event (such as underway replenishment) if no interaction with marine mammals likely and they are outside the safety zone off the bow as presented in Chapter 5 for vessels underway.
NRDC-51	5) Use of simulated geography (and other work-arounds) to reduce or eliminate use of important habitat;	This suggested mitigation was reviewed and discussed in Section 5.3.3.1.2 (Replacing Training with Simulated Activities) of the Supplemental EIS/OEIS. The Navy currently uses computer simulation for training whenever possible, but must also eventually train using actual equipment and at sea in realistic conditions. As detailed in Chapter 5 and to the degree possible, the Navy already has incorporated the use of simulated training into its planning to protect the environment and to reduce training costs where possible.
NRDC-52	6) Avoidance or reduction of training during months with historically significant surface ducting conditions;	This has been reviewed previously as discussed in the Supplemental EIS/OEIS Section 5.3.3.1.9 (Avoiding or Reducing Active Sonar during Strong Surface Ducts) discussing surface duct conditions. Additionally, oceanographic conditions in the Gulf of Alaska during the timeframe when a Northern Edge exercise would occur do not support surface ducting conditions. A surface duct requires cold water at the surface with warmer water at deeper depths which is highly unlikely during the warmer summer months in the Gulf of Alaska. In addition, there has been no indication that surface duct has any direct influence on marine mammal behavior or response to anthropogenic sounds. Please note that submarines have long been known to exploit the phenomena associated with surface ducting. Therefore, training in surface ducting conditions is a critical component to military readiness because sonar operators need to learn how sonar transmissions are altered due to surface ducting, how submarines may take advantage of surface ducting, and how to operate sonar effectively in this environment. Avoiding surface ducting would be impractical to implement because ocean conditions contributing to surface ducting change frequently, and surface ducts can be of varying duration. Surface ducting can also lack uniformity and may or may not extend over a large geographic area, making it difficult to determine where to reduce power and for what periods. Avoiding or reducing active sonar during surface ducting conditions would affect a commander’s ability to develop this tactical picture and would not provide the needed training realism. Diminished realism would reduce a sonar operator’s ability to effectively operate in a real world combat situation, thereby resulting in an unacceptable

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		increased risk to personnel safety and lessening the ability to achieve mission success.
NRDC-53	7) Delay of activities, or use of power-downs, during significant surface ducting conditions;	This has been reviewed previously, as surface duct conditions were discussed in the Supplemental EIS/OEIS Section 5.3.3.1.9 (Avoiding or Reducing Active Sonar during Strong Surface Ducts). As noted above, oceanographic conditions in the Gulf of Alaska during the timeframe when a Northern Edge exercise would occur do not support surface ducting conditions. A surface duct requires cold water at the surface with warmer water at deeper depths which is highly unlikely during the warmer summer months in the Gulf of Alaska. In addition, there has been no indication that surface duct has any direct influence on marine mammal behavior or response to anthropogenic sounds. Please note that submarines have long been known to exploit the phenomena associated with surface ducting. Therefore, training in surface ducting conditions is a critical component to military readiness because sonar operators need to learn how sonar transmissions are altered due to surface ducting, how submarines may take advantage of surface ducting, and how to operate sonar effectively in this environment. Avoiding surface ducting would be impractical to implement because ocean conditions contributing to surface ducting change frequently, and surface ducts can be of varying duration. Surface ducting can also lack uniformity and may or may not extend over a large geographic area, making it difficult to determine where to reduce power and for what periods. Avoiding or reducing active sonar during surface ducting conditions would affect a commander's ability to develop this tactical picture and would not provide the needed training realism. Diminished realism would reduce a sonar operator's ability to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and lessening the ability to achieve mission success.
NRDC-54	8) Avoidance of activities at night and/or in low-visibility conditions (e.g., in fog or in sea-state conditions greater than Beaufort 4).	This has been reviewed previously as discussed in Section 5.3.3.1.8 (Avoiding or Reducing Active Sonar at Night and During Periods of Low Visibility).
NRDC-55	9) Requirement that all weapons firing in missile, bombing, and sinking exercises involving detonations exceeding 20 lbs. net explosive weight will take place during the period 1 hour after official sunrise to 30 minutes before official sunset;	This is already occurring given the mitigation zone procedures requirements for the range clearance and target damage assessment; see Section 5.3.2.1.2 (Explosives and Impulsive Sources) for details in regard to events using explosives.
NRDC-56	10) Use of additional power-downs when significant surface ducting conditions coincide with other conditions that elevate risk, such as during exercises involving the use of multiple systems or in beaked whale habitat;	This has been reviewed previously, as surface duct conditions were discussed in the Supplemental EIS/OEIS Section 5.3.3.1.9 (Avoiding or Reducing Active Sonar during Strong Surface Ducts). Please note

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		that submarines have long been known to exploit the phenomena associated with surface ducting. Therefore, training in surface ducting conditions is a critical component to military readiness because sonar operators need to learn how sonar transmissions are altered due to surface ducting, how submarines may take advantage of surface ducting, and how to operate sonar effectively in this environment. Avoiding surface ducting would be impractical to implement because ocean conditions contributing to surface ducting change frequently, and surface ducts can be of varying duration. Surface ducting can also lack uniformity and may or may not extend over a large geographic area, making it difficult to determine where to reduce power and for what periods. Avoiding or reducing active sonar during surface ducting conditions would affect a commander's ability to develop this tactical picture and would not provide the needed training realism. Diminished realism would reduce a sonar operator's ability to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and lessening the ability to achieve mission success. Regarding beaked whale habitat, see Chapter 3.8 (Marine Mammals) and the referenced Navy Marine Species Density Database technical report noting that beaked whales inhabit all portions of the Study Area.
NRDC-57	11) Planning of ship tracks to avoid embayments and provide escape routes for marine animals;	See the 2011 GOA Final EIS/OEIS and Final Supplemental EIS/OEIS which both provide descriptions and figures of the TMAA that illustrate that there are no embayments or geography that would limit the movement of marine animals.
NRDC-58	12) Suspension or postponement of chokepoint exercises during surface ducting conditions and scheduling of such exercises during daylight hours;	There are no "chokepoint exercises" proposed in any alternative and no geography present to support such an event. See Section 5.3.4.1.8 (Avoiding or Reducing Active Sonar at Night and During Periods of Low Visibility) and Section 5.3.4.1.9 (Avoiding or Reducing Active Sonar During Strong Surface Ducts) regarding the other aspects of this comment.
NRDC-59	13) Use of dedicated aerial monitors during chokepoint exercises, major exercises, and near-coastal exercises;	Please refer to Chapter 2 regarding the Proposed Action and note that the proposed action does not involve any "chokepoint With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. Given the distance from shore for the TMAA, it would not be logistical, practical, or safe for civilian aerial surveys. Furthermore, the use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
NRDC-60	14) Use of dedicated passive acoustic monitoring to detect vocalizing species, through established and portable range instrumentation and/or the use of hydrophone arrays off instrumented ranges;	There are no established Navy instrumented ranges or hydrophone arrays present in the Gulf of Alaska and the portable range instrumentation (if used) does not have the capability to provide for the monitoring of marine mammals. As presented in Section 5.3.2 (Mitigation Zone Procedural Measures), use of available passive acoustic sensors already occurs. Section 5.3.4.1.13 (Increasing Visual and Passive Acoustic Observations) also discusses use of passive sensors. Other passive acoustic monitoring research does occur in the Gulf of Alaska as part of Navy's marine mammal monitoring efforts; see http://www.navy-marinespeciesmonitoring.us/ for details. These devices, however, record data internal storage, and individual devices have to be retrieved after a given field season to obtain the data.
NRDC-61	15) Posting of at least three personnel on watch whose duties include observing the water surface around the vessel, and, in addition, posting of at least two additional personnel on watch as dedicated marine mammal lookouts, whose exclusive responsibility is to monitor for marine mammals;	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally,

Table D.4-4: Responses to Comments from Organizations (continued)

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		multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the capacity to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
NRDC-62	16) Modification of sonobuoys for passive acoustic detection of vocalizing species;	Researchers already routinely use existing surplus Navy sonobuoys for passive acoustic detection of marine mammals (see Rone et al. 2014) and their modification is unnecessary.
NRDC-63	17) Use of aerial surveys and ship-based surveys before, during, and after major exercises;	See Chapter 2 for a discussion of the Proposed Action as there is only one exercise event type proposed. Please also see Section 3.8.5.1 (Alaska Specific Monitoring and Research) of the Supplemental EIS/OEIS describing the proposed current and future Navy funded monitoring in the area.
NRDC-64	18) Use of all available range assets for marine mammal monitoring;	There are no “range assets” available in the TMAA given it is not a Range Complex, but as described throughout Chapter 5, visual observation (aerial and vessel-based) would be conducted in association with Navy training activities. For additional information on the Navy’s marine mammal monitoring efforts, see http://www.navymarinespeciesmonitoring.us/ .
NRDC-65	19) Use of NMFS-certified lookouts for marine mammal detection;	There is no NMFS certification or process for NMFS to train Navy lookouts in marine mammal detection. For NMFS surveys, prospective Marine Mammal Observers supplement experienced observers until sufficient on-the-job training has occurred, but there is still no “certification” process. As explained in the EIS/OEIS, the Navy does train its lookouts and applicable personnel using the NMFS approved Marine Species Awareness Training that has been in use since 2006. With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		(Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
NRDC-66	20) Completion of a Lookout Effectiveness Study comparing the abilities of Navy vessel-based lookouts and experienced marine mammal observers (“MMOs”), and requirement of NMFS-certified lookouts or other monitoring enhancements if Navy observers are significantly (e.g., 20%) less likely than MMOs to detect marine mammals;	The Navy is in the process of assessing Lookout effectiveness at detecting marine mammals during Navy exercises. Until the results of the Navy’s Lookout effectiveness study are available, the Navy relies on the best available science to determine detection probabilities of marine mammals by Navy Lookouts, which is represented in the Navy’s acoustic effects model and post-modeling analysis. Section 5.3.1.2.4 (Effectiveness Assessment for Lookouts) of the Supplemental EIS/OEIS acknowledges that, due to the various detection probabilities, levels of Lookout experience, and variability of sighting conditions, Lookouts will not always be effective at avoiding impacts on all species. However, Lookouts are expected to increase the overall likelihood that certain marine mammal species and some sea turtles will be detected at the surface of the water, when compared to the likelihood that these same species would be detected if Lookouts are not used. The continued use of Lookouts contributes to helping reduce potential impacts on these species from training activities. Results from the Lookout effectiveness study will be reviewed and any recommendations for improving Lookout

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		effectiveness will be considered at that time. In the interim, the Navy's visual mitigation has been demonstrated to be effective over the 8 years of monitoring associated with Navy training and testing at sea in publically available reports submitted to NMFS since 2006 and accessible on the NMFS Office of Protected Resources website.
NRDC-67	21) Use of gliders and other platforms for pre-activity monitoring, especially of major exercises, for purposes of dynamic avoidance of significant aggregations of marine mammals;	Please see Chapter 2 of the Supplemental EIS/OEIS regarding the Proposed Action as there is only one type of exercise event proposed. Mitigation specific to "significant aggregations of marine mammals" are not necessary because the mitigation will be implemented for individual animals as well as groups of animals when observed. See Section 5.3.3.1.11 (Increasing Visual and Passive Acoustic Observations) the Supplemental EIS/OEIS which also discusses the use of passive sensors such as those on gliders. Please also see Section 3.8.5.1 (Alaska Specific Monitoring and Research) of the Supplemental EIS/OEIS describing the proposed current and future Navy funded monitoring in the area.
NRDC-68	22) Use of dedicated aerial monitoring for all Navy explosives activities using timer delays, and/or all activities involving explosives with a net charge weight above a reasonable level (e.g., 20 lbs.);	Please see Chapter 2 of the Supplemental EIS/OEIS regarding the Proposed Action; there are no "timer delays" used in events involving explosives in the TMAA. Regarding "dedicated aerial monitoring," see Section 5.3.3.1.11 (Increasing Visual and Passive Acoustic Observations). The Navy recommended mitigation measures already represent the maximum level of effort (e.g., numbers of Lookouts and passive sonobuoys) that the Navy can commit to observing mitigation zones given the number of personnel that will be involved and the number and type of assets and resources available. The Navy will conduct passive acoustic monitoring during several activities with Navy assets, such as sonobuoys, already participating in the activity (e.g., sinking exercises, and improved extended echo ranging sonobuoys, which involve the use of explosives). With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
NRDC-69	23) Avoidance and reduction in the use of timer delays in favor of explosives with positive controls;	Please see Chapter 2 of the Supplemental EIS/OEIS regarding the Proposed Action; there are no "timer delays" used in events involving explosives in the TMAA.
NRDC-70	24) Application of ship-speed restriction (e.g., of 10 knots) for support vessels and/or other vessels while transiting high-value habitat for baleen whales and endangered species, or other areas of biological significance, and/or shipping lanes;	The Navy always operates its vessels at a safe speed and as required to meet mission requirements. This has been discussed and dismissed from consideration as presented in the Supplemental EIS/OEIS Section 5.3.3.1.5 (Reducing Vessel Speed). Note that as detailed in Section 3.8 (Marine Mammals), there is no basis for a speed restriction of 10 knots as a mitigation measure to protect baleen whales; this number is not supported by the applicable science. Additionally, although the comment provides no definition for what constitutes "high-value habitat for baleen whales and endangered species," there is no designated Critical Habitat within the TMAA.
NRDC-71	25) Application of mitigation prescribed by state regulators, by the courts, by other navies or research centers, or by the U.S. Navy in the past or in other contexts;	Please see Chapter 5 of the Supplemental EIS/OEIS regarding the proposed mitigation measures. The mitigation discussed was developed in cooperation with NMFS and was refined through the MMPA and ESA consultation processes. Evaluation of past and present Navy mitigation measures is included throughout Chapter 5 and many previous specific measures have been reviewed in Section 5.3.3 (Mitigation Measures Considered but Eliminated) of the Supplemental EIS/OEIS. Navy's proposed mitigation measures were chosen if they were likely to result in avoidance or reduction of injury to marine mammals and sea turtles; and if analyzed as acceptable with regard to personnel safety, practicality of implementation, impact on effectiveness of the military readiness activity, and Navy policy.
NRDC-72	26) Avoidance of fish spawning grounds and of important habitat for fish species	See Section 3.6 (Fish) in the documents providing a discussion of the

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	potentially vulnerable to significant behavioral change, such as wide-scale displacement within the water column or changes in breeding behavior;	effects determinations for fish. The analysis does not indicate there are likely to be effects like those suggested by the comment. As outlined in Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS, the unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
NRDC-73	27) Evaluating before each major exercise whether reductions in sonar use are possible, given the readiness status of the strike groups involved;	See Chapter 2 for a discussion of the Proposed Action since there is only one exercise event type proposed. Additionally, this mitigation measure has already been presented and analyzed as discussed in Section 5.3.3.1.3 (Reducing Sonar Source Levels and Total Number of Hours) of the Supplemental EIS/OEIS.
NRDC-74	28) Dedicated research and development of technology to reduce impacts of active acoustic sources on marine mammals;	This is already occurring and information in that regard is presented in the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) and is available on the internet (see http://www.navy Marinespeciesmonitoring.us/). The Navy provides a significant amount of funding and support to marine research. Navy scientists work cooperatively with other government researchers and scientists, universities, industry, and nongovernmental conservation organizations in collecting, evaluating, and modeling information on marine resources. Details on the Navy's involvement with future research will be worked out through the Navy and NMFS adaptive management process, which regularly considers and evaluates the development and use of new science and technologies for Navy applications.
NRDC-75	29) Establishment of a plan and a timetable for maximizing synthetic training in order to reduce the use of active sonar training;	This is already occurring as described in Section 5.3.3.1.2 (Replacing Training with Simulated Activities) of the Supplemental EIS/OEIS, which discusses simulated training activities.
NRDC-76	30) Prescription of specific mitigation requirements for individual classes (or sub-classes) of testing and training activities, in order to maximize mitigation given varying	See Chapter 2 for a discussion of the Proposed Action since there are no proposed testing activities. The suggested action is already

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	sets of operational needs;	occurring as presented in Chapter 5 which discusses mitigation measures developed specific to each activity type and meant to reduce potential impacts while not causing an unacceptable impact on the training mission.
NRDC-77	31) Additional clean-up and retrieval of the massive amount of discarded debris and expended materials associated with its proposed activities; and	Please see the 2011 GOA Final EIS/OEIS Section 3.2 (Expended Materials) detailing those items that are recovered (such as some targets) and those that cannot be (such as the remnant elements of expended flares). It is impractical to retrieve most and impossible to retrieve some of the expended items proposed for use in the TMAA.
NRDC-78	32) Timely, regular reporting to NOAA, state coastal management authorities, and the public to describe and verify use of mitigation measures during testing and training activities.	Timely and regular reporting that is available publically has been occurring for over 8 years. These reports are publically available at the Navy website (www.navy.mil/speciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications). Navy reporting requirements, including exercise and monitoring reporting, are described in Section 5.5 (Monitoring and Reporting) of the Supplemental EIS/OEIS.
NRDC-79	For the reasons given, we urge the Navy to withdraw the present DSEIS and to revise it with a substantially more conservative impact analysis and improved analysis of alternatives and mitigation. As always, we welcome the opportunity to discuss these issues with you and your staff at any time. Very truly yours, Michael Jasny Senior Policy Analyst Director, Marine Mammal Project	Please review the detailed responses to the comments provided and the directions to sections in the 2011 GOA Final EIS/OEIS and Final Supplemental EIS/OEIS where critical information may be found. Most of the comments seem to be based on a misunderstanding of the proposed action and the analysis presented in the Final Supplemental EIS/OEIS. The Navy disagrees with the flawed perception that the analysis is not conservative or that the analysis of the alternative and mitigation measures requires improvement.
NRDC-80	Appendix C – CRITIQUE OF THE NAVY'S ACOUSTICS ANALYSIS CRITIQUE OF THE RISK ASSESSMENT MODEL EMPLOYED TO CALCULATE TAKES IN THE HAWAII RANGE COMPLEX SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT David E. Bain, Ph.D. Abstract Rather than using a fixed received level threshold for whether a take is likely to occur from exposure to mid-frequency sonar, the Navy proposed a method for incorporating individual variation. Risk is predicted as a function of three parameters: 1) a basement value below which takes are unlikely to occur; 2) the level at which 50% of individuals would be taken; and 3) a sharpness parameter intended to reflect the range of individual variation. This paper reviews whether the parameters employed are based on the best available science, the implications of uncertainty in the values, and biases and limitations in the model. Data were incorrectly interpreted when calculating parameter	As evidenced from the title of the critique, Appendix C of the comment letter is in reference to an older (2007–2009) document which analyzed activities in another location (the Hawaii Range Complex), different proposed actions, a different set of criteria and thresholds, and a totally different acoustic effects modeling approach. Dr. Bain's critique is therefore not applicable with regards to the proposed action in this Supplemental EIS/OEIS. Furthermore, a duplicate of the critique was originally presented by NRDC in response to the July 2007 Hawaii Range Complex Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) and all comments from Dr. Bain's critique were previously responded to in the 2009 Hawaii Range Complex Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	values, resulting in a model that underestimates takes.	
M. Bishop on behalf of the Prince William Sound Audubon Society (Electronic) (M. Bishop PWSAS-01)	I am writing to you on behalf of the Prince William Sound Audubon Society, an organization for which I currently serve as President. Prince William Sound Audubon Society is based in Cordova and represents a membership from Cordova, Valdez, and Whittier. Both our mission and Audubon Alaska's mission is to conserve Alaska's natural ecosystems focusing on birds, other wildlife, and their habitats for the benefit and enjoyment of current and future generations. We have reviewed the Supplemental Environmental Impact Statement for the warfare training exercise in the northern Gulf of Alaska just south of Prince William Sound.	Thank you for participating in the NEPA process.
M. Bishop PWSAS-02	Given the projected number of mammal takes as well as the potential impacts to salmon and other fish populations, Prince William Sound Audubon Society strongly supports the No-Action alternative. If the Navy does not select the No-Action alternative that we support, Prince William Sound Audubon Society strongly urges the Navy to mitigate its activities by amending the plan in the following ways: 1) Change the timing of the exercises from summer months to the winter months (Nov-Mar) when migratory whale numbers are lower; 2) Restrict the training area only to areas far offshore, -- that is away from the continental shelf and slope, where most marine mammals are found--, east of 143 W. Longitude, and at least 100 miles from the nearest seamount; 3) Cancel all ship-sinking exercises. 4) Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan. We appreciate the opportunity to provide our comments. Please keep our organization informed of your further efforts in the northern Gulf of Alaska. Sincerely yours, /s/ M.A. Bishop, Ph.D. President, Prince William Sound Audubon Society	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). With regard to restricting training to areas "far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount" see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS. Avoiding locations for training activities based on bathymetry and environmental conditions for the purpose of mitigation would increase safety risks to personnel and result in an unacceptable impact on readiness. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. The varying environmental conditions of the Study Area (e.g., bathymetry and topography) maximize the training realism and effectiveness. Regarding cancelling all "ship-sinking exercises," please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why the Navy needs to train. Regarding the suggestion to "accommodate independent scientific observers," please see the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. A critical skill set of effective Navy training is communication. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
		various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the capacity to maintain third-party observers to accomplish the task for every event. Section 5.2 (Introduction to Mitigation) of the Supplemental EIS/OEIS provides an explanation of the assessment process and why these suggested measures would likely be ineffective at reducing environmental impacts, have an unacceptable operational impact based on the operational assessment, or are incompatible with Section 5.2.2 (Overview of Mitigation Approach) of the Supplemental EIS/OEIS.
University of St. Andrews 3S-project management group (Univ St. Andrews)-01 (Written)	Dear Ms Burt, We would like to provide the comments detailed below, in response to some of the content of the recently published Draft Supplemental EIS/OEIS for the Gulf of Alaska Training Exercises. Our comments relate specifically to the interpretation of recent results arising from our research on the behavioural responses of toothed whales to military sonar signals. Based upon several statements in the document, we feel that the methods of our study were not well understood, leading to erroneous rejection of some of the results.	Thank you for reviewing the document and participating in the NEPA process.
Univ St. Andrews-02	Page Section 3.8.3.1.2.6 Your text: <i>Miller et al. (2011) reported on behavioral responses of pilot whales and killer whales off Norway to a transducer with outputs, including the mid-frequency 1-2 kHz and 6-7 kHz ranges (see also Kvadsheim et al. 2011). There were, however, methodological issues with the exposure experiment, given the sound sources had significant frequency output outside the intended 1-2 kHz and 6-7 kHz ranges and the simultaneous use of other high frequency sources used to track the whales. Because the two primary sources had output frequencies much broader than characterized (see Figure 4.8 in Kvadsheim et al. 2011 and Figure 9 in Miller et al. 2011), it calls into question the control of the exposures and the reported results. The authors note that "we cannot rule out that the higher source level itself or different patterns of reverberation and/or harmonics, were salient features of the source to which the subject whales were more likely to respond with higher severity levels."</i> Our responses: The sonar source used in the 3S experiments (Miller et al., 2011, 2012, 2014; Antunes et al., 2014), known as Socrates, is an operational sonar within the Royal Netherlands Navy and the transmitted signals have characteristics typical for low and mid frequency sonars of European navies. Like most operational sonars, including those operated by the US Navy, it produces harmonics when the source level is near maximum levels. As most operational sonars do contain harmonics, the presence of harmonics in our experiments does not indicate any concern for 'control of' our experiments. Instead, the presence of harmonics in our experiments makes them more similar to actual navy	The Navy concurs with the commenter. Please see revised text in Section 3.8.3.1.2.6 (Behavioral Reactions, subsection Behavioral Reactions to Sonar and Other Active Acoustic Sources, Odontocetes).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	exercises. Indeed, experiments without harmonics should be considered less realistic. We included sound energy up to 40kHz for the calculation of received sound exposure levels (Miller et al., 2011), and for sound exposure levels weighted against the killer whale audiogram ('sensation levels'; Miller et al., 2014). Thus, the acoustic dose in our experiments was carefully measured taking into account the realistic presence of harmonics. Active high frequency sonar (26 kHz and 110 kHz) to track whales was conducted in 2006, but was not used to track whales during any experiments studying how whales respond to naval sonar. Only passive listening and visual observation systems were used to track whales in the naval sonar experiments. The environment in which we predict impacts (navy exercises) will include patterns of reverberation and harmonics. Our experiments also involved ranges from source to whale that were much more realistic than those used in captive experiments. These are all relevant features to free-ranging animals, which would not be present in captive work which is used to develop dose-response functions in the DEIS.	
Univ St. Andrews-03	Your text: <i>It is also unclear from the data if reactions could have been from the vessel itself, without sonar on, or from additional whale observing boats that were separate from the sonar source vessel.</i> Our responses: Our experimental design included a control pass of the vessel without the sonar transmitting to account for possible effects of the vessel itself. Though numbers varied by species due to the inherent challenges in conducting experiments at sea, we were able to conduct sufficient of these passes in long-finned pilot whales to demonstrate the vessel was not a causal factor in behavioural changes (Antunes et al., 2014). For killer whales, behavioural responses during sonar exposures were noted at a wide range of distances from the vessel, all but one at distances exceeding 2km (Miller et al., 2014, Table 1, Fig. 5). Studies of the effects of vessels on killer whale movement patterns have been documented (Williams et al., 2002; Williams and Ashe, 2007; Williams et al., 2009), in an area with whale watching similar to that in the Norwegian study area. Proximity of vessels to the whale was identified as an important factor influencing the movement patterns of whales (Williams et al., 2002). Whales approached by 1-3 vessels within 1000m decreased path directness (ratio of net distance to total distance travelled), but only by a small amount (from 82 to 68 - representing a 20% increase in path length compared to baseline behaviour; Williams and Ashe, 2007). In a later study, the influence of vessels within 400m and within 1000m was contrasted statistically. The results indicated a stronger model fit to the influence of vessels at 400m than at 1000m indicating a decreasing effect at those distances from whales to boat (Williams et al., 2009). Track directness in females tended to increase with vessel proximity (see also Fig 8 in Williams et al., 2002). This	The description of the response by pilot whale gm09_138b to the silent pass (Miller et al 2011) indicates the animals responded by changing their heading (direction of travel) and continued this avoidance response for the duration of the silent pass. Similarly, the description of the response to the silent pass by pilot whale gm09_156b (Miller et al 2011) describes a brief/minor change in heading (direction of travel) in response to the silent pass, as well as a change in group spacing and surfacing synchrony that lasted for the duration of the silent pass. These behavioral reactions to silent passes are similar to some of the reactions observed during sound exposures. The single silent pass on a killer whale group (oo08_149a) contained notable differences from the sound exposure passes (Miller et al., 2011). The sound source vessel began its approach from a shorter distance (within approximately 3 km as opposed to 7–8 km for sound exposures), the session was conducted over a shorter duration (only about 15 minutes as opposed to approximately 30–60 minutes for sound exposure passes), and the closest point of approach was further than most other exposure passes (approximately 1.6 km as opposed to within a few hundred meters for most exposure passes). The killer whales demonstrated notable changes in speed and direction during this silent pass (Miller et al., 2011) although the statistical treatment did not reveal a significant behavioral change (Miller et al., 2012).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	evidence indicates that vessel effects alone are very unlikely to be an important factor in the strong avoidance responses that we observed at distances >2km for killer whales. Whale observing boats were used throughout the follow of all animals using identical procedures before, during and after sonar exposures. Thus, our study design controlled for possible effects of the follow boat.	
Univ St. Andrews-04	Your text <i>The sample size used to derive their results was very small (4 individual killer whales).</i> Our response: We made every effort in our study to collect as many samples with killer whales as possible, and it would have been desirable to have tested responses with more than 4 killer whale groups. However, our study nonetheless represents a substantial increase in information that is otherwise available (1 observation of killer whales in an opportunistic observation in Haro Strait). The consequence of the small sample size on the uncertainty of our predicted dose-response function was fully captured in our analysis (Miller et al., 2014; Fig. 6). In a retrospective study of whale sightings by whale tour operators in relation to navy exercises, Kuningas et al. (2013) found a relationship between sonar transmissions and whale sightings. They clearly identified at least one case in November 2006 during which whale numbers decreased simultaneous to the start of the FLOTEX SILVER exercise. Thus, observations of whale presence during real exercises (Kuningas et al., 2013) was concordant with potential effects predicted based upon the 35 experiments with killer whales (Miller et al., 2014), significantly increasing information supporting these results.	Regarding paragraph 1: The Navy concurs with the commenter. Please see revised text in Section 3.8.3.1.2.6 (Behavioral Reactions, subsection Behavioral Reactions to Sonar and Other Active Acoustic Sources, Odontocetes). Regarding paragraph 2: Kuningas et al. (2013) states that presence of killer whales was most significantly affected by presence of herring, followed by weather and Julian date, but not sonar.
Univ St. Andrews-05	Your text: <i>The experiments also made use of prolonged, continued, and repeated approaches often to relatively close ranges to killer whale pods. The practice of continually heading towards the target whale (and course correcting to ensure that the source vessel was always heading towards the whale) also confounds the interpretation of the response.</i> Our responses: Our <1hr approaches were not 'prolonged' compared to naval sonar exercises. Any potential effect of repeated exposures to the same individual on their response thresholds was empirically tested in the statistical analysis and was not supported statistically (Antunes et al., 2014; Miller et al., 2014). Instead, repeated exposures provided critical data on the within-individual variability of responsiveness of killer whales, which we characterized in our statistical analyses. Heading toward the whale, and turns toward the whale up to 1km distance, were necessary parts of our experimental design to gradually escalate the acoustic sound	Unlike the experimental exposures discussed here, Navy vessels do not change course to approach whales, nor do they purposely and repeatedly approach whales. In fact, mitigation measures prescribe that vessels will avoid approaching marine mammals head on and will maneuver to maintain a mitigation zone of 500 yd. (457 m) around observed whales, providing it is safe to do so. Unlike Navy sources, the 3S sound source vessel adjusted its course to directly approach the whales until within 1 km of the target groups. The closest points of approach were often at shorter distances. The response of the target groups often escalated from short/minor to prolonged and moderate/severe relative to the duration of the approach exposure. This is particularly true for the killer whale groups, which have been shown to be sensitive to vessel presence at close distances (e.g., Williams et al. 2002; Williams and Ashe, 2007; Williams et al. 2009).

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	pressure level received by the study whale up to levels of relevance to the US Navy risk function (50% predicted to respond at 165 dB re 1µPa received level). The changes were not 'continuous', but occasionally a few defined course changes were made up to a distance of 1km at which point the heading of the vessel was not changed any more - so that the whale would perceive a linear pass-by of the source vessel. Finally, in most cases, the initial avoidance response of the whales started before the vessel began turns towards the whale. It was not possible to determine such effects in the field.	Even when the source vessel was farther away, the observation vessel was at all times within a few hundred meters of each group and continued to follow the groups as they avoided the source vessel. This may have added to the prolonged avoidance responses observed.
Univ St. Andrews-06	Your Text: <i>The methodology of this study makes implementation of the proposed risk function difficult. Navy vessels do not, in training conditions, continually adjust their heading to maintain an approach on individual whales. Therefore, the responses interpreted by the authors are a result of conditions that would not occur during Navy training and testing exercises. Using the risk function proposed in Miller et al. (2014) to estimate exposure impacts would likely lead to an inaccurate overestimate of avoidance responses.</i> Our responses: Course corrections were necessary to achieve an effective dose-escalation experiment to document the received levels at which the study cetaceans began to respond to the sonar exposure. Most of those course corrections occurred after avoidance responses had already begun or were very minor. Moving naval vessels will approach roughly 1/2 of the whales within a given habitat. Our research protocol therefore accurately predicts the responses of this set of animals. If whales respond more strongly to a sonar when it is approaching compared to moving away, then this risk function may over-estimate avoidance risk of whales when the sonar source is moving away. If the US Navy wants to develop a different risk function for sonar in the "moving away" context, it would be possible for further experiments to characterize the responses of animals that a sonar source is moving away, and compare those response thresholds with the results of Miller et al. (2014). However, precautionary policy would lead to application of the potentially higher-risk scenario to other contexts until further information becomes available. Finally, environmental risk assessments should always be based on the most relevant and best available science. The DEIS seems to prefer to use the scattered results largely from captive studies rather than the results of the 3S experiments to derive dose-response function for behavioural harassment of cetaceans. However, our experiments with a realistic source conducted with free-ranging animals at sea represent conditions that are more realistic than other information available. Our dose-escalation design gives a much more accurate estimate of exposure leading to response than the Haro Strait results, which use the maximum exposure estimated for killer whales after they had already responded. Therefore, we feel it would be more appropriate for the US	The 3S experiments discussed here represent an important dataset, but differ in a number of important ways from Navy training and testing activities with active sonar. The Navy has considered the results of these studies in its assessment of impacts (see Section 3.8.3.1.2.6, Behavioral Reactions). The Navy will continue to evaluate relevant emergent science, including the data generated in the 3S studies, for applicability to assessing impacts to marine mammals by military readiness activities. The Navy believes that the risk function developed by the 3S researchers does not adequately represent, on its own, potential reactions to the Navy's proposed action. The Navy, however, anticipates using the relevant data generated by the 3S studies, as well as other emerging science, to refine quantitative methodologies. We appreciate the ongoing dialogue with 3S team which is helping the Navy to identify the most relevant data for ongoing refinement of quantitative methodologies.

Table D.4-4: Responses to Comments from Organizations (continued)

Commenter	Comment	Navy Response
	Navy to include consideration of our results when estimating the environmental consequences of sonar activities in the ocean. However, even though the 3S-experiments document that killer whales generally respond at received levels lower than predicted in the DEIS (Miller et al 2014), we have also demonstrated large variations between species, and in a recent paper from our group (Antunes et al. 2014), which is not considered in the DEIS, we demonstrate that pilot whales respond at received levels much higher than killer whales. Sincerely, Petter H. Kvadsheim Frans-Peter A. Lam Patrick J. O. Miller Peter L. Tyack References cited: Antunes, R., Kvadsheim, P. H., Lam, F. P.A., Tyack, P. L., Thomas, L., Wensveen, P. J. & Miller, P. J. O. 2014. High thresholds for avoidance of sonar by free-ranging long-finned pilot whales (<i>Globicephala melas</i>). <i>Marine Pollution Bulletin</i> 83, 165-180. Kuningas, S. Kvadsheim, P. H., Lam, F.-P. A. and Miller, P. J. O. 2013. Killer whale presence in relation to sonar activity and prey abundance in northern Norway. <i>ICES Journal of Marine Science</i>. doi: 10.1 093/icesjms/fst127 Miller, P.J.O., Antunes, R., Alves, A.C., Wensveen, P., Kvadsheim, P.H., Kleivane L., Nordlund, N., Lam, F.P., van Ijsselmuiden, S., Visser, F., and Tyack, P. (2011). The 3S experiments: studying the behavioral effects of sonar on killer whales (<i>Orcinus orca</i>), sperm whales (<i>Physeter macrocephalus</i>), and long-finned pilot whales (<i>Globicephala melas</i>) in Norwegian waters. <i>Scottish Ocean Inst. Tech. Rept. SOI-2011-001</i> (http://soi.st-andrews.ac.uk/documents/424.pdf) Miller P. J. O., Antunes, R. N., Wensveen, P. J., Alves, A. C., Kvadsheim P.H., Kleivane L., Lam F. P. A., Ainslie M. A., Tyack P. L., and Thomas, L. 2014. Dose-response relationships for the onset of avoidance of sonar by free-ranging killer whales (<i>Orcinus orca</i>). <i>Journal of the Acoustical Society of America</i>. 135, 975-993. Miller, P. J. O., Kvadsheim, P., Lam, F. -P.A., Wensveen, P. J., Antunes, R., Alves, A. C., Visser, F., Kleivane, L., Tyack, P. L., and Sivie, L., D. 2012. The severity of behavioral changes observed during experimental exposures of killer (<i>Orcinus orca</i>), long-finned pilot (<i>Globicephala melas</i>), and sperm whales (<i>Physeter macrocephalus</i>) to naval sonar. <i>Aquatic Mammals</i>, 38, 362-401. Williams, R. and Ashe, E. 2007. Killer whale evasive tactics vary with boat number. <i>Journal of Zoology</i> 272: 390-397. Williams, R., Bain, D. E., Smith, J. C. and Lusseau, D. 2009. Effects of vessels on behaviour patterns of individual southern resident killer whales <i>Orcinus orca</i>. <i>Endangered Species Research</i> 6: 199-209. Williams, R., Trites, A. W. and Bain, D. E. 2002. Behavioural responses of killer whales (<i>Orcinus orca</i>) to whale-watching boats: opportunistic observations and experimental approaches. <i>Journal of Zoology, London</i> 256: 255-270.	

Table D.4-5 contains comments from private individuals received during the public comment period and the Navy's response. Responses to these comments were prepared and reviewed for scientific and technical accuracy and completeness.

Table D.4-5: Responses to Comments from Private Individuals

Commenter	Comment	Navy Response
S. Adams (Electronic)	I wish to have, the Navy to continue their exercises in the waters of Alaska, I have commercial fished most of my 37 years in Alaska since 1978. I see this as our nation's benefit, to allow our Navy to conduct exercises, to be prepared if and when needed, Alaskan waters offer the Navy to do their exercises in a large area, away from heavy shipping traffic and population. I have participated in one exercise in the Gulf of Alaska, it was done away from shipping traffic and at a time when we didn't see any sea life at the time, whales, sea lions etc. We must allow our Navy to be prepared.	Thank you for participating in the NEPA process.
M. Adkins-01 (Electronic)	I served on a Navy carrier -- the USS Ranger -- back in the 1980s. During that era, we would dump our garbage overboard once we were a certain distance off the California coast. I can still remember seeing black plastic garbage bags floating in the sea behind the ship, in a trail as far as the eye could see. I was sometimes ordered to assist in dumping the garbage, and I was disgusted with the Navy and with my country, for polluting the sea in such a blatant manner. Thankfully, they stopped that practice after one brave sailor refused to obey the order to dump the garbage, and the case went all the way to the top. Now, the Navy is continuing a practice which is even worse than the garbage-dumping fiasco.	The Navy shares your concern for marine life. All of the potential effects from Navy training activities were analyzed in Chapter 3 of the 2011 Final EIS/OEIS and the Supplemental EIS/OEIS. Also, as described in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS, the Navy implements, to the maximum extent possible, mitigation measures during its training activities.
M. Adkins-02	They wantonly use high-frequency sonar that unquestionably harms marine mammals in highly sensitive areas. As our growing "humanity" (or lack thereof) increasingly places undue pressure on the planet's quickly diminishing wildlife, the Navy is turning a blind eye to the wildlife destruction that their own significant input is causing in their technological push to stay on top militarily. If the Navy moves forward with their insane war-games in the waters of Alaska, then they will have lost what little respect that I still had for them. The time has come to start thinking about life on earth besides mankind. We owe it to wildlife and to our posterity. The Iroquois Nation's "Seventh Generation Principle" teaches that with every decision, we must consider how it will affect our descendants seven generations into the future. This damn Euro-society, including the US Navy with all its arrogance, doesn't even consider how its decisions will affect their own children, much less the seventh generation into the future. All of you people had better get your act together, or you will undoubtedly condemn this planet to destruction before the century is over.	The U.S. Navy has conducted active sonar training activities for decades in the Study Area, and the activities presented in Alternative 2 have been authorized since 2011. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort has found no evidence that Navy training activities have had any impact on these populations in the Pacific in areas such as Southern California or Hawaii, where Navy training has been occurring year-round for decades.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
C. Akers (Electronic)	I am writing to voice my concern in the lack of environmental and wild/marine life preservation that the military seems to repeatedly disregard. I am strongly in favor of military training if it is accomplished in a meaningful and responsible manner, which I do not view as happening. Alaskan villages and remote parts of Alaska are still in the cleanup process of our own military that keeps polluting our state. Even though I am indirectly a part of the Navy's operations in the Gulf of Alaska I am strongly opposed to the blatant disregard for the pollution of sinking a ship with no intent to recover, or the pollution of bomb material dropping into our oceans simply because it is out of site out of mind after the exercise and at the bottom of the ocean. I have ceased to be surprised by the lack of forward thinking by our government at times but I hold onto the hope there will be those within it that might make a small difference in turning it the right direction. Thank you.	The Navy or the military in general are very concerned about the environment; please see http://greenfleet.dodlive.mil/ for example. Please see Chapter 1 (Purpose and Need) of the 2011 GOA Final EIS/OEIS and in the Final Supplemental EIS/OEIS to understand the need to train. Please see Section 3 (Affected Environment and Environmental Consequences) of the documents regarding the analysis of impacts and Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS regarding the mitigation measures. Please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity and note that the SINKEX target has been made environmentally safe for sinking according to standards set by the U.S. Environmental Protection Agency (USEPA).
E. Allen-01 (Electronic)	Navy War Games in Alaska Would Impact Thousands of Marine Mammals The extremely loud underwater noise from active sonar and ship sinking explosions will propagate for hundreds of miles through the offshore ecosystem, and have "the potential to disturb, injure, or kill marine mammals." The area proposed for these war games - the northern Gulf of Alaska - is one of the most productive regions anywhere in the world ocean. Marine mammals in the area include Blue, Fin, Sei, Minke, Sperm, Killer, Right, Gray, and Humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. Active sonar exercises have been implicated in mass strandings of certain whale species elsewhere. The Marine Mammal Protection Act establishes two levels of impacts, or "takes," of marine mammals: "Level A" - actions that may injure (or kill) a marine mammal or marine mammal population; and "Level B" - actions that may disturb a marine mammal or marine mammal population, causing disruption of critical behaviors such as migration, surfacing, nursing, breeding, feeding, or sheltering, "to a point where such behavioral patterns are abandoned or significantly altered." Despite the Navy's proposed mitigation plan, including marine mammal lookouts and clearance zones, the Supplemental Environmental Impact Statement (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing, unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals. Given this	Please see Chapter 3 (Affected Environment and Environmental Consequences) in the 2011 GOA Final EIS/OEIS and in the Supplemental EIS/OEIS where Navy presents information on resources potentially impacted by the continuation of Navy training in the Study Area including all the marine mammal species noted in the comment. See the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) for a discussion of strandings and the referenced Navy Cetacean Stranding Technical Report (U.S. Department of the Navy 2013c) for information regarding strandings. For an analysis of Navy training impacts to marine mammals based on the best available science, see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). There is no basis for the comment's assertion that, "regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals." Navy training activities have been occurring in the Gulf of Alaska for decades, Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been "severely injured" or died as a result of Navy training. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem. Unfortunately it seems the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these damaging war-games in the Gulf of Alaska, regardless of public concerns.	requirements of the Navy in order to fulfill its mission.
E. Allen-02	So, if the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	Please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why Navy needs to train. With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount" see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
E. Allen-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. As outlined in Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS, the unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
E. Allen-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
E. Allen-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
E. Allen-06	While it is important for the Navy to maintain readiness, its proposed war-games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. If the Navy has to do such training, it should do it elsewhere. This proposed activity is shocking and disgraceful. I am thoroughly appalled by the lack of empathy for our inhabitants of the oceans.	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA.
E. Americus-01 (Electronic)	I am a resident of Cordova, AK, and I advocate the No-Action alternative. Active sonar exercises have been implicated in mass strandings of certain whale species elsewhere. The Navy's estimate of 182,000 takes to marine mammals, causing behavioral impacts and some personal injuries, is astonishing and unacceptable.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. See the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) for a discussion of strandings and the referenced Navy Cetacean Stranding Technical Report (U.S. Department of the Navy 2013c) for information regarding strandings. For an analysis of Navy training impacts to marine mammals based on the best available science, see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). Alternative 2 of the proposed action has been authorized since 2011. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
E. Americus-02	It is my opinion that the Navy should: 1. restrict the training area only to areas far offshore (away from the continental shelf and slope, where most marine mammals are found,) east of 143 W. Longitude and at least 100 miles from the nearest seamount.	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions). The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. The TMAA is located where aircraft can access inland training ranges while maintaining separation from the majority of commercial air traffic routes. The location of the TMAA also

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		facilitates participation by the U.S. Army and U.S. Air Force in any joint training events. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
E. Americus-03	2. Change the timing of operations from summer (Apr-Oct) to winter in order to minimize effects on migratory whales in the area in summer.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). As outlined in Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS, the unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Navy has considered the presence of the designated North Pacific right whale feeding area and gray whale migration areas between or adjacent to Kodiak Island and Kenai Peninsula as detailed in Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas). The vast majority of human impacts to include any sound and interactions with marine mammals in these areas will be the result of non-Navy vessel activity (commercial shipping, commercial or recreational fishing and public boating). This would include the relatively pervasive broadband noise from warm season commercial vessel transits, echosounders (fathometers and fish

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		detection sonars), and fishery-related seal bombs. Training is not likely to occur close to shore in these feeding and migration areas. Due to the Navy's relatively small contribution to anthropogenic noise and physical disturbance in these areas, there would be little to no biological benefit from seasonal or area avoidance measures for Navy vessels. The science detailed in Section 3.8 (Marine Mammals) indicates Navy training would not have any biologically meaningful effect on migration behavior. The Navy has, however, agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEEX event from occurring in Habitats of Particular Concern; (2) prohibiting use of explosives during training in the Portlock Bank area; and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements.
E. Americus-04	3. Accommodate independent scientific observers during he exercises to confirm effectiveness of the mitigation plan.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		exercise objectives.
E. Americus-05	4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
E. Americus-06	5. Postpone training exercises until they can track the salmon better. At this point scientists can't tell where the salmon are and what the affect of this training has on them. Postpone trainings until the fish from the Gulf of Alaska have been studied more. I am also concerned about the detonated material from bombs with heavy metals going into our waters and why is there no cleanup effort? What about contamination from these materials into our fish. We know our fish still test positive with heavy metals and nuclear isotopes from US Military training in the 1950's. There is no proof that these exercises won't harm our fish now and in the future. The Gulf of Alaska is one of the most productive regions anywhere in the world ocean. Navy exercises in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals, and fish. If the Navy has to do such training, it should do it elsewhere. I propose the No-Action alternative. Thank you very much. E. Americus Cordova, AK Oct 19, 2014.	It is not the Navy's mission and the Navy is not funded to track salmon in the ocean. Please see Section 3.6 (Fish) in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding an analysis of potential impacts to fish including salmon. Please see Section 3.2 (Expended Materials) of the 2011 GOA Final EIS/OEIS regarding those materials used during training and the fate of those components following their use. Past military practices and historical contamination sites are beyond the scope of the EIS; they are not associated with the Proposed Action. Note however, that the U.S. Navy has programs in place to manage threatened and endangered species on and around our installations; safely clean up past hazardous waste sites for future reuse; explore and develop new, greener technologies for equipment design and maintenance; and recycle metal, wood and glass. Navy installations and ship's crews frequently partner with local communities on volunteer shoreline and neighborhood cleanup projects. Navy is aware of the resources and productivity in the region as detailed in Section 3 (Affected Environment and Environmental Consequences) of the 2011 GOA Final EIS/OEIS. Please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why Navy needs to train in the Gulf of Alaska. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
S. Anderson (Electronic)	I'm among thousands of others that make their living from the ocean. Anything that disturbs sea life, damages our life. I'd ask the Navy to please consider our livelihoods and change its schedule from summer to winter, to better avoid whales and fish. Thank you.	Navy training activities have been occurring in the Gulf of Alaska for more than a decade and the proposed action analyzed in the Supplemental EIS/OEIS has been authorized and ongoing since 2011. The continuation of this ongoing training should have no impacts that

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	Sierra	would affect your livelihoods. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). As outlined in Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS, the unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Also, the detection and avoidance of whales in the winter likely would be more difficult given the sea conditions and there is no scientific data suggesting that fish would be better avoided by training in the winter.
M. Aplin (Electronic)	Please consider conducting your operations in the Gulf of Alaska in the winter to protect the marine mammals. I understand what to need to do is important and I also believe the marine mammals are just as important.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). As outlined in Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) in the Supplemental EIS/OEIS, the unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		sonar operator's ability to achieve mission success. Also, there are still many marine mammals including humpback, blue, fin, and gray whales present in the Gulf of Alaska during the winter months (see the referenced Debich et al. 2013) so training in the winter would not "protect" marine mammals.
R. Archibald-01 (Oral-Homer)	Commander and Mr. Stone, thanks for coming down here. It's -- I was at the last EIS meeting that you had here in Homer, and I think we're glad to see that at least you're revisiting the marine mammals.	Thanks for participating in the NEPA process.
R. Archibald-02	I work in Valdez, or I did; I've retired. But I've seen marine mammals stuck on the bows of ships coming into Valdez. Whether it be a cruise ship or a tanker. And a battle group, I know, has to go at a certain speed, and an aircraft carrier cannot slow down because a whale's in its wake. Statistically I don't know how many times you have actually found that you have whales in the vicinity, using sonar. Or can you actually hear them talking? The continental shelf where this is designated area has quite an upwelling there. So it's very rich in a food source. And the timing, springtime, mid-summer, you're going to have quite a migration of marine mammals coming up through there.	The U.S. Navy has for many years kept track of vessel strikes to whales by U.S. Navy ships. Vessel strikes by Navy vessels are rare. Please see the discussion in the 2011 GOA Final EIS/OEIS titled <i>Collisions with Whales</i> (page 3.8-116) for more details in this regard. The sonar proposed for use in the continuation of Navy training in the TMAA is not used to track whales; however, whales can be heard vocalizing using a number of passive acoustic sensors. Navy is aware of the resources and productivity of the region as detailed in Section 3 (Affected Environment and Environmental Consequences) of the 2011 GOA Final EIS/OEIS.
R. Archibald-03	I know that you train lookouts. Everybody trains lookouts. Statistically, it would be interesting to me to know that over the 30 years whether you've called an all stop to an operation because marine mammals have entered into that area of operation. And whether in fact they've been able to mitigate, or safely navigate around marine mammals, and as you say that you hope to if you encounter them. I know that today things are just not going right, and everybody needs practice at what they do. So, I hope that -- the marine mammals and the fisheries are pretty important to everybody up here. So, I hope you take that into account, and maybe you could reassure us a little more on how you plan on stopping this operation if you were to encounter marine mammals. So, thank you very much.	As described in the Supplemental EIS/OEIS Section 5.3.1.2 (Lookouts), Navy lookouts are given special training including the use of the NMFS approved Marine Species Awareness Training as well as specific Navy mission training. Regarding implemented mitigation, please see the regular reporting that is available publically which has been occurring for over the last 8 years. These reports are publically available at the Navy website (www.navy.marinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental/). In short, there have been many instances where activities have been delayed or moved due to the presence of detected marine mammals. See Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS for a discussion of the mitigation measures.
C. Armon-01 (Electronic)	I appreciate that NOAA, NMFS, Scientists, the Navy, and stakeholders are now working together to research, understand, and mitigate the US Navy Training and Testing Activities, with the objective to minimize the impacts on marine life. That it is also becoming a transparent process with information available to the public, including our participation and comments. Our human survival depends upon survival of sea life. However, I have many concerns, such as; Avoidance behavior used as an exposure mitigation strategy: As Michael Stocker, Director of Ocean Conservation Research stated: "Avoidance behavior used as an exposure mitigation strategy: We also find it troubling that this section is loosely hinged on the idea of "avoidance behavior" being a	As explained in Section 3.8.3.1.7 (Marine Mammal Avoidance of Sound Exposures) of the Supplemental EIS/OEIS, it is reasonable to incorporate likely marine mammal behavior into the analysis of impacts. The quotes presented in the comment from Michael Stocker are not accurate with regards to the Navy's proposed action or the analysis presented in the Supplemental EIS/OEIS and furthermore that the reference to "the Draft Guidance" suggests the quote addressed a different proposed action. The Navy is not using avoidance behavior as a mitigation strategy. As explained in Table

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	mitigating factor in the exposure. With the understanding that the Draft Guidance document is specifically about MMPA “Level A Takes” and not behavioral impacts Castellote et.al. (2010) notes that seismic survey noise disrupted an entire migration season of fin whales. In this case the avoidance behavior was at cause for a loss of entire breeding year (which is not strictly physical damage to the organism but does have a profound bearing on survival). That this “avoidance behavior” occurred at hundreds of kilometers from the airgun source points to a fallacy in the assumption that animals can escape the impacts of noise by moving out of the noise field. It may be that case that animals would avoid the most direct physiological impacts of noise by moving away from the source, although this is not always the case as commonly seen in dolphins that gambol in the bow waves of ships and in the “diner bell” effect of net predator pinnipeds that for one reason or another have elected not to avoid noise exposure. Thus “avoidance behavior” cannot be relied upon as a mitigation strategy and should not be incorporated into any exposure models.”	3.8-10 (Post-Model Acoustic Effects Quantification Process) of the Supplemental EIS/OEIS, the avoidance only results in model-estimated PTS exposures that are unlikely to actually occur, being instead counted as a TTS exposure; an animal is assumed to move away from the sound source. This is not a “mitigation strategy” but rather an attempt to accurately account for likely marine mammal behavior in the quantification of effects. There is no proposed use of airguns or other sources used in seismic surveys. Castellote et.al. (2012) was referenced in Section 3.8.3.1.2.4 (Auditory Masking) of the Supplemental EIS/OEIS, where it is explained that the proposed Navy training activities have very little if any relationship to a seismic survey in the Mediterranean. Finally, as detailed in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS, there is a special provision made for bow-riding dolphins.
C. Armon-02	The Navy's analysis also fails to account for cumulative behavioral impacts for the years of activity. According to the Acoustic Institute: "Behavioral impacts clearly replaced strandings and deaths as the key issue for marine mammals encountering human noise. Several studies released during 2008 all suggest that whales of many species may stop or reduce their feeding when loud human sounds enter their habitat, and this particular impact is likely to become a central focus of future research and regulatory consideration." AEI further states: "All parties seem to be accepting that gross injury is rare to the point of being difficult to use as a lever to shift the balance of interests with the Navy's national security imperative, but NGOs, many field researchers, and agency staff are all looking more closely at the behavioral impacts that take place at much longer ranges (up to several or even tens of kilometers)." How far and wide are the Navy sonar and explosives traveling in the water, considering the long distances of cetaceans hearing abilities (and the most utilized, primary, sense for acoustically oriented marine species)? The current distance mitigations are not enough, the testing and training still impacts marine mammals miles away.	It is not correct to state that Navy has failed to account for cumulative behavioral impacts for the years of activity. See specifically Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS, where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. There is no Navy “testing” being proposed in the Gulf of Alaska. The Navy is aware that there is no means to accomplish the training mission and not sometimes influence the behavior of individual marine mammals miles away, which is why part of the process for the Supplemental EIS/OEIS includes seeking a new MMPA authorization to replace the current one that has been in place since 2011. Regarding the “how far” questions, for sonar see Section 3.8.3.3.1.1 (Range to Effects) and for explosives see Section 3.8.3.3.6.1 (Range to Effects) of the Supplemental EIS/OEIS. The Navy recognizes that there is no means to totally eliminate effects to marine mammals, which is why the Supplemental EIS/OEIS is part of the effort that includes a request for authorization of under the MMPA and other regulatory review to replace the existing authorization. As detailed in the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) the mitigation measures and safety zones were developed with these ranges in mind, plus the addition of an additional buffer to be further protective.
C. Armon-03	The mitigation measures detailed are not sufficient to reliably identify the presence of	Regarding the qualifications and training for Navy Lookouts, please

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	cetaceans in most instances, in part because the marine mammals themselves often attempt to avoid detection. What are the qualifications, training, and time scheduled during all testing and training, dedicated solely to marine mammal observation, of Marine Mammal Observers and onboard crew observers? Has the Navy considered having researchers aboard during testing and training, as marine mammal observers, while supporting research, as the Navy claims to strive to be a world leader and has financially provided more than \$100 million over the last 5 years, toward research projects?	see Section 5.3.1 (Lookout Procedural Measures) of the Supplemental EIS/OEIS. With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the capacity to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives. Note however, that Navy does fund monitoring and research that can include dedicated Marine Mammal Observers (see the reports available at available at the Navy website (www.navy.marinesthespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental/))
C. Armon-04	All species population estimates should be based on minimum population estimate; are population estimates based on 'Carrying Capacity'? Has the Navy considered also using drones to identify marine mammals present in the testing and training areas and beyond?	Please see Section 3.8.1 (Introduction) of the Supplemental EIS/OEIS regarding the species population estimates and the referenced National Marine Fisheries Service stock assessment reports; Allen and Angliss (2014) and Carretta et al. (2014). Also, see Section 3.8.5 (Summary of Observations During Previous Navy Activities) and Section 5.5.1 (Approach to Monitoring) of the Supplemental EIS/OEIS regarding research already conducted and that planned for the future.
C. Armon-05	As we do know the ranges of many cetaceans and marine life, migratory and year round, Navy testing and training (or any seismic or acoustic harm) should not be conducted in those areas. It should be moved to pelagic sea depths, away from near	There are no Navy testing activities and no sources proposed for use that are related to "seismic" harm. See the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	shore, the continental shelf, and islands where the least amount of marine species live and will be impacted.	Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) discussing why Navy has dismissed further consideration of moving the historically used TMAA away from “away from near shore, the continental shelf, and islands.” The TMAA is located where aircraft can access inland training ranges while maintaining separation from the majority of commercial air traffic routes. The location of the TMAA also facilitates participation by the U.S. Army and U.S. Air Force in any joint training events. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Also, as shown on Figure 1.2-1 in Chapter 1 of the Supplemental EIS/OEIS, a large portion of the TMAA already consists of waters consistent with “pelagic sea depths” way from the continental shelf with the approximate middle of the TMAA is located 140 miles offshore.
C. Armon-06	Near shore and near marine life, testing and training should be simulated, as space travel testing and training is simulated. As science shows the habitat needs, ranges, acoustic thresholds, and behavioral change impacts of marine species, the Navy training and testing must adapt.	See Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, where the Navy discusses how it currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) where the Navy also discusses this topic.
C. Armon-07	The Navy should not be allowed to increase training and testing hours, areas, ranges, or testing of new systems, while the impacts are not fully documented and understood. No Action Alternative. Respectfully, C. Armon Marine Educator	Please note that the Navy is not proposing to, “increase training.” That the activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and for which a ROD was issued in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
K. Belkowski (Electronic)	In regards to the Navy's plan to conduct training in the Gulf of Alaska which will injure and kill marine life living there - as a US citizen, I strongly object to this plan and request that the Navy halt all plans for such an operation. There are workable alternatives to conducting this training so close to shore without having such a detrimental impact on wildlife. The very last thing this world needs is to further deplete the vital biodiversity of our planet (we have already lost 52% of the world's vertebrates since the 1970s). I cannot stress this strongly enough - DO NOT CONDUCT THESE TRAINING OPERATIONS!	The analysis presented in the Supplemental EIS/OEIS does not indicate any mortality to any marine life. The proposed action in the Supplemental EIS/OEIS is the continuation of training in the area that has been occurring for many years. Please note that Navy training activities will not be conducted close to shore. As shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Please see Section 3 of the documents in general; the proposed action will not result in a depletion of earth's biodiversity.
M. Berry (Electronic)	My name is Mikal Berry, I am a chef, fisherman and resident of Cordova Alaska which lies in the area that will be directly effected by the Navy's proposal to extend war testing in The Gulf of Alaska. Whether I agree in the motivation, purpose and the expenses related to these actions, is a comment that I won't address. however I do strongly oppose the expansion, seasonal timing and location of these "WAR GAMES". I would also add that I never heard about a public meeting and feel that the Navy did very little to notify the community of their intent to announce their plans and this must be help accountable. TAKE THIS OFFSHORE. FAR OFFSHORE where the our ecosystem and lifestyle will not be the impacted by the ravages of a pretend war. Thanks you M. Berry Cordova Alaska koyuk@me.com	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action, nor is it proposing an expansion of training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for the 2011 document (please see Section 1.7 [Scope and Content] of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Regarding moving the activities "far offshore," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Regarding impacts to "lifestyle," see Section 3.12 (Socioeconomics) and note that the analysis presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS indicated there should be no effects from the continuation of training that would be considered an impact to lifestyle.
N. Bird-01	I remain unconvinced on the need for more time and frequency to train, not only	Please see Chapter 1 (Purpose and Need) of the documents

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	because of the cumulative impacts on ecological resources in the Gulf of Alaska but also because of the incredible expense entailed in this proposed increase in frequency.	regarding the purpose and need for Navy training. Please note that the Navy is not proposing more time and frequency for training over that already authorized since 2011. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of both documents to better understand what the Navy is proposing. Additionally, see Chapter 4 (Cumulative Impacts) of the documents regarding the analysis of cumulative impacts.
N. Bird-02	I request that the training area be restricted to areas far offshore (away from the continental shelf and slope), east of 143 W. Longitude and, at minimum 100 miles from the nearest seamount.	With regard to suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1.2-1, of the Supplemental EIS/OEIS, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope with the approximate middle of the TMAA located 140 miles offshore.
N. Bird-03	I also request that ship sinking exercises be eliminated from these trainings.	Regarding cancelling all “ship-sinking exercises,” please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) of the 2011 GOA Final EIS/OEIS to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining “how to sink ships” as the comment indicates. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
N. Bird-04	While I did not attend the 2014 public meeting, I was at the prior public meeting (2010?) and do not find much, if any, new material in the EIS or SEIS on the impacts to fish, particularly herring and salmon. These are critical resources to my community and the state of Alaska and the cumulative impacts of these bombings and acoustical impacts are unknown.	Fish resources were re-analyzed in the Supplemental EIS/OEIS to identify any new information that could change the analyses and conclusions from those presented in the 2011 GOA Final EIS/OEIS. Upon review of that new information and in consultation with the National Marine Fisheries Service, the Navy has concluded that the analyses and conclusions for fish in the 2011 GOA Final EIS/OEIS remain the same for this Supplemental EIS/OEIS. Please see the most recent information presented in Chapter 3.6 (Fish) of the Supplemental EIS/OEIS.
N. Bird-05	In contrast, there are studies demonstrating the significant impact of acoustical detonations on marine mammal populations and there is not an effective mitigation measure to avoid such impacts.	Please see the discussion of impacts from underwater acoustics on marine mammals presented in the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). Regarding mitigation measures, see the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring).
N. Bird-06	If, as I fear, my desire to not increase these training exercises occurs, I strongly urge a change in the timing of operations from summer to winter (November-March) so that effects on migratory whales in the area might be somewhat limited. That's really not a fix, however, and whales will be impacted whenever these exercises occur!!!	Please note that the Navy is not proposing to "increase training." The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified and analyzed by the 2011 GOA Final EIS/OEIS. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
N. Bird-07	Independent scientific observers should be included in these exercises. My strong preference is that these trainings not be increased in scope or timing.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives. Please note that as detailed in Chapter 2 (Description of Proposed Action and Alternatives) the Navy is not proposing to increase in scope or timing its training over that already authorized since 2011.
A. Bothwell-01 (Electronic)	Alaskan waters are home to many different creatures, one of which includes the beaked whales. Very little is known about these whales however one thing that is known is that they are highly sensitive to sounds. How can one justify the mere possibility that these whales could be effected by the sonar testing? Our world is just that, our world, and although I personally believe that our safety is extremely important I would also venture to say that the safety of our world is even more important. It is our livelihood, our home, and a place that we should appreciate and cherish. These whales are just as much apart of this world as you and me are and I would do everything in my power to protect them and I hope that I could say the same about our government.	Navy is aware of the presence of species of beaked whales as presented in Section 3.8.2.17 (Cuvier's Beaked Whale [<i>Ziphius cavirostris</i>]), Section 3.8.2.18 (Baird's Beaked Whale [<i>Berardius bairdii</i>]), and Section 3.8.2.19 (Stejneger's Beaked Whale [<i>Mesoplodon stejnegeri</i>]) of the Supplemental EIS/OEIS. Please see the analysis of effects to beaked whales and other marine mammal species presented in Section 3.8.3.3 (Analysis of Effects on Marine Mammals) in the Supplemental EIS/OEIS. See Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the document regarding the procedures Navy undertakes to protect marine species while conducting this necessary training.
A. Bothwell-02	As a species, humans have obliterated our homes, we have walked into many situations blind and indifferent to the consequences and the current state of the earth is due mostly to our negligence. This can only change if we want it to change. It can only be stopped if we will it to stop, and why not start here. Why not begin in a place where	Please see the Supplemental EIS/OEIS Section 5.2 (Introduction to Mitigation) and Section 5.3 (Mitigation Assessment) for a discussion of the analysis to find measures to protect marine species. Please see the Supplemental EIS/OEIS Chapter 2 (Description of Proposed

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	further action could cause massive amounts of problems for the planet in general. Can you honestly say that the United States government has done everything within its power to guarantee the safety of the marine species that it is going to effect? Come up with a different answer, a different method of testing, stop hurting the environment and begin to rebuild it.	Action and Alternatives) of the documents to understand that Navy is not proposing to conduct any testing in the TMAA as part of the proposed action.
L. Brache-01 (Electronic)	To whom it may concern: I am very distressed to learn about the Navy's planned training activities in the Gulf of Alaska Temporary Maritime Activity Area. Your PR video clip grossly misrepresents what you do. Although you assure the public that all efforts are made to avoid animals, your EIS states that active sonar will affect over 36,000 mammals. I urge you to STOP the use of active sonar, which we know harms many species. It is my understanding from local whale researchers that often whales that have been affected by your sonar do not die immediately, but experience damage that results in strandings and deaths at a later time --when your "observers" are no longer in the areas. This results in lower counts of "takes" than are actually occurring. If you insist on the exercises, I urge you to move farther offshore, away from the areas known to be used for feeding by the migrating whales and other mammals.	Please see Chapter 1 (Purpose and Need) to understand the need for Navy training. The Navy clearly acknowledges that its training will have impacts. The comment's assertion that marine mammals will die as a result of the continuation of Navy training is incorrect. Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Please note that the adjustments to modeling of effects do not, "lower the counts of "takes""; see Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) of the Supplemental EIS/OEIS for details. Regarding moving "farther offshore," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) of the Supplemental EIS/OEIS where this was discussed. Additionally, as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore.
L. Brache-02	Please Move away from the continental shelf at least 100 miles from shore!	The suggestion to conduct training even farther offshore was discussed in the Supplemental EIS/OEIS in Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). The approximate middle of the TMAA is located 140 miles offshore.
L. Brache-03	I also believe that these activities would cause less harm to animals if you conducted them in the WINTER instead of the summer (when the animals are active and migrating right through this area).	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
L. Brache-04	Although your PR video seems to suggest that you have personnel "watching out for mammals", I would insist that you have independent scientific observers on board throughout the activities.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
L. Brache-05	Finally, I ask that the sinking of a vessel be stopped. There does not appear to be any reasonable excuse for this "exercise". I trust you will take public comment seriously and adjust your plans accordingly. Thank you, L. Brache Homer, AK	Regarding cancelling the "sinking of a vessel," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
B. Brayton (Electronic)	This is in regard to your proposed exercises in Alaska. If you know you are going to harm marine mammals, why go ahead with the exercises? Is there some reason they have to be done there? Why not have regular exercises? Don't you already know how to sink ships? Why all the weaponry used? Alaska, especially this area is so rich in marine life, it would be a shame to disrupt and damage it. Please reconsider your decision, or at least modify it.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and why it occurs in the historically used TMAA. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand the nature of the Navy training that has been occurring on a regular basis for years. Please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, a SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Please see the discussion of impacts from underwater acoustics on marine mammals presented in the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences).
R. Brenner (Electronic)	Dear United States Navy, Just a quick note to express my comment that, while I definitely appreciate the need for our Navy to train, I am concerned about the deleterious impacts to marine mammals. In particular, rare species of toothed whales, some of which are only known from a few specimens, are thought to share a spatial and temporal overlap with your proposed Gulf of Alaska training. As you are aware, these types of whales are difficult to observe and have a small thermal signature. Until you come up with a method to detect these creatures from a considerably distance, I suggest that you relegate your high-energy sonar to tropical waters and the Great Lakes. Conducting live-fire exercises in the high Gulf during the summer season is asking for negative interactions and bad publicity for your fine institution. Most Sincerely, R. Brenner	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and why it has occurred in the historically used TMAA in the Gulf of Alaska for many years. Regarding impacts to marine mammals, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
A. Brower-01 (Electronic)	This has got to stop. You can probably accomplish 80% of what you need to do with these drills by having a virtual simulation. Seriously.	Navy currently uses computer simulation for training whenever possible as noted in Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic.
A. Brower-02	Also, you should do these exercises far beyond the continental shelf and so that no marine animals will be affected. Please stop.	Regarding moving the activities "far beyond the continental shelf," the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
J. Brown	All the exercise activities need to take place well away from the coastal waters. These	Regarding the suggestion to conduct training even farther offshore,

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	waters are the most valuable fisheries remaining in US waters. They should be protected from any activities that could disrupt this economic engine and important world food source. I particularly object to aerial sonic booms, the sinking of any vessels, discharge of ordinance in the water and the use underwater sonar or other tones or noises on or even near the continental shelf. I also object to activity in Warning Area 612 in Prince William Sound.	please see Chapter 1 (Purpose and Need) of the documents regarding the need for Navy training in the TMAA and see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. Throughout the course of the exercise, individual planes may attain supersonic speeds within the TMAA. This would create a sonic boom, the effects of which have been analyzed in Section 3.4 (Acoustics) of the 2011 GOA Final EIS/OEIS and as they relate to marine mammals in Section 3.8 (Marine Mammals). Regarding cancelling the “sinking of any vessels,” please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Again, please see Chapter 1 (Purpose and Need) of the documents regarding the need for Navy training in the TMAA, “the discharge of ordinance in the water and the use underwater sonar” and other stressors. Warning Area 612 is an FAA mandated Special Use Airspace and is not located in Prince William Sound.
F. Busick (Electronic)	Regarding training ops in PAC AK North Gulf Coast. Please further review training operations and exercise perimeters and EIN. Operations can be carried out with increased distance from shore and move proximity to ecologically vital marine wildlife. Due note, the Stellar Sea Lion is protected under the Endangered Species Act and plans must include a compliant filed impact statement and permit from EPA.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the Supplemental EIS/OEIS regarding the review of the training authorized in the Gulf of Alaska since 2011. See Figure 1.2-1 in the Supplemental EIS/OEIS, indicating the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Navy is aware that one stock of Steller sea lion is listed as endangered as detailed in Section 3.8.2.20 (Stellar Sea Lion [<i>Eumetopias jubatus</i>]) of the Supplemental EIS/OEIS. The 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS constitute the “impact statement” for this proposed action. The 2011 GOA Final EIS/OEIS was filed with EPA in March 2011, and the GOA Final Supplemental EIS/OEIS will be filed with EPA upon completion.
K. Button-01	RE: Gulf of Alaska Proposed Action 20 October 2014 Please accept the following as	Please note that the Navy is not proposing an “expansion” of training

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	my comments to the Navy's proposed expansion of military exercises in the Gulf of Alaska (GOA). Under the National Environmental Policy Act (NEPA), federal agencies are required to obtain and analyze data relevant to proposed actions.	activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified and analyzed in the 2011 GOA Final EIS/OEIS document. Please see Section 1.7 (Scope and Content) of the Supplemental EIS/OEIS. None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS.
K. Button-02	The Environmental Impact Statement (EIS) the Navy is using for their proposed expansion of military exercises in the GOA are woefully inadequate:• The Navy fails to adequately analyze and address the serious impacts its sonar training will have on the critically endangered North Pacific right whales, whose critical habitat is only 12 nautical miles from the training area or the endangered gray whales, which migrate through the training area.	Navy disagrees that the analyses presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS are inadequate. Please note that the Navy did analyze impacts to North Pacific right whales and endangered gray whales. Regarding analysis for North Pacific right whale, see the Supplemental EIS/OEIS Sections 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena Japonica</i>]); 3.8.3.3.4.1 (Mysticetes); 3.8.3.3.5.1 (Mysticetes); 3.8.3.3.8.1 (Mysticetes), 3.8.3.3.9.1 (Mysticetes), 3.8.3.3.10.1 (Mysticetes), etc. Navy is aware of the designated North Pacific right whale Critical Habitat as discussed in those sections and as shown on Figure 3.8-1 in the Supplemental EIS/OEIS. In addition, the Navy has establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe in the TMAA. Please see Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas) for more details in this regard. That section also has a discussion regarding the presence of gray whales. Please note that most gray whales in the area are not endangered and because they are fully recovered, were removed from the list of endangered species. Acoustic effects modeling indicates no effects to gray whales under the current MMPA thresholds and criteria. The Western North Pacific gray whales are endangered. The majority of Western North Pacific gray whales feed and migrate within the Western Pacific. There has been no indication that Western North Pacific gray whales use any of the Gulf of Alaska nearshore gray whale feeding areas. These feeding areas are also outside of the GOA TMAA. A few individuals (n = 3) tagged with long-term satellite tracking tags did migrate briefly through the Gulf of Alaska on their way to breeding grounds off the Pacific coast of Mexico (Mate et al. 2015). However, these animals moved quickly through the shelf and offshore waters of GOA and would not be resident, foraging, or in GOA for more than a number of days during their transit. Furthermore, the timing of these migrations to and from the Mexico breeding grounds (December to February and February to May) (Mate et al. 2015) is outside of the window in which Navy training activities have been proposed (May to October with

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		highest probability of June to July for Northern Edge). Therefore, there would be minimum to no overlap between Navy training activities and Western Pacific gray whales. Finally, Mate et al. (2015) went on to hypothesize that the gray whales tagged could also be individuals from the Eastern North Pacific gray whale stock that have expanded their distribution to feeding grounds off Russia, where they co-mingle with the true Western North Pacific stock whose migration is solely along the coast of Asia. No gray whales were detected in the TMAA Study Area during the GOALS II survey (Rone et al. 2013). Also, gray whales, humpback whales, and blue whales have largely recovered (see discussions in Section 3.8 [Marine Mammals]) and there is no evidence that Navy training activities have had any impact on these populations in the Pacific in areas such as Southern California or Hawaii where Navy training has been occurring year-round for decades (see the Supplemental EIS/OEIS Section 3.8.5 [Summary of Observations During Previous Navy Activities]).
K. Button-03	• The Navy has not collected the density data necessary to analyze impacts to fish and marine mammals.	See the Supplemental EIS/OEIS Section 3.8.2.5 (Marine Mammal Density Estimates), Section 3.8.3.1.6.1 (Marine Species Density Data), and the referenced “Pacific Navy Marine Species Density Database Technical Report” regarding the availability of data used in the acoustic effects modeling. Please see Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding impacts to fish.
K. Button-04	• Over 350,000 pounds of waste, with 10,500 pounds of heavy metals, propellants and fluorocarbons will be dumped into the GOA annually. The Navy does not adequately analyze the impacts of these pollutants to the GOA and fish and marine mammals. Ocean acidification is an issue under serious scientific study. In the Pacific Northwest shellfish are already in decline; the Navy fails to address this issue in the EIS.	Please see the 2011 GOA Final EIS/OEIS for analysis of impacts other than acoustic stressors. The Military Munitions Rule identifies when conventional and chemical military munitions are considered solid waste under the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.). Military munitions are not considered solid waste if they are (1) used for their intended purpose, which includes training military personnel and testing of munitions, weapons, or weapon systems; or (2) subjected to materials recovery activities (40 C.F.R. §266.202(a)(1) and (2)). These two conditions cover the uses of munitions included in the Proposed Action and are therefore not subject to Resource Conservation and Recovery Act regulations. Please see the 2011 GOA Final EIS/OEIS Section 4.1.3.3 (Ocean Pollution) and Section 3.2 (Expendable Material) for details regarding your concerns over expended materials. Regarding ocean acidification, see the 2011 GOA Final EIS/OEIS Section 4.4.2.1 (Greenhouse Gases) and the sub-section “Ocean Acidification” where this topic is discussed.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
K. Button-05	Most seriously, the Navy's acoustics impact analysis ignores scientific studies contrary to its interests and uses methodologies not supported by the scientific community. Thus, the thresholds it sets for permanent injury, temporary injury (hearing loss) and behavioral change (which we would argue are too high and thus completely underestimate the actual number of wildlife that will be impacted) are invalid as a matter of science.	Please see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) for a discussion of the scientific studies forming the basis of the analysis presented in the Supplemental EIS/OEIS. The Navy's acoustic analysis and modeling reflect the current best available science, as evidenced by recent NMFS rulemaking actions on other Navy documents.
K. Button-06	The GOA is a highly productive area for fish and marine mammals. It is one of the richest fisheries in Alaska. Commercial fishing is a \$4 billion industry in Alaska; nearly 65% of Alaskans participate in subsistence fisheries. The Navy fails to address and analyze socio-economic impacts.	Navy is aware of the presence of fish (see Section 3.6 [Fish]) and marine mammals (see Section 3.8 [Marine Mammals]) in the study area. Please see Section 3.12 (Socioeconomics) where socio-economic impacts are analyzed. Please reference all three sections in both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS.
K. Button-07	Additional concerns include: Seven endangered species inhabit or migrate through areas in the GOA the Navy proposes to use.	Navy is aware of this information as is evident from the presentations in Sections 3.8 (Marine Mammals) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS.
K. Button-08	The Navy's exercises take place primarily during seasons in which whales and salmon, particularly, are migrating through the GOA.	Navy is aware of this information as presented in Section 3.6 (Fish) and Section 3.8 (Marine Mammals) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS.
K. Button-09	The Navy's alternative analysis fails to present an authentic no action alternative. Instead, it presents only three options: maintaining its current level of war games, increasing the level, or further increasing the level. These are not real options.	As detailed in Chapter 2 (Description of Proposed Action and Alternatives) Navy is not proposing to increase the level of training over that already authorized since 2011, but is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. See the Supplemental EIS/OEIS Section 1.1 (Introduction) regarding development of the present new analysis.
K. Button-10	I strongly urge NMFS to not only reject the Navy's proposed increase in military exercises, but to go further and reject their EIS altogether for its failures laid out above. Certainly, adequate military readiness is in the best interest of US citizens, but it need not be at the expense of the environment. We live in precarious times, certainly, yet much more precarious is the balance of our Earth's living systems. Thank you, ~K. Button	Please note that the Navy is not proposing to increase military exercises in the Study Area.
T. Carte (Electronic)	After reading through the literature provided on the proposed exercise, I understand that the active sonar can impact marine animals behaviorally. I am very concerned about the impact on Alaska's marine animals. Each animal in our system serves a purpose and our economy is largely based on what the ocean provides. Living in Cordova, Alaska, the fishing industry is critical to our economy. I am concerned that the leadership is saying that the exercises will stop if marine life is identified and will allow it to move out of the zone. However, who will be monitoring to see that this really happens. With the amount of money that the Navy will have floating out in the Gulf of	Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The monitoring that has taken place has included independent scientists and observers, as well as Navy exercise

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	Alaska, how much will they weigh the damage done to a pod of whales? Who will be there to document what actually happens? The materials shared sound reasonable; I just know enough military personnel at the lower ranks who have expressed extreme disregard for the animals in the sea. If this feeling is pervasive there, I don't see how shiny posters shared with the public will have any impact on the choices made during these exercises. Marine animals will be hurt and killed. Please recognize that if you do choose to do this exercise. If there is any way to choose a location that has less impact on the communities surrounding the area and are less inhabited by the marine life, this is absolutely what should be considered. Please remain intent on respecting the lives and health of our marine animal family while you do your best to prepare your team to protect the health and lifestyles of the American people.	participants and Navy scientists. The analysis presented in the document does not indicate any marine mammals killed, and very few injuries are anticipated. Please see Section 1.1 (Introduction) of the documents explaining why the training occurs in the TMAA and see the Supplemental EIS/OEIS Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) and Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
M. Casey (Electronic)	The proposed War Games in the Gulf of Alaska will render it a virtual sacrifice zone. The EIS categorically states that weapons detonation, shock waves, pollution due to explosives, fuel, vessel activity, sonar, etc will have deadly and hazardous impacts on the commercial fish species, whales and other marine mammals that live or migrate through these areas. This is a sustainable yet fragile place. Please do not render it into another "Sacrifice Zone"...we are still reeling from the consequences of the Exxon Valdez oil spill 25 years and counting - the herring and Orca are decimated, the human community a textbook sociological PTSD study, the offshore trawl fleet steadily killing off the Chinook among the pollock/cod bycatch. Why push it over the brink / ???? Enough is enough !!	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for a number of years rather than new activity. Please note that the Supplemental EIS/OEIS does not present any analysis that indicates "deadly and hazardous impacts" on any resources; see the Supplemental EIS/OEIS Section 3 (General Approach to Analysis) regarding the analysis for each of the resources present. Please see for example, the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
J. Carlson-01 (Electronic)	If the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions). The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore. As presented in Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA), the Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA.
J. Carlson-02	2. Change the timing of operations from summer (Apr – Oct) to winter (Nov – Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
J. Carlson-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
J. Carlson-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
J. Carlson-05	The Supplemental Environmental Impact Statement (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing,	For an analysis of Navy training impacts to marine mammals based on the best available science, see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). There is no basis for the comment's assertion that, "regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals." Navy training activities have been occurring in the Gulf of Alaska for decades, Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been "severely injured" or died as a

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals. Given this expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem. But despite many such public comments submitted to the original 2011 EIS, the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these damaging war-games in the Gulf of Alaska, regardless of public concerns. Thank you.	result of Navy training. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
F. Chaney (Electronic)	I live right next door to Jber in Anchorage, we hear grenades, shooting, n helicopters all the time. I'm glad to be an American, n don't mind them working. The ocean is a different venue, the animals will be impacted, we cannot replace them. I suggest the navy take into consideration of the impact they r willing to take. If they want to destroy something, go to Japan where they already depleted their ocean. We're fighting for ours all the time.	Thank you for participating in the NEPA process. The Navy shares your concern for marine life and thus has undertaken this Supplemental EIS/OEIS to measure its impact on the environment from its activities. Please see Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS to understand the impacts resulting from the proposed action being discussed. Navy training activities have been occurring in the Gulf of Alaska for decades, Alternative 2 of the proposed action has been authorized since 2011, and there is no evidence indicating that Navy activities have depleted or will deplete the ocean. Potential impacts to marine mammals are analyzed in Section 3.8 (Marine Mammals) of the Supplemental EIS/OEIS. Since the GOA Final EIS/OEIS was completed in 2011, there have been no reports of or evidence indicating that marine mammals have been severely injured or died as a result of Navy training. Additional analysis on potential impacts to marine mammals from the proposed activities is in Section 3.8.3.3 (Analysis of Effects on Marine Mammals). Refer to Chapter 4 (Cumulative Impacts) for a broader discussion of the proposed action in the context of other activities occurring in the Study Area and how potential impacts from these activities may cumulatively affect marine resources.
A. Christiansen (Oral-Homer)	Hi. My name is Amy Christiansen. I've spent most of my life now in Alaska. I've had minke whales almost come into my kayak. I've had beluga whales underneath my skiff, interacting with me. Killer whales. I've seen numerous humpbacks, and I've even seen a fin whale. In the wild, in Alaska. For that I am grateful. And Alaska is pristine. Alaska is so important to me. I don't want your war games happening in my backyard. I don't want your war games happening, period. If they have to, then go somewhere else. And that's all I really have to say.	The Navy shares your passion and concern for marine life. Navy training has been occurring in the TMAA for many years and the Supplemental EIS/OEIS is reviewing the previous 2011 GOA Final EIS/OEIS analysis of those activities. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training in the Gulf of Alaska and why it occurs in the TMAA.
A. Christiansen	You did your homework. I applaud you for that. But I do not believe your blanket	Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Written)	statement – no lifelong effects? No population effect? As far as impacts of your war games? Alaska is pristine. Play your war games somewhere else. Is there no where left on earth you choose not to cause any harm? Practice off the coast of San Diego, or anywhere else please. Keep Alaskan waters pristine, and protected.	of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades. Additionally, please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training in the Gulf of Alaska and why it occurs in the TMAA.
S. Christiansen-01 (Electronic)	The marine creatures impacted by the Gulf of Alaska Navy training activities are not expendable. Stop these war games! 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions). The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
S. Christiansen-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
S. Christiansen-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
S. Christiansen-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		ships."
S. Christiansen-05	What do we have to do to get through to whoever is making these decisions? The public hearings you held in Homer were 100% against these activities! Please listen to the people. Open your minds and hearts to a new way of thinking. Please do not destroy the marine environment. Sincerely, S. Christiansen	This comment has been noted and is part of the record that will be presented to the decision-maker for this Supplemental EIS/OEIS. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please note that the proposed continuation of Navy training activities will not destroy the marine environment; please see Section 3 of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS for details regarding the proposed action.
S. Colbert (Electronic)	I am absolutely horrified at the United States Navy's proposal to engage in military exercises which will most assuredly affect marine animals and sealife in Alaska. As a resident of Alaska for the past nine years I ABSOLUTELY CANNOT allow myself to not comment on the negligence of your proposed actions. We are well aware scientifically of the delicate balance between species. All species of sealife will be adversely affected. It's bad enough we have to deal with environmental and weather emergencies, oil spills such as Exxon, and what happened at Valdez, not to mention the impact of Fukushima on our Alaskan shores and wildlife but this is over the TOP and not something Alaskans will accept! SINCERELY, S. Colbert	The proposed action is the same as the Proposed Action presented in the 2011 GOA Final EIS/OEIS and Record of Decision for Final Environmental Impact Statement/Overseas Environmental Impact Statement for the Gulf of Alaska Navy Training Activities and involves the continuation of training that, in the majority, has been ongoing for more than a decade. Please see the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS for details regarding the proposed action.
R. Courtney-01 (Oral-Kodiak)	That's sloppy handwriting. Made myself a few notes here. So, my name is Rich Courtney. And if the name sounds familiar, you will find something attached to the back side, it's the National Weather Service. So, I'm that goofy guy on the radio out there. I work two things. I work VHF radio, which is the little NOAA radio that you hear about, and I talk to people like Patty right here on HF radio and satellite phones. I've done this job now for 20 years. But in a previous lifetime for 20 years I was in the Navy. I was what was known as a Aerographry Mate, and an aerographer. It means I completed all the way up to a Chief Warrant Officer, and I used to work with Commanders like him flying airplanes, keeping him safe. That's the sum total experience that I have in the Navy. I do things to keep people safe. So that's my background.	Thank you for participating in the NEPA process.
R. Courtney-02	And why I'm speaking, I want to speak about tonight, this is a unique part of the world. The weather up here is one of two places where you can really get continuously bad weather. I'm preaching to the choir here to anybody that's been out there fishing. This is an important place to train people like me, Navy guys, that will eventually go back into the weather service and become weather forecasters. And gentlemen like the Commander over here. You cannot just sit at a dock and walk around and just, okay, I'm going to move an airplane from here to there; you have to be out there. The most	Thank you for participating in the NEPA process.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	choreographed thing in this world is the flight deck of an aircraft carrier. There are over three to five hundred people at one time running around. Everybody knows where they're supposed to be and what they're supposed to do. And because of one of them people that he talked about, is called the Air Boss. I was on an aircraft carrier. My job was to brief captains, admirals, and everybody else. I kept them aware of what is going on, just like I do with the tug boats, the fishing boats, and anybody else who takes part in our stuff. I learned everything that I did from the Navy. So, it's imparted back into you. And it's a very good thing that they're up here trying to explain what they're trying to do.	
R. Courtney-03	They're actually trying to keep you a lot safer than the -- this crazy world of ours. You don't have to look anywhere else, but you can't just pick up and go play a game of war. And that's -- you don't want to go to war; we do when we have to. So you need the proper training. You just don't pick up and go to war. Sorry, it's not like a school yard fight.	Thank you for participating in the NEPA process.
R. Courtney-04	The second thing is, one of the things that he mentioned I didn't even consider about, but I am deeply involved, and it's called HADR missions; Humanitarian Assistance Disaster Relief. I am a ham radio operator. And anybody who goes back to 1964 found out that the only way they got messages out of Alaska is on the Alaska Pacific net, which is on certain HF frequencies. It's a very important mission for the Navy right now. That mission involves taking all kinds of ships, bringing them together as a group, like they talked about, with Haiti. Just think of this as Haiti in reverse. If you get a major earthquake up here in the dead of winter, what are you going to do to survive? You're going to require guys like him to come up on five, 10, 20 ships. The thing that's going to kill everybody up here will be the cold. And I'm serious about that.	Thank you for participating in the NEPA process.
R. Courtney-05	So think about that for a second. They have to work up here in this environment. They have to know what they're doing. You can't just go out there and say, okay, well, it's an 18 foot sea out there, which would be roughly about twice the height of this room. And that's pretty much what I'm saying. I'm here as a friend of the Navy. I'm giving back to something that's given to me, that I give to you guys on a daily basis. Thank you.	Thank you for participating in the NEPA process.
R. Courtney-1-01 (Oral-Kodiak)	I shut myself off because the young lady gave the thing, and I wanted to be respectful. One of the things that the Commander was talking about is something else that I have been deeply involved with in the Navy, besides meteorology. It's oceanography. I'm a part of, or at least my job in the Navy is a part of the sonars that he's talking about. And I came here -- I'm here to tell you right now, I never saw a school of fish bubble up underneath my ship. Nor did I ever see dead whales from any of that kind of stuff. I think their mitigation processes, at least from my perspective, are very healthy. They're very good. They go out of their way, I know what the Navy is, and I know the hierarchy and structure. And we subserve ourselves underneath civilian authority. So civilian authority tells us what to do, and we just say, yes, sir. We'll get it done. We don't care	Thank you for participating in the NEPA process.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	what the -- so, when we were told to be protective of the marine life or anything in the ocean like that, we bend over backwards or you get fired. Plain, pure, and simple. You don't do it, you don't do the job. You're not going to continue on in that.	
R. Courtney-1-02	So, as far as the whales out there, there is an honest effort. Granted, back when I was around we didn't worry too much about the whales. They were just fellow traveling companions in the middle of the night. And I think that their stuff right there, what they need to practice on, they absolutely have to. I mean, that's the only thing I could tell you right now; they have to get out there and they have to know how to do what they're doing in the ocean out there. That's all I've got to say.	Thank you for participating in the NEPA process.
B. Cram (Electronic)	This is what you don't want the public to know - it's all here. But I've decoded your message in this "EIS". You keep trying to get the message out, and I'll keep finding it. It's all a False Flag. The Anunnaki control all – they always have and we are getting closer to identifying them. The reptiles control. Just like Sandy Hook, just like the Navy Yard shooting, "Aaron Alexis" and the others were not the real story. But the letters give the message to the other reptilians. The code is always there, I am now able to find it. Like "Aldon Smith", who claimed to plant a bomb in LAX, the "A" is the indicator. You have your "Action and Alternatives" that are emblazoned on your document for all the reptilians to see. The reptilians have been waiting for their message to return and create their final settlement here on Earth. They wait in the western sky. And the reptilians in charge have been making subtle communication to not tip off others in the galaxy as to the time and place of the settlement. Your "DoD" is the prefix for An (pronounced "on"), as in Anunnaki, and one of their leaders, Anu (ON-nu). It is no wonder these operations in the western sky are very secretive; the government is using the airspace to communicate to the second-coming of the Anunnaki. The nearby comets in the western sky, ISON and Encke, are indicative of the reptilian communication. The prefix for ISON would be IS, as in Isis who is the same character in folklore as Inanna and the Sumerian Goddess, Ishtar – the goddess of love, war, fertility, and sexuality. Separate the word ISON, you get IS-htar and ANU(ON-nu)-nnaki. The growth of, you guessed it, ISIS, in Iraq (ancient Sumeria) is where the final communication and settlement with the Anunnaki will take place. With the comet Encke following ISON in the western sky, the reptilians will have perfect coordinates to find their meeting place – Enki was a Sumerian God who was later referred to as Ea (Earth) – Earth, ISIS, Ishtar. Ishtar's symbol – the 8-pointed star – can be found in Jerusalem – the dome of the rock. This will be the start of the end. I also notice that you have changed your communication from earlier documents. Your "NAEMO" can be the final indicator – we have the Alpha and the Omega all in one acronym. It has begun, I hope all who read this document prepare after reading my comment.	Thank you for participating in the NEPA process.
N. Crawford (Electronic)	I am concerned about the proposed trainings in the Gulf of Alaska. Particularly how the heavy metals get into the fish and contaminate our food supply. Why is none of the detonated material from bombs and such recorded? What types of heavy metals from	Please see Section 3.2 (Expended Materials) of the 2011 GOA Final EIS/OEIS for an analysis of expended materials including bombs. In particular, see the discussion presented in Section 3.2.1.1.1

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	these devices are going into our waters and why is there no cleanup effort? We know our fish still test positive with heavy metals and nuclear isotopes from US Military training in the 1950's. What proof is there that these exercises won't harm our fish and humans eating the fish now and in the future?	(Contaminants from Expended Materials). Please note that the proposed action will not contaminate the food supply. For example, since 2009 various research projects have been undertaken at deep-water munition disposal sites in the Hawaiian Islands that contain both conventional and chemical military munitions. These studies found that these concentrations of munitions were not contributing to the bioaccumulation of munitions-related chemicals for any of the species sampled. Additionally, the total amount of expended and hazardous materials for each alternative is summarized in Tables 3.2-10, 3.2-14, and 3.2-19 of the 2011 GOA Final EIS/OEIS. The effects of all expended materials would be equivalent to the sum of individual effects because of the large area in GOA, the low areal density of expended materials, and the low percentage of hazardous materials (about 3 percent of expended materials would be considered hazardous).
T. Cummings-01 (Written)	Good Day: The Navy should adopt the "No-Action" alternative and cancel the expanded training. It is unacceptable to kill over 182,000 marine mammals or cause permanent injury to same. This training should be done somewhere else where the impact to marine life would be very small or not at all, far offshore.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please note that the Navy is not proposing to expand training; see Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand what the Navy is proposing. Please see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) regarding the correct analysis of impacts; the analysis indicates no marine mammals will be killed by the continuation of Navy training in the Gulf of Alaska. Regarding moving the activities "far offshore," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Also regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
T. Cummings-02	Ship sinking exercises (<u>are not necessary</u>).	Regarding the assertion that ship sinking exercises are not necessary, please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) of the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
T. Cummings-03	<u>Independent observers</u> should be utilized.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
T. Cummings-04	<u>Timing</u> of these proposed operations, if done, should be in the winter so whales that migrate are not harmed. Wrong place, wrong time, too many dead mammals – “No action” Thank you	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. As detailed in the documents being considered, no marine mammal mortality is expected to result from the continuation of Navy training in the area; see Section 3.8 (Marine Mammals) of the Supplemental EIS/OEIS for details. As stated above, the selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Cutler (Electronic)	Have you ever been around little children right when a toddler discovers that special note? That horrible shriek - where she can scream in a way that pierces you painfully, making you cringe and want to protect your ears? It's worse than fingernails on a chalkboard. It hurts. What if it didn't end, and you could not turn it off? Now imagine when you heard that, it was even louder and damaged your ears. Imagine you could feel it like the heaviest base beat you ever heard from a subwoofer...right in your chest and around your heart. Whales feel that way about naval sonars, especially the more penetrating ones. Well, it's clear that this is some of how the naval sonars are heard by whales, seals, dolphins, and otters. Those are some of the creatures around here (our Alaskan waters) that these tests would hurt. These animals are part of our community, so when you hurt them, you hurt all of us too. Have you ever compared a whale brain to a human brain? They are many times larger and more complex than our brains. We like to think we are the smartest creatures on earth, because we have big brains. Well, as we fiddle around with our high tech sonars and make noises like a bunch of monkeys banging on pots and pans, we are harming the animals with the even bigger brains. That's really stupid, or really mean. Either you are too stupid to understand that this technology is hurting other sentient creatures--you just don't get it...or, you are just plain old mean people, who are glad to hurt other sentient creatures whenever it suits you. You can't claim ignorance, because plenty of people have been telling you are hurting these beautiful creatures. So stop with all that noise! You are not the only one in the pool.	Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) to understand the nature of the proposed action and the likely effects to marine mammals from the proposed continuation of training in the Gulf of Alaska. As presented in Chapter 2 of the documents, there are no plans to conduct "tests" as part of the proposed actions. Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training with sonar has been occurring year-round for decades.
J. Davis (Electronic)	Consider changing the schedule from summer to winter to avoid the large numbers of whale and fish in this area.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See also discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See Section 5.3.3.1.10

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		(Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
A. Degneau (Electronic)	I write to you in response to the Navy's plan to conduct training exercises in the Gulf of Alaska each summer (Apr - Oct) for five years, over an area about 300 miles x 156 miles (42,146 square miles) of the northern Gulf of Alaska, just south of Prince William Sound, and east of the Kenai Peninsula and Kodiak Island. This is a delicate and vital ecosystem that will be irreparably damaged by the planned training exercises. The damage will not be limited to wildlife, but will also impact the economies of hundreds, if not thousands, of towns that rely on a healthy wildlife ecosystem in the Gulf of Alaska. There are other places to conduct training, and better ways to spend tax payer dollars. Please do not implement this plan.	Please note that the TMAA is not just south of Prince William Sound, east of the Kenai Peninsula, and Kodiak Island. The northern boundary of the TMAA is at the closest point approximately 24 nm from the Kenai Peninsula and Kodiak Island, and is even farther from Prince William Sound. The approximate middle of the TMAA is located 140 nm offshore. Navy training in the TMAA has been occurring for more than a decade and as indicated in Section 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the continuation of training in the future will not negatively impact the economies of towns relying on the Gulf of Alaska. Please see Chapter 1 (Purpose and Need) to understand why the training is necessary and why in the Gulf of Alaska.
J. Dercks (Electronic)	I would prefer to see the Navy cancel the SINKEX altogether. While the safety of our country is important, it is far more important to look at the larger scale. It is the welfare of our oceans and sea life that is of a greater concern and until we start making other creatures, big or small, a priority, we will not have a balanced planet for long. I strongly urge the Navy to reconsider their exercises and take in to account the world around them. If we don't start doing that, there will be no world for the Navy to protect.	Regarding cancelling all "ship-sinking exercises," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) of the 2011 GOA Final EIS/OEIS to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Regarding reconsideration of the training, please see Section 1.1 (Introduction) of the Supplemental EIS/OEIS regarding the requirements for the training. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
B. Dolma-01	Hi, I'm Brenda Dolma. I just wanted to make sure that we had on record, as I'm	Navy is aware of the presence of marine mammals in the area in the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(One on One with Court Reporter)	observing where the training sites are, this is one of the places that a super pod of whales meets. A species that comes up every summer. It's like a great big party, and it's sort of a mating/dating game, where they switch out. So, I just want to make sure that we're aware of that, so that no training were to happen during this reproductive party time. I think it's a critical time.	summer months as presented in the Supplemental EIS/OEIS Section 3.8 (Marine Mammals). Regarding not conducting the training in the summer, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
B. Dolma-02	I want to say thank you for taking the responsibility of protecting this pristine environment and this diverse ecosystem that is changing. And as in a world that's changing, and I know you've got a job to do in an ever changing world, and I certainly appreciate the Navy taking into account any way that we can protect our ecosystem so that we have fish and clean water and clean food first, as we're looking at our protection of a nation as well. So, anything we can do to continue to protect our water, our air, and our species that are in decline and under threat, I certainly appreciate that. Thank you very much.	Thank you for your comment.
M. Domico (Electronic)	There is substantial reason to believe that not enough science and research exists to support the Navy's intent to test sonar technology in the Gulf of Alaska. The information that is provided to the public about the upcoming developments is marginal at best. We are given numbers - that the government decided - of the "allowed allotment" of injured, displaced or deceased animals as a result of this project. My question is: where do these numbers come from? Why are no scientific papers or statistical data presented to the public? How can we be 100% confident that this prediction will in fact come true? I can answer that last one myself - we can't be. As centuries of previous scientific research has discovered, the Earth is not as linear or stagnant as our man-made mathematical models. Marine organisms and ecosystems are extremely dynamic, and many predictions in the past have been proven wildly inaccurate. The message that the public continually hears on this subject is that "sonar does not effect marine mammals long term." Once again - how is it that the Navy knows this? Many previous occurrences suggest that sonar can, and has, affected marine mammal populations in a variety of ways. For example, in 2012 a large number of dolphins washed up on the shores of California immediately following Naval sonar testing. The same exact thing happened along the shores of Peru in 2012. Many examples exist of similar mass stranding events that are believed to be linked to sonar activity, or to seismic testing, which has an extremely similar impact. Some of these occurrences are referenced at the end of this appeal for your convenience. Sonar activity in the oceans interfere with the echolocation and acoustic communication of marine mammals. Many marine mammals can go temporarily and/or permanently deaf from these interferences, which affects their ability to forage for food, to mate, and to effectively survive in the wild. Additionally, sonar activity can affect the diving behavior of marine mammals, causing them to resurface too quickly and experience an adverse affect similar to the bends in humans. Many studies have shown a nitrogen build-up in the auditory canal of	The Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. The Supplemental EIS/OEIS is a re-analysis of the same training that has been largely ongoing for more than a decade. Please see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) and specifically 3.8.3 (Environmental Consequences) to understand how the numerical analyses were conducted. These sections cite the publically available scientific papers (detailed in the References section) and data used in the analysis that the comment states should be (and was) presented to the public. Please see Section 3.8.3.1.2.8 (Stranding) of the Supplemental EIS/OEIS for a discussion regarding stranding potentially associated with sonar use as well as the referenced Cetacean Stranding Technical Report. Thank you for providing the links to websites you believe have useful information. Navy notes the information these websites provided. The Peru stranding mentioned in the comment was reported to involve seismic testing, which is not part of the Navy's proposed action. Regarding the assessment of long term impacts, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. See the Supplemental EIS/OEIS Section 3.8.3.1 (Acoustic Stressors)

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	cetaceans (see articles listed below appeal) causing deafness and/or death. The third, and perhaps most important reason why there is such a large adverse reaction to sonar testing in the Gulf of Alaska is - there is absolutely no need for it! Alaska harbors one of the most biologically rich marine habitats on Earth. Why in the world would the navy need to come here to test their sonar abilities, and risk the health of such a diverse ecosystem? There are plenty of areas of the ocean that have already been destroyed by human impact - dead zones exist in US waters that would be suitable for sonar testing. The reasoning that the navy officials gave me for testing in Alaska waters was that "trainees need to be versed in cold water situations." I highly doubt that cold water training is enough reason to potentially harm and displace an entire ecosystem. If the Navy has reason to believe that it is, then these reasons need to be documented in full detail on paper and sent out to the public. Lastly, the environmental impact of Naval testing in the Gulf of Alaska goes way beyond marine mammals. Marine mammals are a highly influential group on the marine food web. If marine mammal populations are adversely affected by sonar testing, so too will be the fish and invertebrates that they eat, and the smaller organisms that they in turn eat, and so on. This rippling effect could potentially harm the populations of photosynthetic organisms in the ocean. Additionally, the excretive waste of cetaceans is extremely high in nutrients that are sources of energy for autotrophs. Without planktonic and algal autotrophs - which produce 50-70% of the oxygen on Earth - we would not be here today. Not enough research has been done on the adverse effects of sonar testing on marine mammal and the entire oceanic environment to go on with this project. Any type of technological testing in the ocean is messing with our main source of food, oxygen, water, and many other necessary resources for our survival and the health of this planet. The health of this planet is, quite literally, our entire livelihood. Do you really believe that it is worth it? http://green.blogs.nytimes.com/2012/05/28/expert-links-dolphin-deaths-to-sonar-testing/?_php=true&_type=blogs&_r=0 http://www.huffingtonpost.com/dr-reese-halter/sonar-delivers-coup-de-gr_b_3891534.html http://www.colorado.edu/physics/phys1240/phys1240_sp05/handouts/whale%20deaths.pdf http://foodweb.uhh.hawaii.edu/MARE390_files/Rommel%20et%20al.%202006.pdf http://rspb.royalsocietypublishing.org/content/280/1765/20130657.full	and sub-sections to see that the issues raised in the comment (Hearing Loss, Nitrogen Decompression, and Behavioral Reactions) have already been addressed. Please see Chapter 1 (Purpose and Need) of the documents where the answer to the question why train in the Gulf of Alaska is answered and again note that the proposed action is the continuation of training, and has nothing to do with sonar testing. Please note that the proposed continuation of training will not risk the health of the ecosystem, create dead zones, or displace an entire ecosystem; see again the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities). See Section 3.6 (Fish) regarding impacts to fish and Section 3.5 (Marine Plants and Invertebrates) of both documents with regard to analysis of impacts to those resources.
M. Domico (Written)	To Whom it May Concern, There is substantial reason to believe that not enough science and research exists to support the navy's intent to test sonar technology in the Gulf of Alaska. The information that is provided to the public about the upcoming developments is marginal at best. We are given numbers - that the government decided - of the "allowed allotment" of injured, displaced or deceased animals as a result of this project. My question is: where do these numbers come from? Why are no scientific papers or statistical data presented to the public? How can we be 100% confident that this prediction will in fact come true? I can answer that last one myself - we can't be. As centuries of previous scientific research has discovered, the Earth is not as linear or stagnant as our man-made	This written comment is basically the same comment that was submitted by M. Domico (electronically and responded to directly above). As such, please reference that response. With regard to the mention of mitigation measures implemented for detected marine mammals, please see Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the Supplemental EIS/OEIS. Regarding reporting on the implementation of these measures, see the Supplemental EIS/OEIS Section 5.5.2 (Reporting), the Navy website, [www.navy.marinespeciesmonitoring.us/], and also at the NMFS website, [www.nmfs.noaa.gov/pr/permits/incidental/].

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	mathematical models. Marine organisms and ecosystems are extremely dynamic, and many predictions in the past have been proven wildly inaccurate. The message that the public continually hears on this subject is that "sonar does not affect marine mammals long term." Once again - how is it that the Navy knows this? Many previous occurrences suggest that sonar can, and has, affected marine mammal populations in a variety of ways. For example, in 2012 a large number of dolphins washed up on the shores of California immediately following naval sonar testing. The same exact thing happened along the shores of Peru in 2012. Many examples exist of similar mass stranding events that are believed to be linked to sonar activity, or to seismic testing, which has an extremely similar impact. Some of these occurrences are referenced at the end of this appeal for your convenience. Sonar activity in the oceans interfere with the echolocation and acoustic communication of marine mammals. Many marine mammals can go temporarily and/or permanently deaf from these interferences, which affects their ability to forage for food, to mate, and to effectively survive in the wild. Additionally, sonar activity can affect the diving behavior of marine mammals, causing them to resurface too quickly and experience an adverse effect similar to the bends in humans. Many studies have shown a nitrogen build-up in the auditory canal of cetaceans (see articles listed below appeal) causing deafness and/or death. Your answer to this problem will be, "Well, then we will shut off the sonar any time we sense a marine mammal in the near vicinity." This is perhaps the most unpractical solution that can be offered. Military activity is astronomically expensive in itself, let alone the use of sonar and other acoustic technology. Are we supposed to believe that the navy is going to waste millions - perhaps billions - of dollars in taxpayer money to passively idle? Not to mention the fact that marine mammals have incredible acoustic sensitivity and dive depths. There may be an animal within sonar range without the navy realizing it - or the sonar range that the navy has created may not be enough. This is an unacceptable solution, and I will not be alone in asserting that it portrays an unlawful use of citizen tax dollar. The third, and perhaps most important reason why there is such a large adverse reaction to sonar testing in the Gulf of Alaska is - there is absolutely no need for it! Alaska harbors one of the most biologically rich marine habitats on Earth. Why in the world would the navy need to come here to test their sonar abilities, and risk the health of such a diverse ecosystem? There are plenty of areas of the ocean that have already been destroyed by human impact - dead zones exist in US waters that would be suitable for sonar testing. The reasoning that the navy officials gave me for testing in Alaska waters was that "trainees need to be versed in cold water situations." I highly doubt that cold water training is enough reason to potentially harm and displace an entire ecosystem. If the navy has reason to believe that it is, then these reasons need to be documented in full detail on paper and sent out to the public. Lastly, the environmental impact of naval testing in the Gulf of Alaska goes way beyond marine mammals. Marine mammals are a highly influential group on the marine food	Please note that no testing of sonar or other equipment is proposed, and no mortalities of marine wildlife are expected to result from the continuation of Navy training activities that have been occurring for more than a decade.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	web. If marine mammal populations are adversely affected by sonar testing, so too will be the fish and invertebrates that they eat, and the smaller organisms that <i>they</i> in turn eat, and so on. This rippling effect could potentially harm the populations of photosynthetic organisms in the ocean. Additionally, the excretive waste of cetaceans is extremely high in nutrients that are sources of energy for autotrophs. Without planktonic and algal autotrophs - which produce 50-70% of the oxygen on Earth - we would not be here today. Not enough research has been done on the adverse effects of sonar testing on marine mammal and the entire oceanic environment to go on with this project. Any type of technological testing in the ocean is messing with our main source of food, oxygen, water, and many other necessary resources for our survival and the health of this planet. The health of this planet is, quite literally, our entire livelihood. Do you really believe that it is worth it? I dearly hope that the navy will reconsider their intentions to implement sonar testing in the Gulf of Alaska. The project is not amply supported by research, and I truly believe that the costs highly outweigh the benefits. Please, consider instead testing in a known dead zone, or a military facility equipped with the proper sonar resources. Public opinion of military occurrences will increase exponentially if the Navy just implements this one simple change. Sincerely, A concerned citizen of the Earth. http://green.blogs.nytimes.com/2012/05/28/expert-links-dolphin-deaths-to-sonar-testing/?_php=true&_type=blogs&_r=0 http://www.huffingtonpost.com/dr-reese-halter/sonar-delivers-coup-de-gr_b_3891534.html http://www.colorado.edu/physics/phys1240/phys1240_sp05/handouts/whale%20deaths.pdf http://foodweb.uhh.hawaii.edu/MARE390_files/Rommel%20et%20al.%202006.pdf http://rspb.royalsocietypublishing.org/content/280/1765/20130657.full	
J. Donahue (Electronic)	I am a young Alaskan and commercial fisherman. I make my living off of the salmon that live in the water you plan on polluting with your bombs, missiles, torpedoes, heavy deck guns and small arms rounds. The salmon I fish are a product of their environment. They need clean cold water with the correct ph levels. You and your training exercises are going to ruin my fish, and you nowhere in your literature do you prove otherwise. The expended materials you will leave behind will turn the pristine waters into a chemical metal filled toilet with unclean water. The petrochemicals you power your massive ships with is exacerbating climate change and the warming of our oceans. The heavy metals in your expended materials will alter the ph levels of the water. The terms in which you reference the affects of these trainings on salmon (and other fish) are relative - and I know you haven't had independent studies done. I request that the Navy complete independent testing of cumulative affects and adequate mitigation before any	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The proposed action detailed in the Supplemental EIS/OEIS is not new. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on populations of fish or the health of the fisheries in Alaska. See Section 3.2 (Expended Materials) of both documents regarding the impact from expended materials and clarity of actual expected impacts. Regarding climate change, the specific contributions of a particular project to global or regional

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	military training exercises be done in the GOA. Not only do you plan on turning the source of my food and livelihood into a war zone, you plan on doing it during fishing season - just so the Navy can train in a challenging environment - this is not acceptable. I request that you conduct your trainings in the winter. You have not completed a ESU or DPS for salmonids in Alaska. Table 3.6 in the 2011 FEIS only lists salmon runs on the West Coast of the Lower 48. I request the Navy needs to list ESU/ DPS for Alaska. The TMAA is not far enough away from my office - the fishing grounds of the Copper River and Prince William Sound. I request that the Navy not carry out any training exercises in the Pacific Ocean. I often see debris from Japan and other far away places wash up along the shores of Alaska's wild coast line. If garbage from Japan can reach Alaska's shores then surely the expend materials you leave in the water will also reach Alaska's shores even if I can see it (because it is dissolved) or taste it (in the flesh of my fish). You state the amount of expended materials isn't that much, and will be dispersed and spread over a large area, this does not provide me with comfort when I think about the fish I depend on. You would like to eat a fish that has spent it's life swimming in waters containing cyanide (at levels 140 to 150 times the EPA's recommendations), lead, tungsten, fluorocarbons, etc? Do you think the average consumer would want to eat those fish? I don't, which is why I request that the Navy not conduct any trainings in the Pacific Ocean. As a boy and teenager, my father encouraged me to enter in the armed forces. As a gifted swimmer and boater I considered both the Navy and the Coast Guard. Go to work defending my country...I liked the sound of that. Right now, however, I find that the only people I have to defend my country (and ocean) from are the ones who are supposed to be protecting it. I wonder if the young men and women who will commit the acts that will ultimately pollute the ocean I (and all of us) depend on, who, like me, liked the sound of "go to work defending my country" will think the same thing? I have always been thankful to have been born in the USA. Up until now there was a certain comfort in knowing that the greatest military power in the world had my back. No war would come to my door...until now that is.	climate change generally cannot be identified based on existing scientific knowledge, because they typically are extremely small and climate processes are understood at only a general level (see Section 3.1.1.1 [Existing Conditions]) of both documents. Cumulative regional contributions to climate change as it applies to Navy's actions in the area are addressed in Section 4.2.1.2 (Greenhouse Gases) of the 2011 GOA Final EIS/OEIS. Please note that "independent studies," have been done; see Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS for studies involving fish. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. See Section 5.5.2 (Reporting) of the Supplemental EIS/OEIS regarding past and future reporting. See Chapter 4 (Cumulative Impacts) of both documents for a discussion of cumulative effects. See the Draft and Final Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) discussing mitigation measures. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Draft and Final Supplemental EIS/OEIS. As noted in Section 3.6.1.3.1 (Threatened and Endangered Species/Salmonids) of the Draft and Final Supplemental EIS/OEIS, Evolutionarily Significant Unit (ESU) and Distinct Population Segment (DPS) designations have not been established for Alaskan salmonid stocks. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
K. Doria (Electronic)	It is unfortunate that the Navy would continue to seek to cause needless "innocent bystander" injury, even death in an effort to test equipment. The apparent disregard for the other species that we share this Earth with shows not just a lack of compassion but of intelligence on the part of the Navy. Too many intelligent individuals will be irreparably harmed from this unnecessary endeavor. Other alternatives exist to diminish the negative impact. Must we be so focused on warmongering in the name of protecting the innocent that we directly harm the innocent from our actions. The time has come to stop, think, and be accountable. Chose a different course and chose no harm. Thank you	Please note that testing is not part of the Proposed Action and no mortalities are expected to result from the continuation of Navy training activities that have been occurring for more than a decade. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand the alternatives being proposed. See the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) discussing mitigation measures designed to reduce impacts from Navy training activities.
M. Dunbar (Electronic)	I am extremely concerned that this action will be very detrimental to ocean life in the Gulf of Alaska. The heavy metals and chemicals left in the ocean could affect the water acidity and have other unforeseen consequences. Five species of salmon live in the Gulf; we cannot afford to lose any of them. Since this action is not for direct defense but only training purposes, it is not worth the risk to the ecosystem. The Navy should not proceed with these training exercises.	The proposed action is to continue the Navy training activities that have been occurring in the Gulf of Alaska for more than a decade; see Chapter 1 of the documents. See Section 3.2 (Expended Materials) of the documents regarding the impact from expended materials and clarity of actual expected impacts. The acidity of the ocean will not be impacted by the use of expended materials. Navy is aware of the salmon species present in the Gulf of Alaska as presented in Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Draft and Final Supplemental EIS/OEIS; the proposed training activities should not have an impact on populations of fish or the health of the fisheries in Alaska.
L. Dupree (Electronic)	I am totally against the US Navy using the in shore area for war games. This is the wrong place and the wrong time for such activities. This is an area that sees many different kinds of whales migrating to their feeding grounds in the arctic. I suggest the maneuvers be moved to much further off shore to protect all the marine mammals. Thank you	Please note that the inshore area is not being proposed for use in the Supplemental EIS/OEIS. The TMAA is shown on Figure 1.2-1 of the Draft and Final Supplemental EIS/OEIS and the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Draft and Final Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). The Navy is aware of the different species of whales that inhabit the area as presented in the Supplemental EIS/OEIS; see for example Sections 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena Japonica</i>]); 3.8.3.3.4.1 (Mysticetes); 3.8.3.3.5.1 (Mysticetes); 3.8.3.3.8.1 (Mysticetes), 3.8.3.3.9.1 (Mysticetes), 3.8.3.3.10.1 (Mysticetes), etc. The Navy has also considered whales

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		and their designated feeding grounds as discussed in Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas). The Navy has established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe when right whales may be feeding in the area.
D. Eckwert (Electronic)	While it might be appropriate to conduct war games testing I strongly suggest doing so in waters that are not crucial habitat to marine mammals and at a time that they are not in such abundance. The Kenai Peninsula of Alaska is pristine and important habitat for many sea creatures. It is clear in the research that testing is cause for major disruptions that pose serious health risks to these animals. Conducting tests in their important feeding grounds particularly at a time when nutrients are in their greatest abundance would be short sighted to say the least. I strongly urge you to reconsider the use of this area for testing particularly in light of having so many other areas on the planet that are already compromised and pose little risk for vulnerable marine mammals. Thank you. D. Eckwert	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is proposing. As shown on Figure 1.2-1 in the Draft and Final Supplemental EIS/OEIS, the Kenai Peninsula shoreline is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Draft and Final Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer.). See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Draft and Final Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
C. Elwood (Electronic)	It greatly disturbs me that the following text (rightly) informs me that any effort I might make to try to stop or deter the Navy from killing and maiming life in the very oceans it traverses, is useless and will be ignored: Despite the Navy's proposed mitigation plan, including marine mammal lookouts and clearance zones, the Supplemental	Please see Chapter 3 (Affected Environment and Environmental Consequences) in the 2011 GOA Final EIS/OEIS and in the Draft and Final Supplemental EIS/OEIS, where the Navy presents information on resources potentially impacted by the continuation of Navy training

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	Environmental Impact Statement (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing, unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals. Given this expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem. But despite many such public comments submitted to the original 2011 EIS, the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these damaging war-games in the Gulf of Alaska, regardless of public concerns.	in the Study Area, including all the marine mammal species noted in the comment. See the Draft and Final Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) for a discussion of strandings and the referenced Navy Cetacean Stranding Technical Report (U.S. Department of the Navy 2013c) for information regarding strandings. For an analysis of Navy training impacts to marine mammals based on the best available science, see the Draft and Final Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). Navy training activities have been occurring in the Gulf of Alaska for decades, Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been "severely injured" or died as a result of Navy training. Please also see the Draft and Final Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
M. Fabrick (Electronic)	Mature ecosystems are highly complex with multiple and interrelated feedback mechanisms than must be considered. It is very difficult in not impossible to collect sufficient long term data to be able to characterize system dynamic responses and systematic feedback mechanisms and to properly evaluate the potential occurrence and severity of adverse impacts. The scope of proposed training activities, many of which are described as harmful to marine mammals and fish, can have multiple and synergistic adverse impact through their impacts on ecosystem feedback mechanisms resulting in sever and unknowable a priori impacts to the marine ecosystem as a whole and on individual sensitive specie populations. The NO ACTION alternative is the only reasonable alternative in view of these analytical shortfalls, especially given the lack of a demonstrated existinal treat to the security of the United States that the proposed action purportedly seeks to address. Additionally, the impact on taking of marine mammals by other nations for various stated reasons could be encouraged were the proposed action be implemented, signifying the acceptance by the United States to reduced levels of protection for marine mammals including multiple endangered species and populations.	The Navy has considered interrelated and cumulative impacts in the analysis presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; see Chapter 4 (Cumulative Impacts) and for example Section 3.8.7.2 (Acoustic Effects) and subsections in the 2011 GOA Final EIS/OEIS discussing secondary and synergistic effects. Regarding long term data, see the Draft Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and Chapter 2 (Description of Proposed Action and Alternatives) to understand the proposed action. As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The proposed action and Navy training activities detailed in the Draft Supplemental EIS/OEIS are not new. The selection of an alternative by the decision maker will be based on

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
D. Farrar (Electronic)	Somehow I get the feeling that the Navy has a plan and will do whatever it takes to implement that plan. EIS and public input are formalities that law requires, but can generally be manipulated or ignored as needed. I spent 35 years experiencing the "National Geographic" quality of the North Pacific. The Exxon oil spill was an accidental disaster. Why would the Navy even consider an intentional disaster? The State of Alaska has the most interest and the most knowledge about the area in question. It would seem to me that close involvement with environmental agencies in the Alaska government and unquestioned following of their recommendations would be basic to any operation of this magnitude. I have read many reasonable suggestions to allow the operation to go on and yet greatly minimize the negative impacts. From what I can see, the Navy accepts Alaska and public input, but has little interest in altering its direction. The only true pressure that the Navy is concerned with must come from within the Federal Government. My hope is that enough public pressure will generate some congressional action, an oversight committee, or national environmental pressure to protect a National Treasure from unnecessary damage.	Your comment is noted and thank you for participating in the NEPA process. As explained in Section 1.6 (The Environmental Planning Process) of the Supplemental EIS/OEIS, the decision on which alternative the Navy will pursue will be made in light of the Purpose and Need by Navy representatives following the review of all relevant facts, impact analyses, and comments received via the EIS/OEIS public participation process.
M. Fell-Cheston (Electronic)	Please explain to your public why it is okay to kill untold amounts of marine mammals, fish, etc. in the Gulf of Alaska over the next 5 years, so you can "practice". Why, why, why is that okay? It appears your decision is set and no amount of public comment is going to change that. Why even accept comments? Protocol? Buying a little time? I don't understand, none of us do. Except for one thing: the Navy is nothing more than another corporation, another machine bent on making as much money as possible. Protect us? I'd say from you. Why does no one on this planet seem to give a rip about the wildlife, be it on land or sea? You are some of the worst perpetrators. You make our lives on central Whidbey Island miserable with your Growlers overhead. All in the name of "freedom"? We are your prisoners. Oh, that's right. Unless we sell and move. Obviously, and once again, because you don't give a rip about anyone or anything but yourselves. How can you live with yourselves every day?	The analysis in Section 3.6 (Fish) and Section 3.8 (Marine Mammals) of both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, shows that the proposed training activities are predicted to have no impact on populations of fish and there are no mortalities to marine mammals expected from the continuation of training that has been occurring in the Study Area for more than a decade. As explained in Section 1.6 of the Supplemental EIS/OEIS, the decision on which alternative the Navy will pursue will be made in light of the Purpose and Need by Navy officials following the review of all relevant facts, impact analyses, and comments received via the EIS/OEIS public participation process. Activities at Whidbey Island, Washington are outside the scope of the proposed action covered in this Supplemental EIS/OEIS.
L. Fineman (Electronic)	Please don't commence naval exercises in Alaska. This would negatively impact thousands of animals. How would you like it if someone went to your home and emitted sounds that would deafen you, but they said it's ok, they won't do it if they can tell if anyone is home. Please just don't.	Please note that the Navy is not proposing to "commence" training, but is proposing to continue to train in the Gulf of Alaska as has been occurring previously. Please see Section 1.1 (Introduction) of the Supplemental EIS/OEIS where it explains that the training activities being analyzed have been occurring in the same training area for more than a decade. These training activities were last analyzed in the 2011 GOA Final EIS/OEIS. The proposed action and Navy training activities detailed in the Supplemental EIS/OEIS are not new. Please see the Supplemental EIS/OEIS Section 3.8.3.1.2.3 (Hearing Loss)

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		where it explains that the term “hearing loss” does not equate to “deafness.”
K. Finn-01 (Oral – Homer)	Okay. I am Kate Finn. I'm embarrassed to say I am vastly, vastly less prepared than Shelley or Olga. And I'm just speaking for myself. And some of my comments have already been done by Shelley and by Olga. I did have questions I was really hoping to ask. I guess I have to wait until afterwards. But in response to one of the comments about short term effect, I did do a tiny bit of research. And one of the things I found that I'm just -- my heart got palpitating when you guys said that it was very temporary. I don't know what that means. There's a blue whale population, I believe it's actually in Southeast America, but I don't know that for sure, was found that his acoustic bubble had shrunk from 1,000 miles to 100 miles since 1940. So, he's hearing a tenth, these whales are hearing one-tenth of what they heard before; one-tenth of where their prey are, one-tenth of where their food is, one-tenth of where their mating opportunities and variety are. Their one-tenth of everything that they bring in has been decreased, at least in the blue whale. Now, is that really going to be different over time here? How do we know that? I don't know how they found this out, but apparently it was in Discover magazine this year, so I think it's a very accurate piece of information. So temporary is what to whom, is one thing.	Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) regarding impacts to marine mammals. Assuming your comment refers to temporary threshold shift in hearing sensitivity – see Section 3.8.3.1.2.3 (Hearing Loss) of the Draft and Final Supplemental EIS/OEIS where it explains that the recovery for a loss of hearing sensitivity occurs within minutes to hours for the small amounts of TTS that have been experimentally induced. Regarding the impact from chronic noise relating to the masking of hearing, see the referenced Rolland et al. (2012) as it relates to investigation of right whales and Williams et al. 2013 for a similar study.
K. Finn-02	The other is the bleeding in the head, the deafness, the immediate impact, however temporary it may be. The acoustics are for the whales and the other mammals in the water like sight is for us. Are we going to lose our sight temporarily? For months or weeks or years? What does that mean? What do I do in the meantime? How do I feed myself? How do I make a living? How do I take care of my children? How do I find my mate? When I'm temporarily blinded, which is what's happening with the whales. And I - again, this was part of my question I was very much hoping for a response while we're talking, and I will wait until afterwards to see, you know, what you guys have to say. I'm sure you have some answers to this.	Subjects covered by this comment are presented in the Draft and Final Supplemental EIS/OEIS in Section 3.8.3.1.2.1 (Direct Injury). Regarding the analogy to being blind, note that as mentioned in the response above, as presented in Section 3.8.3.1.2.3 (Hearing Loss) of the Supplemental EIS/OEIS, the analysis does not indicate animals will be made “deaf.”
K. Finn-03	The other is, of course, the comment about the timing of these exercises. Being in the summertime is just appallingly ridiculous. It is when the populations are here. What are we doing? Maybe it's not possible to do it in the wintertime; fine, go do them someplace else. As Shelley says, where already the environment has been so damaged that there's really no need to, you know, be concerned about the damage that's going to be furthered by these exercises.	Regarding conducting the training in the winter, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Draft and Final Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). The proposed continuation of training in the GOA will not damage the environment.
K. Finn-04	I appreciate your effort, I appreciate the danger and the excitement that you live. I really do. And I'm grateful for that. I know that as a country we need to be protected, and I'm - and I'm okay with that. I'm glad for that. But please, please, please, this is a -- I think that this a place where we can do something different. So let's do that, instead of just following the same old, same old because it's easy. And because we're the biggest population to show up for public comment, I'm really sad to hear that. I know equally as	See the response above to K. Finn-02 regarding the incorrect analogy to “temporary blindness” and “temporary deafness.”

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	many people as there are here who feel strongly about it who just can't make it. And I'm just about out of time, and I don't have anything more really productive to say. So, thank you for coming. Please, please hear these comments. And temporary blindness is not an option I want. And I don't think the whales want temporary deafness either. Or any other marine mammal.	
K. Finn (Written)	Please address in some detail the noise pollution “acoustic fog” created by these tests for more inhabitants of Cook Inlet than just Beluga Whales. There are humpbacks, Orca, Grey, Minke as well as seals, otters, and fish. The noise pollution is huge! It damages hearing, can cause internal bleeding and death, as well as: Disrupted navigation Communications – keeping track of the pod Finding food and mates Detect prey, monitor surroundings Noise pollution decreases dramatically the whales “acoustic bubble”. In the case of blue whales, it has shrunk from 1,000 miles to 100 miles since 1940.	The issue of “noise” is addressed in various areas of the document specific to the resource, but for marine mammals see the Draft Supplemental EIS/OEIS Section 3.8.2.4 (General Threats) and 3.8.3.1 (Acoustic Stressors). Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action and that none of the Navy training activities take place in or otherwise affect Cook Inlet. Regarding “damages to hearing” see the Supplemental EIS/OEIS in Section 3.8.3.1.2.1 (Direct Injury).
A. Flanagan (Electronic)	I beg you as a lifelong Coastal Alaskan to take your training exercises deeper in the Pacific and do it in the Winter. Our marine animals are too important to our well-being as humans to sacrifice. They bring joy and peace to our soul and provide us food when times are hard. Thank you from a Citizen of the United States and Alaska: A. Flanagan	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success.
P. Fluegel (Electronic)	If the navy is going to use high frequency sonar and munitions in the gulf of AK (Where I have spent most of my life) please at least consider changing your schedule to winter, when it will have less damaging impact on marine life. Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
T. Forthofer-01 (Electronic)	Thank you for the opportunity to share comments. I'm asking for reconsideration of the Navy proposal for expanded war games in Alaska. With recent news that we've driven 50% of all animals to extinction in last 40 yrs, and the oceans are unhealthy, it seems egregious to deliberately undertake activities that will "take" thousands of marine mammals. Ideally, the Navy would undertake no new action and maintain training as usual.	Please see Chapter 1 (Purpose and Need) of the documents regarding the proposed action and note that the Navy is not proposing to "expand" training. The training that was authorized since 2011 has been occurring for decades, often at a reduced level of activity than analyzed in the proposed action. See the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) regarding the status of marine mammals and the likely effects resulting from the continuation of training in the area.
T. Forthofer-02	At minimum, they should consider relocating the exercises to a more remote part of the Pacific (away from the shelf and slope) - at least 100 miles from the nearest seamount.	The commenter's suggestions were already considered; regarding training in "a more remote part of the Pacific," please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary location of the exercise event, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). Regarding the suggestion to stay away from "the shelf and slope," see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Additionally, as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore. With regard to relocating the proposed training exercises "at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
T. Forthofer-03	The timing of the operation should also be adjusted from summer to winter to minimize impact on migrating whales.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
T. Forthofer-04	Allowing independent scientific researchers to observe the exercises and confirm the mitigation plan would go a long way to appeasing environmental groups.	With regard to independent observers, please see the discussion in the Draft and Final Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
T. Forthofer-05	Lastly, the ship-sinking exercises are completely unnecessary. Sinking ships is not difficult and seems to be something that are Navy knows how to do quite well.	Regarding "ship-sinking exercises," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) of the 2011 GOA Final EIS/OEIS to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
T. Forthofer-06	Alaska seems to be the last untouched frontier from a wildlife and environmental protection perspective. I would hate to see that ruined for exercises that are not needed and potential disastrous for marine life in the area. Thank you, T. Forthofer Mooreville, NC	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need of the proposed action. The training that was authorized since 2011 has been occurring for decades, often at a reduced level of activity than analyzed in the proposed action. Regarding impacts to marine mammals, please see the Draft and Final Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
J. Fowler-01 (Written)	Where this study area is it is clear that these exercises should not be held in the summer months as this is a peak time for marine mammals in the area. This is poor planning on the part of the Navy.	Please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Draft and Final

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
J. Fowler 02	Also I think the non action alternative should be chosen. Thank you J. Fowler	The Navy's No Action Alternative is the status quo from the 2011 GOA Final EIS/OEIS; see Chapter 2 (Description of Proposed Action and Alternatives) for details. The proposal is for the continuation of training that was authorized in 2011 and has been occurring for decades, often at a reduced level of activity than analyzed in the proposed action. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
M. Fraser-01 (Electronic)	I am against these navy training exercises. I am concerned about how this could effect our fishery, wildlife and community. More research needs to be done before this is allowed.	Please see the analysis presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS detailing the research that has been done and the science supporting the determinations of effect presented in those documents. See Section 3.6 (Fish), other sections in Chapter 3 (General Approach to Analysis) for other "wildlife," and Section 3.12 (Socioeconomics) regarding the local community. The proposal is for the continuation of training that was authorized in 2011 and has been occurring for decades, often at a reduced level of activity than analyzed in the proposed action. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
M. Fraser-02	Also more advertisement needs to be done when there is a public meeting. Very few people knew about the meeting that took place in my home, Cordova. I know that the whole fishing community would have been there had they been told about it.	The Navy has complied with all NEPA notification requirements under 40 C.F.R. § 1506. NEPA regulations require that agencies not allow less than 45 days for comments on a DEIS. The 60 day public review period for the Gulf of Alaska (GOA) Draft Supplemental EIS/OEIS began with publication of a Notice of Availability on August 22, 2014. This notice specifically listed library repositories where the hard copy document could be viewed, and stated specifically that the document could be viewed online at the project website. In addition, specific mention of the locations where a copy of the Draft Supplemental EIS/OEIS could be viewed or downloaded were made in the following: - Postcards sent to potentially affected Tribes and Nations, State and Federal regulatory and government agencies, non-governmental

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		organizations, fishing groups, and individuals - Newspaper advertisements in newspapers in Alaska - News releases to numerous print, TV, and online media - Meeting flyers sent to community locations in Alaska. - Stakeholder letters sent to previously identified stakeholders including Tribes and Nations, Federal and State elected officials, State and Federal regulatory and government agencies, and individuals. Public comments are a core tool of participation in the NEPA process. The Draft Supplemental EIS/OEIS was released to the public for a 60-day comment period. During this 60-day period, the Navy made extensive efforts to conduct outreach based on what was learned during the previous release of the 2011 GOA EIS/OEIS and public feedback. There were ample opportunities, as well as a wide variety of options, to comment on the Gulf of Alaska Draft Supplemental EIS/OEIS. The public provided comments via mail, online comments via the Gulf of Alaska Supplemental EIS/OEIS website; or attendance at one of five public meetings in the state of Alaska in September 2014. At the public meetings, the public had an opportunity to publicly or privately comment in front of a court reporter or fill out a comment form, and turn it in. For additional information on public outreach, please see Section D.3 of this appendix.
J. Gaedeke (Electronic)	Please limit your sonar activities to the winter when they are less harmful to marine mammals. Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Draft and Final Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
A. Gallo-01	I'm concerned about the loss of marine mammals due to the Naval exercise in the Gulf	Please note that no loss of marine mammals is predicted to result from

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	of Alaska. I've taken the Cross Gulf Ferry 5 times and always enjoy seeing whales, dolphins and other sea life.	the continuation of Navy training in the area. Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details.
A. Gallo-02	I would like to see the Navy move the exercise further out to sea to avoid the killing of these creatures. Being a Vietnam veteran I understand the need for the Navy to have training exercises. Please consider moving the exercise to avoid the needless deaths of these wonderful creatures.	As presented in the analysis in the Supplemental EIS/OEIS, there are no mortalities expected to result from the continuation of Navy training in the area. Regarding moving the activities "further out to sea," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
M. Gamboa (Electronic)	Hi there, This comment is in regards to the Navy's plan to expand its warfare training exercises. As you know, countless marine mammals would be adversely affected by the use of active sonar and live weapons. In the interest of saving time, I will not post all the research proving the negative consequences of the proposed Navy training exercises, as I'm sure you're well aware of the facts. I implore you to reconsider your plans and consider the lives and well being of our marine mammal who would suffer gravely. Thank you for your attention, M.	Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing expand training over that already authorized since 2011 or otherwise been occurring for more than a decade in the Gulf of Alaska. Regarding the effects to marine mammals, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
L. Garrison (Written)	I object to Navy training activities in the Gulf of Alaska that use high power sonar or other such methods. These put our whale populations at risk. If such training methods are absolutely necessary then perform them in the winter when the whales are not in the area.	Please see in general Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training including the use of sonar and other activities. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
M. Gibbons (Electronic)	The Navy really must change the procedures for testing in the Gulf of Alaska! The wildlife ecosystems are too fragile for us to be messing with. Habitat change due to climate is enough for these poor creatures to deal with. The Navy can change the testing to accommodate them.	Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Regarding climate change, the specific contributions of a particular project to global or regional climate change generally cannot be identified based on existing scientific knowledge, because they typically are extremely small and climate processes are understood at only a general level (see Section 3.1.1.1 [Existing Conditions]). Cumulative regional contributions to climate change as it applies to Navy's actions in the area are addressed in Section 4.2.1.2 (Greenhouse Gases) of the 2011 GOA Final EIS/OEIS. In response to concerns over climate change, Department of the Navy leadership has initiated broad programs to reduce energy consumption and shift energy demand to renewable and alternative fuels to the extent consistent with its national security mission, thereby reducing emissions of CO2 and other GHG.
S. Gill (Electronic)	The Navy proposal is in the wrong place at the wrong time. Navy activity could disrupt migration of salmon as well as marine mammals. It could have a devastating impact on the economy. The Navy has not even considered the impact on beaked whales-known to be in the area- even though they were sued and lost after causing a mass stranding in the Bahamas doing the same kind of war games. This joint operation needs to be conducted either somewhere else or in winter when the impact will be less.	Please see the Supplemental EIS/OEIS Section 3.6 (Fish) and Section 3.8 (Marine Mammals) and note that there is no science indicating the continuation of Navy training, which has been occurring in the area for over a decade, would result in a disruption of migration for salmon or marine mammals. See the Supplemental EIS/OEIS Section 3.12 (Socioeconomics) regarding the lack of any negative impact to the local economy. The Navy did consider impacts to beaked whales; see for example Section 3.8.3.3.4.2 (Odontocetes) and the sub-section titled <i>Beaked Whales</i> in the Supplemental EIS/OEIS, for a consideration of beaked whales under Alternative 1. Please see Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that the proposed continuation of Navy training in the Gulf of Alaska is not the same as the training event which occurred in the Bahamas in 2000. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
S. Gill-01 (Oral – Homer)	My name's Shelley Gill, I'm a board member of EyeoftheWhaleResearch.org, which conducts marine mammal research in Prince William Sound, primarily in Western Prince William Sound. We study primarily humpback whales, and we have been in the sound on a long-term study for 32 years. It's one of the longest running research projects in the world. And for the record, we have not been asked for any input from the Navy regarding the impact on these proposed activities on the humpback population. So, I'm assuming that most of the data is coming from National Marine Fisheries.	Please see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) regarding the various sources of information used in the analysis; some of the data has come from National Marine Fisheries Service who served as a cooperating agency in the development of 2011 GOA Final EIS/OEIS and is serving as a cooperating agency in the development of the Supplemental EIS/OEIS.
S. Gill-02	From the Barren Islands all along the Gulf Coast to Prince William Sound is a migratory pathway for whales and salmon. Marine species in general use sound to navigate because they evolved to take advantage of the fact that sound moves four times faster through water than air. The complexity of the creature determines the type of sound system they use for both navigation and to perceive their world. Some whale species have incredibly sensitive auditory systems that we are only beginning to understand. There exists a body of evidence, however, that human generated underwater sound is at best altering marine mammal behavior, and at its worse is killing them. After the 9/11 disaster, when all marine and air traffic was halted, biologists monitoring the severely endangered North Atlantic right whale saw an immediate drop in the whales' stress levels. In all area of the world, whale vocalizations have increased in volume. They are screaming to be heard.	This information was presented in the Supplemental EIS/OEIS in Section 3.8 (Marine Mammals); see reference to Rolland et al. (2012) for example.
S. Gill-03	The truth is, we know very little about these mammal populations. NAEMO is slick, for sure, but it's only as good as the data that goes into it. We've spent decades trying to decide what together means for a 60 foot animal. On the other hand, we have been able to show humpback populations have complex social bonds, lifelong friendships that get stronger with time.	Comment noted.
S. Gill-04	The whole area of the proposed Navy games was heavily oiled after the EXXON VALDEZ oil spill. And many species have failed to recover. Some, like the transient AT pod in Prince William Sound will never recover. It has been 25 years and these	See Figure 1.2-1 in the Supplemental EIS/OEIS and note the location of the TMAA; the historically used training area is not located in nor includes any part of Prince William Sound.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	communities that rely on the sea still feel the emotional toll the oil spill took. This proposal is very worrisome to those communities taking in once by the glib promises of Alyeska Pipeline, Exxon, and Exxon's drunk Captain Joe Hazelwood.	
S. Gill-05	Seventeen years ago, when I started working in Prince William Sound, one saw few boats around. Now each summer it looks like Christmas on Madison Avenue. Thanks to the current governor, we've lost control of our coastal zones, and because the Citizen's Clean Water Initiative has been overturned by that office, the impact by the cruise ship industry in the sound is now appalling. We must look at the cumulative effects of all these impacts, including the Navy's.	See the Supplemental EIS/OEIS Chapter 4 (Cumulative Impacts) for a discussion of cumulative effects resulting from Navy's proposed action.
S. Gill-06	I heard Mr. Stone telling another guy a little while ago that blue whale populations have recovered. Blue whales are doing better. So are humpback whales. But they are far from recovery to prewhaling days. And we can only wonder what toll ocean acidification and accelerating number of ship strikes, including our own Alaska ferry, the Japanese, lack of habitat, and the future lack of food in that habitat will have.	See the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) presenting evidence that populations of blue whales and humpback whales have likely recovered from their numbers prior to industrial whaling. This section also considers likely long term impacts as a result of continued training in the area.
S. Gill-07	Precision, though, is important in landing aircraft on decks and in predicting the impact to marine mammals. For the record, five years ago the first blue whales swam their way north again. It was the first time they'd been seen in over forty years. To construe this as recovered, however, is ridiculous. They have retained their migratory routes. This creature, the biggest creature on earth, is no longer the blue whale. Man killed all the big ones. Now the fin whale is bigger. It, too, has not recovered. The loudest creature on earth, again the blue whale, cannot be heard by human ears. That seems a perfect metaphor in this circumstance.	See the Supplemental EIS/OEIS Section 3.8.2.8 (Blue Whale [<i>Balaenoptera musculus</i>]) for a discussion of blue whale recovery and Section 3.8.2.9 (Fin Whale [<i>Balaenoptera physalus</i>]) for fin whale discussion, which have also recovered.
S. Gill-08	I would like to propose it would be a better plan for the Navy to train off the coast of San Diego or Annapolis or somewhere where the marine environment has already been degraded. The Atlantic grey whales are extinct, right whales are headed in the same directions, fisheries on the Atlantic are a shamble. Besides, folks in Annapolis can depend on the government or the academy for jobs. Most Alaskans depend on wild oceans with salmon, halibut, whales, and sea lions. We choose to live in a way that we are supported by the land and oceans. And it is now our turn to support that land and ocean that sustains us.	Regarding the suggestion to conduct the historically occurring training elsewhere, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. Additionally, the Navy has agreed to preclude a SINTEX event from occurring in Habitats of Particular Concern and Navy has established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the June to September timeframe. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
T. Goodwin (Electronic)	The Navy's Gulf of Alaska (proposed) exercises seem to be largely unnecessary- there are suitable alternatives- and will cause massive death and injury to a huge number of highly evolved marine mammals. It is immoral, knowing the great harm that will be done to these creatures despite available alternative protocols and locations, that this be allowed to go forward.	Please see in general Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. The continuation of Navy training, which has been occurring for more than a decade, will not result in "massive death" of marine mammals as the comment asserts; see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) for details.
C. Gordon-01 (Electronic)	As a U.S. citizen, I am outraged that the Navy is planning warfare training exercises in the northern Gulf of Alaska that will have extreme negative impacts on THOUSANDS of marine mammals. This is totally unnecessary and unacceptable. The people of America are tired of war, war games, and the utter disregard of other life forms on the planet that these activities promote. The U.S. government and all its branches, including the U.S. Navy, have an obligation to do no further harm to the planet. War games are not a justifiable reason to sacrifice thousands of marine mammals. Whales in particular have borne the brunt of violence from humans for many hundreds of years. These practices cannot continue, even in the guise of their present-day form of "training exercises." There is one and only one action that the U.S. Navy, which exists to serve me and the rest of the American people, should pursue: a NO ACTION. Cancel these unnecessary expanded training exercises immediately. However, I am not optimistic that the U.S. Navy will cancel these expanded training exercises.	Please note that the Navy is not looking to expand its training in the study area. As noted in Section 1.1 (Introduction), the proposed action is to continue training that has been ongoing for more than a decade. Regarding the need for Navy training, please see Chapter 1 (Purpose and Need). See the analysis in Section 3.8 (Marine Mammals) of the Supplemental EIS/OEIS regarding effects to marine mammals. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to expand training over that already authorized since 2011. Cancelling the historically occurring training in the Gulf of Alaska is not a viable alternative. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
C. Gordon-02	If the U.S. refuses to listen to the American people and cancel, there are two remaining actions that would provide far better mitigation than the totally unsatisfactory mitigation plan that the Navy currently has: (1) Move the location of the exercises from Alaska to the central Pacific Ocean where whales will not be impacted.	To understand the current proposed mitigation measures, see the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring). Regarding moving the historically occurring activities out of the TMAA to "the central Pacific Ocean," see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area and the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
C. Gordon-03	(2) If the Navy insists on conducting the exercises in the Gulf of Alaska, make changes to the practice plan that will provide far greater mitigation for marine mammals: 1. Restrict the training area only to areas far offshore, away from the continental shelf and slope, where most marine mammals are found, east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	Regarding the suggestion to restrict training to "areas far offshore," "away from the continental shelf and slope" and east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
C. Gordon-04	2. Change the timing of operations from summer (April to October) to winter (November to March), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
C. Gordon-05	3. Include INDEPENDENT scientific observers during the exercises to confirm effectiveness of the mitigation plan. Reputable independent scientific observers known in their fields pose no security threats;	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
C. Gordon-06	and 4. Cancel the ship sinking (SINKEX) exercises altogether. They are absolutely unnecessary.	Regarding cancelling the “ship-sinking” exercises, please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
C. Gordon-07	It's time for the U.S. Navy to listen to the U.S. people. Marine mammals should NEVER be subjected to this kind of loud underwater noise from sonar and explosions. No marine mammals should be sacrificed in our name for the sake of unnecessary war games. Cancel these expanded training exercises immediately.	Please see the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) regarding the likely effects resulting from the continuation of training in the area. Please see Chapter 1 (Purpose and Need) of the documents regarding the proposed action, which states that Navy is not proposing to expand training as the comment asserts. The training that was already authorized since 2011 has been occurring for decades, often at a reduced level of activity than analyzed in the proposed action.
E. Haddix (Electronic)	I am writing about the Navy's proposed training actions for the Gulf of Alaska. I object to the Navy undertaking these training exercises in the proposed location. I have reviewed	Please see in general Chapter 1 (Purpose and Need) of the documents regarding the requirement for Navy training in the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	your proposal and several opinion pieces regarding the proposal. It seems that your training exercises could be held in a variety of places that would create less significant impact on the marine mammal populations. At the least, you could hold your training exercises during a time of year where the marine mammals at issue would be less likely to be present in high numbers, and with newborns. When you negatively impact the Marine Mammals headed to Alaska you are also directly harming Alaskans - both for our relationship with those animals, and a direct economic (tourism and ecological) impact. Please reconsider your proposed training location / timing.	historically used TMAA; Please note that the same training could not be accomplished elsewhere. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
A. Hall (Electronic)	I don't understand why the Navy has to hold war games in the Gulf of Alaska. Move them further out. The Marine habitat should not be disturbed for games. Wrong place, wrong time.	As described in Section 2.3.2.1, the Navy considered, but rejected, alternatives that included moving this exercise to other locations. Such alternatives fail to meet the purpose of and need for the proposed action. Additionally, as discussed in Chapter 2, Section 2.3.2.1 of the 2011 GOA Final EIS/OEIS, the GOA TMAA provides a strategically important and unique venue for conducting required Navy training activities and meeting the mission of Alaskan Command.
T. Hall (Electronic)	I am very concerned about the proposed naval maneuvers to take place and Alaskan waters, including the use of live ammunition and loud underwater pinging as would be used for the detection of submarines. I am very familiar with Alaskan waters and have recently read the book "War on Whales." The damage these naval activities can do to wildlife and the environment in general is great. Navy maneuvers should be closely monitored and controlled within acceptable and not harmful limits.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and were previously analyzed in the 2011 GOA Final EIS/OEIS. The proposed action detailed in the Supplemental EIS/OEIS is not new. See the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Please reference this section and Section 5.5.2 (Reporting) of the Supplemental EIS/OEIS regarding past and future monitoring of Navy training activities.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
M. Hand (Electronic)	I would ask that you please consider the livelihoods of fishermen around the State of Alaska. The ocean in our lifeblood and something that none of us would ever risk hurting. Consider all options and please think outside the box in order to come up with a solution. I believe the pristine marine environment around Kodiak and Prince William Sound can co-exist with the necessary Naval training exercises, but please consider what each of those "splashes" from your bombs does. Each will have an impact. None of that metal belongs in the ocean, so consider what the ocean can handle.	The livelihoods of fishermen were considered in Section 3.6 (Fish) and Section 3.12 (Socioeconomics) in both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS documents as well as in numerous discussions and input from the public having taken place since the development of the 2011 GOA Final EIS/OEIS. Please see Section 3.2 (Expended Materials) of both documents regarding an analysis of impacts from expended materials. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. Additionally the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern and Navy has established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
N. Hand (Electronic)	Please consider the coastal fishing community of Cordova with your decision. I am a fisherman in Cordova and ask that you postpone these trainings until you can study the affects on salmon. I also ask to have the trainings rescheduled to be done during the fall, as to not be done during the commercial fishing season that takes place every May through September. Our community depends on this fishery and we have a deep respect for the environment we work in. The Gulf of Alaska is my home and my where I work to support my livehood. Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. The training activities being analyzed have

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		been occurring in the same training area for more than a decade and were previously analyzed in the 2011 GOA Final EIS/OEIS. The proposed action detailed in the Supplemental EIS/OEIS is not new and will not affect the fishery in the future.
K. Hart-01 (Electronic)	pages 3.8-16, 17 "Anthropogenic noise is generated from a variety of sources, including commercial shipping, oil and gas exploration and production activities, commercial and recreational fishing (including fish-finding sonar, fathometers, and acoustic deterrent and harassment devices), recreational boating and whale-watching activities, offshore power generation, research (including noise from air guns, sonar, and telemetry), and military training and testing activities. Commercial shipping's contribution to ambient noise in the ocean has increased by as much as 12 dB over the last few decades (Hildebrand 2009, McDonald et al. 2008). Navy training activities in the Study Area are not a chronic noise source and are not on par with sources of noise such as those from oil and gas seismic exploration or commercial shipping." NEPA requires a cumulative analysis of the impact of adding the military activities and disturbances onto these other disturbers, not to dismiss impacts of military activities on account of other activity (that also stresses marine mammals).	The quoted information from the Supplemental EIS/OEIS cited in the comment is a presentation of the facts involving baseline conditions as opposed to a means to "dismiss impacts" resulting from the proposed training as the comment asserts. Please see Section 4.2.4 (Acoustic Environment [Airborne]) of the 2011 GOA EIS/OEIS for a discussion of anthropogenic noise impacts on the marine environment and Section 4.4.2.2.4 (Marine Mammals/Ocean Noise) of the Supplemental EIS/OEIS for a discussion of sound- and vibration-related cumulative effects on marine mammals. Please see Appendix D (Acoustic Primer) of the Supplemental EIS/OEIS for further detail.
K. Hart-02	There appears to be inadequate information to truly understand and assess impacts, or even to know population sizes and whether there are impacts there.	See the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) to review the compendium of best available science and the assessment of impacts resulting from the proposed action.
K. Hart-03	Military readiness is vital to our national security, but it need not come at the expense of degraded water quality, fisheries and marine mammal populations.	Please see the analysis presented in Section 3 (Affected Environment and Environmental Consequences) of the 2011 GOA EIS/OEIS and the Supplemental EIS/OEIS. The continuation of Navy training in Gulf of Alaska will not result in degraded water quality or fisheries, or have long-term consequences to populations of marine mammals.
K. Hart-04	The Navy estimates that its sonar training exercises in the GOA from its Preferred Alternative (Alternative 2) will result in more than 425,000 marine mammal "takes" (behavioral impacts, harassment, injury, death) every year - that's over 2.125 million takes during the course of the Marine Mammal Protection Act permit it must seek from NOAA. In all, the Navy expects to "take" more than 20 different species of marine mammals, including 7 endangered species, in the GOA.	As described in the 2011 GOA Final EIS/OEIS and in this context, the term "take," as defined by the Marine Mammal Protection Act is in reference to actions that "harass" and all but three (3) of the estimated "takes" are behavioral. There are no mortalities predicted or expected from the continuation of training in the Gulf of Alaska. As presented in the Supplemental EIS/OEIS, the number of total effects predicted from the use of sonar and other active acoustic sources under Alternative 2 is 36,414 annually based on the latest science and more accurate modeling approach. Only 3 of these total annual effects from the use of sonar and other active acoustic sources involve injury; the remaining 36,411 are temporary changes in an animal's behavior. With regard to long-term effects, please see for example Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Behavioral response studies and the results of research efforts and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		monitoring of Navy events since 2006 show no long-term impacts to marine mammal populations. In the Supplemental EIS/OEIS, the Navy has assessed that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy including the TMAA.
K. Hart-05	Nearly all of the mitigation measures that the Navy has proposed for the GOA concern the operation of a small "safety zone" around the sonar ship. Yet it is widely agreed in the scientific community that this measure is inadequate given the far-reaching effects of Navy sonar and the difficulty of spotting marine mammals from fast-moving vessels.	Please see Chapter 5 (Mitigation Measures) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, which discussed mitigation measures. The current mitigation measures were developed in collaboration between Navy scientists, acoustic experts, and marine mammal scientists with the National Marine Fisheries Service. In response to scoping during the 2011 GOA EIS/OEIS, the boundary of the TMAA was moved to the southwest to avoid Steller sea lion critical habitat.
K. Hart-06	The Navy has not proposed to establish any protection areas in the GOA, despite the broad recognition that geographic protection zones are the most effective available means to mitigate sonar's impacts on marine wildlife.	In response to scoping during the 2011 GOA EIS/OEIS, the Navy did move the boundary of the TMAA specifically to avoid Steller sea lion critical habitat. In addition, already incorporated into the Navy's and NMFS' analysis of effects to marine mammals has been consideration of emergent science regarding locations where cetaceans are known to engage in activities at certain times of the year that are important to individual animals as well as populations of marine mammals. Such locations have been designated Biologically Important Areas (BIAs). It is important to note that the BIAs were not meant to define exclusionary zones, nor were they meant to be locations that serve as sanctuaries from human activity, or areas analogous to marine protected areas (see Ferguson et al. [2015a]; this and the other citations referred to below are citations in the GOA Final Supplemental EIS/OEIS) regarding the envisioned purpose for the BIA designations). The delineation of BIAs does not have direct or immediate regulatory consequences. The intention was that the BIAs would serve as resource management tools and their boundaries be dynamic and considered along with any new information as well as, "existing density estimates, range-wide distribution data, information on population trends and life history parameters, known threats to the population, and other relevant information" (Van Parijs 2015). The Navy and NMFS have supported and will continue to support the Cetacean and Sound Mapping project, including providing representation on the Cetacean Density and Distribution Mapping Working Group (CetMap) developing the BIAs. The final products from this mapping effort, including U.S. West Coast BIAs, were completed and published in March 2015 (Aquatic Mammals 2015; Ferguson et al.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		2015a, 2015b; Van Parijs 2015). A review of the final BIAs for fin whales, North Pacific right whales, beluga whales, humpback whales, and gray whales showed that there is only minimal spatial overlap with the North Pacific right whale feeding BIA and the gray whale migration BIA (see Ferguson et al. 2015b) with the Navy TMAA. Because these two BIA are at the nearshore edge of the TMAA, Navy events there are unlikely. Additionally, there may be only limited if any temporal overlap between Navy activities in those areas and animals being present (especially for the North Pacific right whale). Finally, effects to gray whale migration or North Pacific right whale feeding are unlikely to result from any Navy training activities that might take place (such as vessel transit) in those BIAs. Acoustic impact modeling indicates no MMPA effects to gray whales. Given that spatial and temporal overlap are not expected, and would be biologically insignificant if they did co-occur, the Navy has determined that no additional mitigation measures beyond those presented in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) are necessary for Navy activities that may occur in the BIAs. However, the Navy has agreed to establish the overlapped North Pacific Right Whale feeding area within the TMAA (an area measuring approximately 2,050 km²) as a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur between the June and September timeframe.
K. Hart-07	For example, no protection areas are proposed for harbor porpoises, which are acutely sensitive to sound; for endangered gray whales, which migrate directly through the TMAA; for endangered humpback whales and blue whales, which gather to feed in the TMAA; for the critically endangered North Pacific right whale, whose critical habitat is directly adjacent to the TMAA; or for any other species or habitat. The Navy does not properly analyze environmental impacts. For instance, it completely disregards the serious impacts its sonar training will have on the critically endangered North Pacific right whales, whose critical habitat is only 12 nautical miles from the training area or the endangered gray whales, which migrate through the training area.	Regarding analysis for North Pacific right whale, see the Supplemental EIS/OEIS Sections 3.8.2.6 (North Pacific Right Whale [<i>Eubalaena japonica</i>]); 3.8.3.3.4.1 (Mysticetes); 3.8.3.3.5.1 (Mysticetes); 3.8.3.3.8.1 (Mysticetes), etc. of the Supplemental EIS/OEIS. The Navy is aware of the designated North Pacific right whale Critical Habitat as discussed in those sections and as shown on Figure 3.8-1 of the Supplemental EIS/OEIS. The majority of Western North Pacific gray whales feed and migrate within the Western Pacific. There has been no indication that Western North Pacific gray whales use any of the Gulf of Alaska nearshore gray whale feeding areas. These feeding areas are also outside of the GOA TMAA. A few individuals (n = 3) tagged with long-term satellite tracking tags did migrate briefly through the Gulf of Alaska on their way to breeding grounds off the Pacific coast of Mexico (Mate et al. 2015). However, these animals moved quickly through the shelf and offshore waters of GOA and would not be resident, foraging, or in GOA for more than a number of days during their transit. Furthermore, the timing of these migrations to and from the Mexico breeding grounds (December to February and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		February to May) (Mate et al. 2015) is outside of the window in which Navy training activities have been proposed (May to October with highest probability of June to July for Northern Edge). Therefore, there would be minimum to no overlap between Navy training activities and Western Pacific gray whales. Finally, Mate et al. (2015) went on to hypothesize that the gray whales tagged could also be individuals from the Eastern North Pacific gray whale stock that have expanded their distribution to feeding grounds off Russia, where they co-mingle with the true Western North Pacific stock whose migration is solely along the coast of Asia. No gray whales were detected in the TMAA Study Area during the GOALS II survey (Rone et al. 2013). Gray whales, humpback whale, and blue whales have largely recovered (see discussions in Section 3.8 of the Supplemental EIS/OEIS), and there is no evidence that Navy training activities have had any impact on these populations in the Pacific in areas such as Southern California or Hawaii, where Navy training has been occurring year-round for decades (see the Supplemental EIS/OEIS Section 3.8.5, Summary of Observations During Previous Navy Activities).
K. Hart-08	Furthermore, it fails to discuss and analyze the cumulative effects its activities may have in conjunction with other projects and activities in the area. The Navy underestimates the number of marine mammals (and fish) that will be harassed, injured and killed because it simply does not have the density estimates needed in order to accurately make this determination. The National Environmental Policy Act (NEPA) specifically requires federal agencies to obtain the data necessary to their analysis. The simple assertion that "no information exists" will not suffice; unless the costs of obtaining the information are exorbitant, NEPA requires that it be obtained. See 40 C.F.R. § 1502.22(a).	Please see Chapter 4 (Cumulative Impacts) in both the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS for a discussion and analysis of cumulative effects. See the Supplemental EIS/OEIS Section 3.8.2.5 (Marine Mammal Density Estimates) Section 3.8.3.1.6.1 (Marine Species Density Data) and the referenced "Pacific Navy Marine Species Density Database Technical Report" (available on the GOA website) regarding the availability of data used in the acoustic effects modeling. As presented in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) of the Supplemental EIS/OEIS, modeling assumptions believed to overestimate the number of exposures were chosen. Please see Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding impacts to fish.
K. Hart-09	The Navy's acoustics impact analysis ignores scientific studies contrary to its interests and uses methodologies not supported by the scientific community. Thus, the thresholds it sets for permanent injury, temporary injury (hearing loss) and behavioral change (which we would argue are too high and thus completely underestimate the actual number of wildlife that will be impacted) are invalid as a matter of science.	Please see Section 3.8 (Marine Mammals) for a discussion of the scientific studies forming the basis of the analysis presented in the Supplemental EIS/OEIS. The Navy's acoustic analysis and modeling reflect the current best available science as evidenced by recent NMFS rulemaking actions on other Navy documents.
K. Hart-10	The Navy's alternative analysis is inadequate. The Navy only presents three options - maintain the status quo, add more training, or add even more training. It does not consider - or blithely dismisses - any other alternatives, some employed by the Navy itself in other training exercises and ranges.	The range of alternatives presented in the 2011 GOA Final EIS/OEIS includes reasonable alternatives. To be reasonable, an alternative must meet the stated purpose of and need for the Proposed Action. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission, achieved in part by conducting

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		training within the Study Area. The alternatives carried forward meet the Navy's purpose and need (see the 2011 GOA Final EIS/OEIS Section 1.4, Purpose of and Need for Proposed Military Readiness Training Activities) to ensure that it can fulfill its obligation under Title 10 of U.S. Code. See Section 2.3 (Proposed Action and Alternatives) of the 2011 GOA Final EIS/OEIS for more detailed information on the development of alternatives. The Navy complied with NEPA requirements in the development and consideration of alternatives. This Supplemental EIS/OEIS analyzes all alternatives in the 2011 GOA Final EIS/OEIS. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
K. Hart-11	Most critically, the Navy does not set forth adequate measures to mitigate the harmful effects of sonar. Its proposed mitigation measures basically boil down to "safety zones" (1,000 yard power-down and 200 yard shut down) around the sonar maintained primarily by on-board visual monitors. These are the same measures that federal courts have found to be "woefully inadequate and ineffectual." (For instance, studies show that visual monitoring only spots about 5% of marine mammals. Statistically, a 5% "success" rate clearly does not cut it.) The Navy's refusal to employ better mitigation measures is astounding, because it has used more protective measures during previous training. - See more at: http://inletkeeper.org/issues/gulf-of-alaska-bombing-range#sthash.QJJDjvNU.dpuf	Chapter 5 provides a comprehensive discussion of proposed mitigation measures. The comment references studies pertaining to visual monitoring; however, it does not cite to or otherwise identify particular studies. Please see the presentation in Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) of the Supplemental EIS/OEIS discussing how Navy training and visual detection differs from the conditions present during a line transect marine mammal survey, from which most detection data has been derived. The Navy does not claim or expect 100 percent of the animals present in the vicinity of training events will be detected; however, mitigation measures based on detection of marine mammals by exercise participants anywhere in the exercise area will result in the mitigation of some potential impacts. Please see the Supplemental EIS/OEIS Section 3.8.3.1.8 (Implementing Mitigation to Reduce Sound Exposures) for more details in this regard. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) regarding monitoring reports from exercises since 2006 that have demonstrated the ability to detect marine mammals, the success of these mitigation measures, and a lack of observable impacts to marine species as a result of Navy training events. As detailed in the introduction to Chapter 5 in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the Navy and NMFS as a cooperating agency have reviewed other potential mitigation measures as described. Additionally, the information provided at the referenced website (inletkeeper.org) is largely incorrect. For correct information regarding the Navy's proposed action and analysis of impacts, see the Supplemental EIS/OEIS

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Section 5.2 (Introduction to Mitigation).
C. Heitman-01 (Electronic)	I made comments on the original 2011 GOA Draft EIS and those comments still apply and I would like them referred to in this Supplemental DEIS. In a July 28, 2014 application the NMFS received from the Navy requesting a LOA, the Navy requested to take 19 species of marine mammals incidental to Navy training activities in the GOA TMAA from 2016 through 2021. Over that time period millions of marine mammals have the potential of being harassed, injured, maimed or killed in Alaskan waters. Over 500 million marine mammals were affected by Navy training exercises off the coasts of California and Washington (Northwest Training Exercise EIS) and since the Navy is already aware of sonar effects on marine life it does not need to further evaluate potential sonar effects on marine species in Alaska. How the Navy's training exercises is affecting marine life along all U.S. coastlines is deplorable.	The comments you made on the 2011 GOA EIS/OEIS were fully addressed in the 2011 GOA Final EIS/OEIS, and that Final EIS/OEIS is part of the current analysis. See Figure 1.2-1 of the Supplemental EIS/OEIS showing the training area and its location in regard to Kodiak Island, which is the same as the training area (Figure 1-1) in the 2011 GOA Final EIS/OEIS. Also, a poster showing the same area as in Figure 1.2-.1 was displayed at the September 2014 public meeting referenced in the comment.
C. Heitman-02	In September 2014 Navy representatives came to Kodiak, Alaska to give a presentation and take public comments on the Supplemental Draft GOA EIS, and nowhere in the presentation did representatives mention the fact that the Navy wants to conduct training activities in the waters off Kodiak.	The proposed action is to conduct Navy training activities within the TMAA.
C. Heitman-03	The Navy sent an application to the NMFS asking for a LOA for activities involving the use of mid-frequency sonar, weapons systems, explosive and non-explosive practice munitions and ordnance, high-explosive underwater detonations, expended materials, electromagnetic devices, high-energy lasers, vessels, and aircraft. Activities would occur in summer, defined as April-October, and considering that spring and early summer is the migratory season for marine mammals returning to Alaska, any training exercises during those months is unacceptable. If any exercises are to take place at all it should be during the winter months (November-March).	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
C. Heitman-04	Figure ES-1: GOA Temporary Maritime Activities Area: the map shows the Kodiak Seamount which is abundant with marine life and earthquake faults (NOAA Ocean Explorer 2004) and it appears to be located near if not partially into the TMAA boundary and training activities should be off-limits anywhere near that seamount, continental shelf or slope where most marine life resides.	With regard to the suggestion that training should be off-limits anywhere near the Kodiak seamount, see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on the Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
C. Heitman-05	If the impacts from training exercises will have a significant impact on an environment resource within its region of influence (ROI), then the impacts of the proposed actions would normally be cumulatively significant (Joint Pacific Alaska Range Complex EIS--4.0 Cumulative Impacts and Secondary Effects). The Navy's continued presence and activities in the Gulf of Alaska will have detrimental effects on marine life and ocean contamination and because of the ocean currents some debris and pollutants from training exercises could potentially find its way to Kodiak Island and other Alaska communities, adding to the cumulative impacts.	See Section 3.2 (Expended Materials) of the 2011 GOA Final EIS/OEIS regarding impacts from expended materials; the proposed activities will not result in "ocean contamination" as the comment asserts.
C. Heitman-06	Under the Navy's preferred alternative, what will be the effects on the human environment from training exercises? That information should have been discussed in the Supplemental EIS for public comments and needs to be included in the Final Supplemental EIS.	See Section 3.12 (Socioeconomics) of both documents regarding effects on the human environment.
C. Heitman-07	Table 4.3.1: Other Actions and Other Environmental Considerations Identified for the Cumulative Impacts Analysis--under the Restoration, Research, and Conservation Projects and Programs section, the Alaska Aerospace Corporation, Kodiak Launch Complex is listed as being 'Retained' for further analysis for past, present, and future cumulative impacts. If the Navy is proposing to use the Kodiak Launch Complex (KLC) in any future capacity as part of its test range or mission support for Navy ships, then that information should have been included in this Supplemental EIS for public comments and definitely needs to be included in the Final EIS. The FAA is in the process of doing a Kodiak Launch Pad 3 EA and at the Alaska Aerospace Corporation (AAC) Board Meeting in Kodiak in September 2014, one of the board members stated	Please note that the Kodiak Launch Complex, the Kodiak Launch Pad 3, and the high-power microwave antennas or sensors located in Chiniak on Kodiak Island are not part of the Navy's proposed action.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	that once the KLC Launch Pad 3 EA was completed it would then be incorporated into the Navy's Supplemental GOA Draft EIS. Why, and for what purpose does the Navy need to incorporate that information into its own Supplemental GOA Draft EIS?? The Navy should not be waiting on the FAA to state there will be 'no cumulative impacts' from rocket launches at KLC/Narrow Cape and then using that information to 'piggy-back' and justify its own training activities involving the KLC or waters in or around Kodiak Island, as the 2014 permit the AAC received from the NMFS to harass marine mammals incidental to rocket launches does not apply to Navy training activities. Likewise, if the Navy has plans on using the 'high-power microwave' antennas or sensors located in Chiniak on Kodiak Island as part of future training exercises, that information should also have been included in this Supplemental Draft EIS.	
C. Heitman-08	Comments continued from previous: Since the Chiniak microwave antennas were installed in 1999, the Navy has been funding their research through the University of Alaska, Fairbanks, so theoretically it makes sense that the Navy would want to test the sensors in some capacity during training activities, considering the fact that some high-power microwaves are classified as being 'electromagnetic warfare weapons' by the Department of Defense by having the ability 'to stop a plane or a missile dead in tracks' from various frequencies and power transmissions. In the Navy's 2014 application to the NMFS asking for a LOA to do training activities in waters off of Kodiak, Alaska, information in the application includes 'weapon systems.' What kind of weapon systems is the Navy referring to? Again, that information should have been included in this Supplemental EIS and needs to be included in the Final EIS. The public has a right to know what potentially harmful military tests are taking place in or around the areas where they live, even if the Navy has a different opinion about that. Thank you for the opportunity to comment.	Please note that the Chiniak microwave antennas are not part of the proposed action. With regard to amount and types of weapons, refer to the 2011 GOA Final EIS/OEIS, Chapter 2, Tables 2-6 and 2-7, pages 2-40 and 2-41.
C. Heitman-1-01 (Electronic)	My additional comments on the GOA Supplemental EIS/ODEIS that I forgot to submit previously. During the Navy's GOA Supplemental EIS public meeting in Kodiak, Alaska in September 2014, I specifically asked one of the Navy representatives Alex Stone, about the FAA's Kodiak Launch Pad 3 EA being incorporated into the Supplemental GOA EIS once it was completed, since that is what one of the Alaska Aerospace Corporation(AAC) board members stated at the AAC Board Meeting in Kodiak in September 2014; However, Mr. Stone denied that the FAA EA and the GOA EIS were connected in any way whatsoever, telling me that they were two totally different assessments. I am sure he remembers our conversation since he and I had met in one of his previous trips to Kodiak. However, in the GOA Supplemental EIS Section 4.3.2.3 OTHER MILITARY ACTIVITIES, 4.3.2.3.1 NAVAL SPECIAL WARFARE MARITIME TRAINING ACTIVITIES-Kodiak Island, it states: "Analysis of Naval Special Warfare (NSW) activities on Kodiak Island is provided in the 2011 GOA Final EIS/OEIS, Chapter 4 (Cumulative Impacts). The effects and analysis have not changed, although a new Environmental Assessment is currently being conducted for training activities at Kodiak. Cumulative impacts will be re-analyzed upon completion of that document and	As Mr. Stone stated at the public meeting, the FAA EA and the GOA Supplemental EIS/OEIS are not connected in any way whatsoever. They are in fact two totally different assessments. Additionally, the FAA EA and the Naval Special Warfare Maritime Training Activities-Kodiak Draft EA are also two separate documents and are not connected. However, the Navy has a responsibility to look at other projects occurring within the study area and analyze their cumulative effects in conjunction with the Navy's Proposed Action in the Supplemental EIS/OEIS. As stated at the public meeting, the Kodiak Launch Complex Draft EA is not connected to the proposed action of this Supplemental EIS/OEIS. Since it is an ongoing action, the Navy must consider it under cumulative effects as part of the Supplemental EIS/OEIS, but that is the only tie-in. Please see Section 4.3.2.3.1 (Naval Special

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	incorporated into this Supplemental EIS/OEIS when available. Until that time, NSW training on Kodiak Island is dismissed from consideration because of negligible to minor impacts on resources in the area affected by this activity and the Proposed Action." Exactly what is the Navy's 'proposed action' involving Kodiak or waters surrounding Kodiak Island because no details whatsoever were given in this Supplemental EIS, especially where the Kodiak Launch Complex is concerned. The only EA the public is aware of at this time concerning Kodiak is the Kodiak Launch Pad 3 EA the FAA is currently working on, and nowhere in that Draft EA did it say the Navy wanted to do training exercises around Kodiak, nor was the FAA Draft EA referred to by name in the GOA Supplemental EIS.	Warfare Maritime Training Activities - Kodiak Island) of the Supplemental EIS/OEIS for further detail. Similar to the Kodiak Launch Complex Draft EA, the Naval Special Warfare Center Detachment Kodiak, Cold Weather Maritime Training, Kodiak, Alaska Draft EA is not part of the proposed action of this Supplemental EIS/OEIS. However, the environmental effects of the proposed action in that document have been cumulatively considered in this Supplemental EIS/OEIS.
C. Heitman-1-02	Although the AAC received a Letter of Authorization in July 2014 from the NMFS to take species of seals and sea lions incidental to space vehicle and missile launch operations at the Kodiak Launch Complex, nowhere in that LOA did it give the 'go-ahead' for the Navy to step in and do the same. The Navy was granted the training area it requested in the GOA TMAA, and that's where training exercises should stay, if at all, rather than expanding exercises to Kodiak Island. The Navy was granted a LOA from the NMFS for training exercises 'within' the TMAA and not outside.	Concur and the Navy will be requesting a new 5 year LOA for its effects under this proposed action which would take place in the TMAA. The other LOAs that are referenced in the comment are specific to other projects and not part of this proposed action. Regarding the comment about expanding exercises to Kodiak Island, please see response to M. Berry above.
C. Heitman-1-03	The GOA Supplemental EIS Section 4.3.3.2 OTHER MILITARY ACTIVITIES and 4.3.3.2.1 SURVEILLANCE TOWED ARRAY SENSOR SYSTEM LOW FREQUENCY ACTIVE SONAR states: "Based on current Navy national security and operational requirements, routine training, testing, and military operations using these sonar systems could occur in the Pacific Ocean, although outside the TMAA." If the Navy is proposing to use a towed array sensor anywhere outside the TMAA or in waters off Kodiak Island, which could injure or kill marine mammals, then "NO" and "NO", that is unacceptable to Kodiak Island residents.	There is no use of SURTASS LFA platforms for Navy training in the TMAA, and use of this sensor is not part of, or connected to, the proposed action.
C. Heitman-1-04	It is obvious that the public cannot depend on being told the truth by Navy representatives during public meetings, even if they are asked questions point-blank, as I asked about the Kodiak Launch Complex Draft EA being incorporated into the Navy's Supplemental Draft EIS and being told that was not the plan, when obviously that is exactly what the Navy is waiting on to be completed so it can incorporate it into its own GOA EIS so that it does not have to do its own EIS for Kodiak or the Kodiak Launch Complex.	As stated at the public meetings and in an earlier response, the Kodiak Launch Complex Draft EA is not part of the proposed action of this EIS/OEIS. If the Kodiak Launch Complex Draft EA is finished prior to the Final release of this EIS/OEIS, it will be considered cumulatively in this document, but that is the extent of the tie-in between the two projects.
C. Heitman-1-05	The Navy needs to stop harming, injuring and killing marine life with its detrimental activities and the only preferred alternative is a NO ACTION one which actually means 'No Action' and the Navy stops training in and contaminating Alaska waters.	Please see Chapter 1 (Purpose and Need) of the 2011 GOA Final EIS/OEIS explaining why Navy needs to train. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
C. Heitman-2-	Sometimes when you give these presentations, it's not always what's said, but what	As stated at the public meeting, the Kodiak Launch Complex Draft EA

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
01 (Oral-Kodiak)	maybe is unsaid. And I'm assuming, even though on your presentation we can comment on anything that's in your Supplemental EIS, is that correct? MS. TURNER: Yes. Okay. So, what I would like to discuss is in your section for environmental and cumulative impacts analysis, the Alaska Aerospace Corporation and the launch complex is listed there, and there's different cities here in Alaska and areas that where they may have been dismissed because there will be no impact. And the launch complex is one that's been retained for further analysis. And I didn't see anything in it discussing what maybe the Navy might like to do or has been involved with the Kodiak Launch Complex, but last week I attended the Alaska Aerospace Corporation board meeting here in Kodiak and they are in the process of doing – the FAA is doing an Environmental Assessment right now, and will be having a meeting, I think, early next month. And during that discussion they were saying that once their Draft EA is completed for the Kodiak Launch Complex for launch pad 3, their Environmental Assessment will be incorporated into the Navy's Supplemental Gulf of Alaska EIS. But I didn't see any further references to it. So I just think that if the Navy, the Kodiak Launch Complex, or around Kodiak Island is going to part of the Navy's, you know, part of the Navy's testing range or mission, that that should have been included in your Supplemental EIS.	is not part of the proposed action of this Supplemental EIS/OEIS. Since it is an ongoing action, the Navy must consider it under cumulative effects as part of the Supplemental EIS/OEIS, but that is the only tie-in. The environmental effects of the proposed action in the Kodiak Launch Complex Draft EA document were cumulatively considered in this Supplemental EIS/OEIS; see Section 4.3.2.3.1 (Naval Special Warfare Maritime Training Activities – Kodiak Island) of the Supplemental EIS/OEIS for further detail.
C. Heitman-2-02	So -- and the only reason I mention it is because -- and also, we have a high power microwave, and I made this comment back in 2011, Chiniak has a high power microwave system that runs to the University of Alaska in Fairbanks. And the Navy helps fund the research on this particular radar here on Kodiak. There is another radar in Cordova, which you'll be having a public meeting there. There's another radar in Juneau on Federal property, which you also will be going to Juneau for the public. So, if there's going to -- if any of these radars are going to be used as part of your electromagnetic warfare system testing, because you do refer in one of your sections here on new weapons systems that you would like test, but you don't -- you don't go any further to what is it? Is it going to be drones? I mean, possibly that, you know, will any of our radar systems in Kodiak, like the Chiniak radar, possibly be involved with some of the Navy ships. And, you know, whatever testing they're going to be doing. So it's not just mainly in the Gulf, it -- going by the Alaska Aerospace Corporation, the Navy somehow is going to, you know, is going to be involved somehow in the future. So, the only reason I mention it is that you mentioned it yourself here. So, thank you.	The Chiniak microwave antennas, the radar in Cordova, and the radar in Juneau are not part of, or connected to, the proposed action in this Supplemental EIS/OEIS.
R. Highland-01 (Oral-Homer)	There we go. Hi. Name is Roberta Highland, and I'm representing the Kachemak Bay Conservation Society tonight. And I just want to say I agree with everyone who has spoke so far, and they've done a much more eloquent job than I've managed to get my act together here. But the reasons this needs to be done saddens me. I understand it. It still makes me sick, just because life is like this. And then you doing it and deciding to do it where you're doing it, doubles those feelings.	Thank you for participating in the NEPA process.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
R. Highland-02	You know that this is an incredibly rich ecosystem. And that's where I don't understand why anyone would even consider doing this in this ecosystem. And sadly, there's dead zones all over these days in the ocean. It's so sad, but it's true. And so I just am adamantly opposed to having these kind of, what's the word I'm looking for? Anyhow, this kind of activity done in this area. It's a really bad area.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and why in the Gulf of Alaska.
R. Highland-03	I do want to find out, I will ask questions after, is what's the track record? You guys have been doing this for 30 years up here, so I want to know what's the track record? Who's keeping track? And are there non-Navy observers on these ships or involved in these activities so that we don't have the fox watching the hens. And it's just an amazing thing to read where in the paper it said that the Navy wants permission to take over 425,000 marine mammals each year for five years. Is that a misquote, I'm wondering? It was in the Tribune. So I will ask that afterwards.	See the Supplemental EIS/OEIS Section 5.5.2 (Reporting) regarding past and future reporting. Also for example, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The number quoted (425,000 marine mammals) and attributed to the Tribune in the comment is incorrect regarding the annual take requested; see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details regarding the correct number and likely effects.
R. Highland-04	It is always sad because you've made the effort to come here, and that we can't have a more conversation. Because it's helpful to have all of us to be able to hear the questions and hear the answers. So, it would really be nice in the future that that is taken into account and done. Because it just is of consideration, I think, to us. Because there are a lot of us very concerned.	Thank you for participating in the NEPA process. The Navy will take your recommendation under consideration.
R. Highland-05	And so, yes, Shelley and Olga explained that the endangered species, we have them, and that to do this -- to do this at all in this area, I know you've got all your reasons. But it totally does not make any stewardship sense to me for this incredible ecosystem. They just don't make them like this anymore. And we're doing a number all over the world. And with ocean acidification coming, there's just got to have to be a whole new way of thinking. So I am hoping that you really will hear that we appreciate what you're doing. It's terrible times right now, but please do it somewhere else. Thank you.	Navy is aware of the presence of endangered species in the area as presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS. The Navy is in consultation with NMFS regarding listed marine mammals and fish and is requesting a letter of authorization for the taking of marine mammals in association with the proposed training activities in the Gulf of Alaska. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and why in the Gulf of Alaska.
R. Highland-1-01 (One on One with Court Reporter-Homer)	Roberta Highland. And I want to go on record, Kachemak Bay Conservation Society, that we don't support any activity in this area. However, if there is -- if it's going to happen no matter what, we support the Alternative 1, which is the No Action; am I right on that? You don't know? Can you turn it off for a sec, I'll just go back there and look. So, actually, we support the No Action Alternative. So that's the important piece, the No Action Alternative. But we do not support having this done here in this area at all. Thank you.	Your support for the No Action Alternative is noted.
T. Hightower	Please change the kind of testing you're going to do in Alaska. You can get your	Please see the information detailed in Chapter 2 (Description of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	answers without all that harmful testing. Please think of this world future before destroying some many this or changing so far past normal that their behaviors will never be the same. Please don't do this terrible testing and bombing and sinking. There has to be alternative ways.....	Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to do any testing and to see the analysis of alternatives. Also see the Supplemental EIS/OEIS Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) discussing mitigation measures.
B. Hill (Electronic)	The Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to expand training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified and analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. The proposed action is a continuation of training as currently authorized under the 2011 record of decision. Regarding relocating the training "far offshore in the central Pacific," please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Also as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore.
K. Hoffman (Electronic)	I recommend the Navy adopt a No-Action alternative and cancel expanded training. The potential and unknown risks to ecosystems and fisheries, upon which our Alaskan and local economies depend, are too high to proceed with expanded training.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to expand training in the TMAA. Regarding impacts to ecosystems and fisheries, and local economies, see the Supplemental EIS/OEIS Chapter 3 (General Approach to Analysis) and for fisheries see Section 3.6 (Fish) and Section 3.12 (Socioeconomics) of both documents.
M. Holleman-01	In order to reduce the impact to Alaska's marine life, I request that the GOA Draft	With regard to the suggestion to restrict training to "areas far offshore,"

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	EIS/OEIS be revised as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
M. Holleman-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales and seabirds in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
M. Holleman-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan;	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
M. Holleman-04	4. Cancel the ship sinking (SINKEX) exercises altogether. These exercises are unnecessary as the US Navy already knows how to sink ships. Thank you.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
A. Honkola-01 (Electronic)	I have concerns about the wildlife in the area, including but not limited to, whales, fish, marine birds, and migratory bird populations. This area is very rich with wildlife and should be carefully protected. In truth, we cannot know how the actions of the Navy change and harm the wild habitat of these animals, some of which are already suffering depleted numbers. Navy testing and "war games" should not happen in a place with	Navy shares a concern for wildlife and marine species in the area and as presented in Chapter 3 (General Approach to Analysis) of the Supplemental EIS/OEIS Navy is fully aware of the natural resources present in the area. The proposed activities are not new and have been occurring in the same area for over a decade. Please note that

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	such rich and diverse wildlife? Expansion of Navy testing in this area should not occur. In fact, it needs to be shut down completely.	the Navy does have knowledge of how its training activities affect marine life based on monitoring and other scientific research conducted over the last 8 years and as summarized in the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where there has been no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Additionally, the Navy is not proposing an expansion of training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS.
A. Honkola-02	This area does not need to be expanded. It needs to be moved further away from the communities of coastal South Central Alaska. The populations in this area are being put at risk. This "mission to maintain, train, and equip combat-ready military forces capable of winning wars, deterring aggression, and maintaining freedom of the seas" is putting local civilians at risk. This type of activity should be done at a location at least 100 NM from the nearest sea mount, and far from where US citizens work and live.	The Navy is not proposing an expansion of training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Regarding relocating the training "at least 100 NM from the nearest sea mount, and far from where US citizens work and live," please see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		operator's ability to achieve mission success. Also as shown on Figure 1.2-1 in the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore.
J. Honkola-01 (Electronic)	I'm a commercial fisherman born and raised in Cordova Alaska. The gulf of Alaska is the source of my livelihood and the reason Cordova is where it is today. These exercises could pose considerable risk to the Salmon and after reading the EIS, I saw that there was very little research done on Alaska salmon. Instead the research was directed at Salmon that live south of the Gulf and don't even migrate there. The training exercises should not commence until a full understanding of the impact on Alaska Salmon can be produced. For example, does the military have an understanding of where the fish will be and where not to train to avoid disrupting Alaska's sustainable fish culture?	Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy’s analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun’aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
J. Honkola-02	Also, why not move the training zone in the first place? The EIS states that it is a good site for training due to the fact that the Airbases are closer and the complexity of the seafloor is beneficial. What is not beneficial is that fact that it's one of largest marine life habitats in the Pacific. By moving the training zone you can at least reduce the risks by simply avoiding the large marine habitat.	Navy must balance the need to complete the training mission with the likely environmental impacts. Moving the training elsewhere would not meet the mission requirements presented in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS.
J. Honkola-03	Also, what information on pollution is there? I need to know what impact the pollution	Please note that the Navy is not proposing to conduct any testing in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	will have from the weapon testing and release of heavy metals and contaminants into the water column. What sort of cleanup effort will there be to reduce the pollutants being introduced? We also need proof that the contamination will not be affecting the current fish population. The EIS also fails to give any information on what amount of weapons will even be used during training and simply states that the training will happen over 20+ days at a time. This is important information considering it directly relates to the amount of pollution control that needs to be dealt with or cleaned up after training.	the TMAA as part of the proposed action. See the Supplemental EIS/OEIS Chapter regarding the analysis for each of the resources present. As examples, Section 3.2 (Expendable Materials) of the 2011 GOA Final EIS/OEIS describes the impacts from the perspective of potentially hazardous materials such as explosives constituents; Section 3.3 (Water Resources) describes impacts to water; and Section 3.1 (Air Quality) deals with air quality. With regard to amount and types of weapons, refer to the 2011 GOA Final EIS/OEIS, Chapter 2, Tables 2-6 and 2-7, pages 2-40 and 2-41.
J. Honkola-04	Cumulative impacts in the EIS fails to show adequate proof that there is a full understanding of all the impacts the training will have in regards to the ecosystem in the Gulf of Alaska.	See Chapter 4 (Cumulative Impacts) of each document for a general discussion of cumulative effects. See also for example, the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
J. Honkola-05	Another thing to note is that there is no plan to have independent scientific observers on board during the training to evaluate the militaries effectiveness at mitigations.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		additional space for essential Navy personnel required to meet the exercise objectives.
J. Honkola-06	Why does the military need to sink their old ships in the Gulf of Alaska in the first place? I'm sure they know how to sink a ship already.	Regarding the "sinking of old ships," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
J. Honkola-07	The public meeting held in Cordova was not advertised well enough and needs to be re conducted so there can be a greater attendance then 4.	The Navy has complied with all NEPA notification requirements under 40 C.F.R. § 1506. NEPA regulations require that agencies not allow less than 45 days for comments on a DEIS. The 60-day public review period for the Gulf of Alaska (GOA) Supplemental EIS/OEIS began with publication of a Notice of Availability on August 22, 2014. This notice specifically listed library repositories where the hard copy document could be viewed, and stated specifically that the document could be viewed online at the project website. In addition, specific mention of the locations where a copy of the Supplemental EIS/OEIS could be viewed or downloaded were made in the following: - Postcards sent to potentially affected Tribes and Nations, State and Federal regulatory and government agencies, non-governmental organizations, fishing groups, and individuals - Newspaper advertisements in newspapers in Alaska - News releases to numerous print, TV, and online media - Meeting flyers sent to community locations in Alaska. - Stakeholder letters sent to previously identified stakeholders including Tribes and Nations, Federal and State elected officials, State and Federal regulatory and government agencies, and individuals. Public comments are a core tool of participation in the NEPA process. The Draft Supplemental EIS/OEIS was released to the public for a 60-day comment period. During this 60-day period, the Navy made extensive efforts to conduct outreach based on what was learned during the previous release of the 2011 GOA EIS/OEIS and public feedback. There were ample opportunities, as well as a wide variety of options, to comment on the Gulf of Alaska Draft EIS/OEIS. The public provided comments via mail, online comments via the Gulf of Alaska Supplemental EIS/OEIS website, or attended one of five public meetings in the state of Alaska in September 2014. At the public

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		meetings, the public had an opportunity to publicly or privately comment in front of a court reporter or fill out and turn in a comment form. For additional information on public outreach, please see Section D.3 of this appendix.
J. Honkola-08	The fact is, the Gulf of Alaska is how many Alaskans make their livelihoods, it creates a lot of jobs elsewhere in the world from seafood exports as well. The military is required to train I understand this, but it is far from necessary to do this in the Gulf of Alaska where the current impact analysis is lacking scientific data in regards to the different forms of marine life. Why put Alaska at any risk at all? Will the military pay for my livelihood when the fish returns fail, or will they simply stop training and say sorry?	As presented in Section 3.12 (Socioeconomics) of both documents, the Navy is aware of the economic importance of the Gulf of Alaska and its resources. Regarding the need to train, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). Please see Chapter 3 of the documents presenting the best available science for each of the resources and including the impact analysis for each. See for example, Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; the proposed training activities should not have an impact on populations of fish or the health of the fisheries and socioeconomics in Alaska.
M. Honkola (Electronic)	I am a third-generation commercial fisherman from Cordova Alaska. I am concerned that the increase in the wargames practiced in the gulf of Alaska will impact the salmon runs in the beginning of their run. The Navy exercise should be moved to a location farther away from these salmon runs.	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. As detailed in Chapter 2 (Description of Proposed Action and Alternatives) Navy is not proposing to increase the level of training over that already authorized since 2011, but is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska.
C. Hoover-01 (Electronic)	My name is Christa Hoover and my husband and daughter are both commercial salmon fishermen, both harvesting salmon on the Copper River Flats and Prince William Sound. Any Navy training exercises in the Gulf of Alaska are of concern to me but especially this particular permit request to double the number of permitted days is of concern.	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. As detailed in Chapter 2 (Description of Proposed Action and Alternatives), the Navy is not proposing to increase the level of training over that already authorized since 2011, but it is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy’s analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun’aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
C. Hoover-02	My protests and concerns are as follows: First and foremost I am concerned by the lack	The Navy has complied with all NEPA notification requirements under

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	of ample advertising and notification in our community that is directly adjacent to the proposed training areas in the Gulf of Alaska. Cordova was not amply notified of the comment opportunities via public meeting and written letter.	40 C.F.R. § 1506. NEPA regulations require that agencies not allow less than 45 days for comments on a DEIS. The 60-day public review period for the Gulf of Alaska (GOA) Draft Supplemental EIS/OEIS began with publication of a Notice of Availability on August 22, 2014. This notice specifically listed library repositories where the hard copy document could be viewed, and stated specifically that the document could be viewed online at the project website. In addition, specific mention of the locations where a copy of the Draft Supplemental EIS/OEIS could be viewed or downloaded were made in the following: - Postcards sent to potentially affected Tribes and Nations, State and Federal regulatory and government agencies, non-governmental organizations, fishing groups, and individuals - Newspaper advertisements in newspapers in Alaska - News releases to numerous print, TV, and online media - Meeting flyers sent to community locations in Alaska. - Stakeholder letters sent to previously identified stakeholders including Tribes and Nations, Federal and State elected officials, State and Federal regulatory and government agencies, and individuals. Public comments are a core tool of participation in the NEPA process. The Draft Supplemental EIS/OEIS was released to the public for a 60-day comment period. During this 60-day period, the Navy made extensive efforts to conduct outreach based on what was learned during the previous release of the 2011 GOA EIS/OEIS and public feedback. There were ample opportunities, as well as a wide variety of options, to comment on the Gulf of Alaska Draft EIS/OEIS. The public provided comments via mail, online comments via the Gulf of Alaska Supplemental EIS/OEIS website; or attended one of five public meetings in the state of Alaska in September 2014. At the public meetings, the public had an opportunity to publicly or privately comment in front of a court reporter or fill out and turn in a comment form. For additional information on public outreach, please see Section D.3 of this appendix.
C. Hoover-03	Has the Navy had to determine on any level the effect their exercises will have on the economic engine that drives Cordova, our commercial fisheries namely salmon and halibut? It should not be up to our industry to prove that the Navy's actions will or will not harm our fish runs and our economy. It should be incumbent upon the Navy to demonstrate that their actions will not cause harm to our resource and our economy.	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. As detailed in Chapter 2 (Description of Proposed Action and Alternatives), the Navy is not proposing to increase the level of training over that already authorized since 2011, but it is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1)

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
C. Hoover-04	Of similar concern is the issue of possible water and resource contamination. Again the Navy must disclose any potential contaminants that could cause damage to our salmon, halibut and other fish, their ecosystem and our environment. What is the allowable level of contamination and what are the potential types of contamination? What cleanup efforts will the Navy make or be required to make? Any real measurable amount of contamination found in our salmon has the potential to devastate our industry and thereby our local and related economies. Are there other possible sites that are less critical to our commercial fish harvests and fish runs? Will there be visible presence of the Navy in Cordova with the likelihood of any positive impact on our community and economy? Will there be objective observers on board to record and document or are we being asked with a wink and a nod to trust the Navy to record and document and monitor themselves? Most of the above listed concerns reference salmon but all of these concerns extend to all the potential effected marine life from fish to marine mammals.	See the Supplemental EIS/OEIS Chapter regarding the analysis for each of the resources present. As examples, Section 3.2 (Expended Materials) describes the predicted impacts from the perspective of potentially hazardous materials such as explosives constituents; Section 3.3 (Water Resources) describes impacts to water; and Section 3.1 (Air Quality) deals with air quality. The proposed Navy training does not include any activities resulting in a presence at Cordova. With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
C. Hoover-05	Two particular quotes from the EIS cause me great concern: • "Fish would have the potential to be affected by vessel movement, aircraft overflights, explosive ordnance, nonexplosive ordnance use, weapons firing disturbance, and expended materials."	Your concern is noted. Thank you for participating in the NEPA process.
C. Hoover-06	• "impacts may occur to migratory juvenile or adult individuals physical injury to salmonids could occur within the distances of an explosion. Impacts to fish from explosions would be possible." These possible outcomes are not acceptable all for the sake of "training exercises".	See Section 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; the proposed training activities are predicted to have no impact on fish populations or the health of fisheries in Alaska. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy’s analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun’aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
C. Hoover-07	Doesn't the Navy already know how to bomb and sink ships? Christa Hoover Cordova, Alaska 10/6/14	Regarding knowing how to "sink ships," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. As stated in the Supplemental EIS/OEIS, the Navy recognizes that the likelihood of there being two SINKEX events in any one year in the TMAA is presently low. In order to ensure flexibility to meet potential Fleet training requirements, however, this Supplemental EIS/OEIS conservatively analyzes the potential impacts of conducting up to two SINKEX events per year in the TMAA.
H. Hoover-01 (Electronic)	My comments are about the "War Games" the navy plans to conduct just outside Prince William Sound. I am a commercial gill netter in PWS. I am also an educator at the Prince William Sound Science Center. I am also a member of Cordova's city council. These "war games" have the potential to destroy Cordova's way of life. Over 50% of Cordova's income comes directly from the commercial fishing industry. At least 30% of the remaining commerce supports the commercial fishery industry. As you can see commercial fishing is the life blood of our town.	The Navy training activities analyzed again in the Supplemental EIS/OEIS have been occurring for more than a decade and will not destroy Cordova's way of life; see Section 1.1 (Introduction) for details. See Section 3.6 (Fish) and Section 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; the proposed training activities should not have an impact on populations of fish or the health of the fisheries and socioeconomics in Alaska.
H. Hoover-02	I would like the following list of concerns/suggestions/questions to be considered or answered: Restrict the training area only to areas far offshore, (away from the continental shelf and slope), east of 143 W. Longitude (and at least 100 miles from the nearest seamount)	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
H. Hoover-03	Change the timing of operations from summer to winter (November-March) in order to minimize effects on the commercial fishing industry	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Hoover-04	Accommodate independent scientific observers during the exercises to confirm effectiveness of mitigation	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
H. Hoover-05	Cancel the ship sinking (SINKEX) exercises altogether. Why does the Navy need to practice sinking ships?	Regarding cancelling all “ship-sinking exercises,” please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining “how to sink ships.” The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
H. Hoover-06	These training exercises should be postponed until effort is put into tracking the salmon better. At this point it is unknown where the salmon are and what affects the training will have on them. I am shocked that the Navy would be allowed to conduct any kind of training or experiment without first fully understanding the implications on the environment in this day and age.	It is not the Navy’s mission and the Navy is not funded to track salmon in the ocean. Please see Section 3.6 (Fish) in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding an analysis of potential impacts to fish including salmon. Please see Section 3.2 (Expendable Materials) of the 2011 GOA Final EIS/OEIS regarding those materials used during training and the fate of those components following their use. Please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why the Navy needs to train in the Gulf of Alaska.
H. Hoover-07	I would like to know the exact number of bombs, missiles, torpedoes etc. that would be detonated during these exercises. When asked during the meeting that was held in Cordova (a meeting that was conveniently under publicized), Navy reps refused to answer the question.	The Navy representatives at the meeting acknowledged that this was an oversight on their part and apologized for not having the document available. For exact numbers of the requested items, refer to the 2011 GOA Final EIS/OEIS, Chapter 2, Tables 2-6 and 2-7, pages 2-40 and 2-41.
H. Hoover-08	Why does the training need to be held on an annual basis? Why is none of the detonated material from bombs and such recorded? What types of heavy metals from these devices are going into our waters? There needs to be a cleanup effort made after each exercise. It is irresponsible to and illegal to litter so why is the Navy able to get away with something like this on such a large scale?	Please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why Navy needs to train. Please see Section 3.2 (Expendable Materials) of the 2011 GOA Final EIS/OEIS regarding those materials used during training and the fate of those components following their use.
H. Hoover-09	What about contamination from these materials into our fish? We know our fish still test positive with heavy metals and nuclear isotopes from US Military training in the 1950's. There is no proof that these exercises won't harm our fish now and in the future.	Please see Section 3.6 (Fish) in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS regarding an analysis of potential impacts to fish including salmon. Please see Section 3.2 (Expendable Materials) of the 2011 GOA Final EIS/OEIS regarding those materials used

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		during training and the fate of those components following their use. Past military practices and historical contamination sites are beyond the scope of the EIS; they are not associated with the Proposed Action. However, the U.S. Navy has programs in place to manage threatened and endangered species on and around our installations; safely clean up past hazardous waste sites for future reuse; explore and develop new, greener technologies for equipment design and maintenance; and recycle metal, wood and glass. Navy installations and ship's crews frequently partner with local communities on volunteer shoreline and neighborhood cleanup projects.
H. Hoover-10	The Prince William Sound Salmon Fishery is one of the last sustainable fisheries in the country. Why does the Navy not see the value of this resource to not only Cordovan's but the whole state of Alaska?	As presented in Section 3.6 (Fish) and Section 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS Navy is aware of the importance of fisheries in Alaska. The proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska.
H. Hoover-11	The Navy should postpone these training until they have answers to these questions and concerns. I have focused my questions/comments around salmon, but that doesn't mean that these trainings wouldn't affect anything else.	Please see the analyses presented in Chapter 3 of the documents for a presentation on specific environmental consequences for each resource area.
H. Hoover-12	The entire ecosystem should be considered. Our ecosystems are already at risk due to a high volume of oil production and transport. Why should Alaska's wilderness have to take on this burden as well?	Please see the analyses presented in Chapter 3 of the documents for a presentation on specific environmental consequences for each resource area.
R. Hoover (Electronic)	Please do not do this to our town, our lives the way we take care of Our families!! Our children's future in commercial Fishing depends on you practicing somewhere else Please please!! You will kill this town, please.	The Navy training activities analyzed again in the Supplemental EIS/OEIS have been occurring for more than a decade; see Section 1.1 (Introduction) for details. See Section 3.6 (Fish) and Section 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska.
S. Jagers-Radolf-01 (Electronic)	The Navy expanding their "war games" should not be allowed, I lived in Alaska for an amazing year and fell in LOVE with the nature and wild life. It is a blessing to have all of that and it is sad to let marine life and vulnerable ecosystems be put into danger so that the navy can detonate bombs and create simulations.	Please note that the Navy is not proposing to expand its "war games." The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
S. Jagers-Radolf-02	I personally have participated in army trainings with the Austrian army and understand that you can have war games and simulations without active ammunition.	See Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic.
S. Jagers-Radolf-03	It saddens me that Alaska's representative and those in charge would ever put at risk the beauty and abundance of such an amazing place so that a small few can see how their bomb goes off, or top level gun shoots.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training.
S. Jagers-Radolf-04	So many Alaska towns and villages rely on the marine life, that should be more important than any monetary funds offered by the Navy. I hope you realize all that you put into danger for a chance to test something out that MAYBE one day could be of use.	See Section 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS; the proposed training activities are predicted to have no impact on socioeconomic conditions in Alaska.
S. Jagers-Radolf-05	What Alaska is so rich in, is its natural resources and abundance of life, that is worth more than any dollar amount and should be protected NO MATTER WHAT!!!	Your comment is noted. Thank you for participating in the NEPA process.
D. Janka-01 (Electronic)	Sorry to have missed your recent public meeting in Cordova. I was out of town, working my charter boat in Prince William Sound. And thank you for the opportunity to comment online. You admit that your normal activities will negatively harm marine mammals. No telling what sort of harm will be done to migratory fish and birds.	For a summary of likely effects to marine mammals see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. For impacts to fish see Section 3.6 (Fish) and for birds see Section 3.9 (Birds) of both documents.
D. Janka-02	Your plans would make the area a toxic dump, a region still recovering from the Exxon Valdez Oil Spill, being dumped upon by tons of Japanese tsunami debris as well as decades of commercial whaling abuse.	The proposed action is the continuation of Navy training which has been occurring in the Gulf of Alaska for more than a decade. Section 3.2 (Expended Materials) of the Supplemental EIS/OEIS and the 2011 GOA Final EIS/OEIS provides a detailed analysis of the potential impacts from Navy expended materials and concludes that expended materials would not adversely affect fish or wildlife populations or their habitats.
D. Janka-03	I live and work on the waters of Prince William Sound year-round. Part of my business takes visitors out to view marine mammals, birds and experience the wilderness quality of Prince William Sound. I strongly feel that your activities are a threat to my business and the wilderness it depends on. My own personal lifestyle, living close to the natural world would be under attack as well.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training, which states that the proposed activities will not take place in or around Prince William Sound. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand what Navy is proposing; the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. Section 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the Supplemental EIS/OEIS; the proposed training activities are predicted to have no impact on socioeconomic conditions in Alaska.
D. Janka-04	I consider the possibility of an accident during your operations to be high, further threatening the area. I continue to feel more threatened by your activities near my home, Prince William Sound, than any terrorist group or enemy nation. Take your madness somewhere else. You are not welcome anywhere near here.	See Figure 1.2-1 in the Supplemental EIS/OEIS; the TMAA is not near Prince William Sound and the approximate middle of the TMAA is located 140 miles offshore of Kenai Peninsula.
C. Jensen (Electronic)	This is in regards to the planned Naval activities to occur in the Gulf of Alaska, and specifically Kodiak Island in the summer of 2014. We are fishermen. When the Navy had a submarine in Marmot Bay we knew of it well before it surfaced. The submarine stirs up the bottom of the bay filling the nets with muck, the fish caught is zero, but the birds and the marine mammals fill the nets. The sub came into the bay on August 15th. We know by looking at our fishing logs. On the 20th it surfaced. I am telling you this because your intent is probably to quietly bring in a sub. It won't work if nets are in the water. With the internet the location of the sub will be broadcast long before it surfaces. It was quite exciting when it surfaced in '91 and tourists, on lookers and planes swarmed it. It will be even more so with communication being so accessible. We will know if a submarine is in our bay as soon as the bottom is stirred up.	Thank you for your comment. Submarine port visits are not part of the training activities of the Proposed Action.
H. Johnson (Electronic)	Unfortunately for many whales, dolphins and other marine life, the use of underwater sonar (short for sound navigation and ranging) can lead to injury and even death. Sonar systems—first developed by the U.S. Navy to detect enemy submarines—generate slow-rolling sound waves topping out at around 235 decibels; the world's loudest rock bands top out at only 130. These sound waves can travel for hundreds of miles under water, and can retain an intensity of 140 decibels as far as 300 miles from their source. These rolling walls of noise are no doubt too much for some marine wildlife. While little is known about any direct physiological effects of sonar waves on marine species, evidence shows that whales will swim hundreds of miles, rapidly change their depth (sometime leading to bleeding from the eyes and ears), and even beach themselves to get away from the sounds of sonar. From Scientific America: In January 2005, 34 whales of three different species became stranded and died along North Carolina's Outer Banks during nearby offshore Navy sonar training. Other sad examples around the coast of the U.S. and elsewhere abound, notably in recent years with more sonar testing going on than ever before. According to the nonprofit Natural Resources Defense Council (NRDC), which has campaigned vigorously to ban use of the technology in waters rich in marine wildlife, recent cases of whale strandings likely represent a small fraction of sonar's toll, given that severely injured animals rarely make it to shore.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see the Supplemental EIS/OEIS for accurate information with regard to the Navy's proposed action. See Section 3.8.3.1.2.8 (Stranding) for a discussion strandings in general and the referenced technical report concerning the comment's mentioned North Carolina stranding. For the North Carolina stranding, there was a severe weather event but there was no "nearby" sonar training and none occurring on the day of the stranding. For a science based assessment of likely effects to marine mammals see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
K. Johnson-01 (Electronic)	I am writing in regards to the proposal to expand the Gulf of Alaska Navy Training Activities. I protest the proposal option to expand the training to over twice what is currently held. The training area proposed stretches through the northern Gulf of Alaska and contains critical migration habitat for North Pacific humpback whales, blue whales,	Please see Chapter 2 of the Supplemental EIS/OEIS to understand that Navy is not proposing "to expand" the training authorized since completion of the 2011 GOA EIS/OEIS. Navy is well aware of the resources and marine species present in the area as presented in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	fin whales and other marine mammals that are very sensitive to acoustic sonar. Additionally, the training area is used by millions of salmon which return to the most productive waters in the world and support some of the richest fisheries of our nation. It is unclear how sonar and bombing exercises will impact marine mammals, fish and other marine organisms. There is strong evidence that active sonar drastically harms cetaceans by injuring the inner ear, resulting in disorientation, distress and ultimately death. The proposed mitigation plan by the Navy to post marine mammal observers and then decrease or halt the sonar when a whale is present is insufficient. Whales are on the surface less than 30% of the time and sighting accuracy is tied to sea surface state; the Gulf of Alaska is not known to be a flat, calm area so accurate sightings of whales will be very impaired resulting in the high possibility of unsighted cetaceans being in the area of testing. There is no current research regarding the impacts of the > 350,000 pounds of bombing waste materials (heavy metals, propellents, PAHs, fluorocarbons, batteries and explosives) on our valued fisheries. Who wants to eat fish that is bathed in heavy metals?	Chapter 3. For a science based assessment of likely effects to marine mammals see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Navy is aware of the presence of fish (see Section 3.6 [Fish]) and marine mammals (see Section 3.8 [Marine Mammals]) in the study area. Please see Section 3.12 (Socioeconomics) where socio-economic impacts are analyzed. Regarding the proposed mitigation, please see Chapter 5 (Standard Operating Procedures, Mitigation and Monitoring) of the Supplemental EIS/OEIS to understand that the mitigation measures involve much more than posted Lookouts. Please also understand that Navy is fully aware that the mitigation measures will not completely or fully protect all marine mammals that may be present in the area but the measures are designed to reduce or avoid potential impacts on marine resources. Please see the 2011 GOA EIS/OEIS for analysis of impacts other than acoustic stressors and note that the Navy is not dumping "waste materials" into the environment. Please see the 2011 GOA EIS/OEIS Section 4.1.3.3 (Ocean Pollution) and Section 3.2 (Expended Material) for details regard your concerns over expended materials.
K. Johnson-02	Options to the proposed plan by the Navy that may lessen the impacts on marine animals and our valuable marine ecosystems include shifting the training exercise to far offshore, off the continental shelf.	Regarding moving the activities "far offshore," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training off the continental shelf, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
K. Johnson-03	Conduct training in winter to minimize impacts on migrating animals.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
K. Johnson-04	Cancel the ship sinking completely (favored approach).	Regarding cancelling the "ship sinking," please see Section 2.6.1.1 (Sinking Exercise [SINKEX]) in the 2011 GOA Final EIS/OEIS to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
K. Johnson-05	It is important the the Navy disclose what the waste products and pollution impacts from the proposed bombing activities. There can be cumulative impacts of acoustic and pollution exposure year after year and by granting the Navy the approval to conduct their bombings we are turning a blind eye and adding incredible stress to an already fragile system. We have already seen significant declines in king salmon returns. I believe it is more than a coincidence that these fish spend the most time at sea (of all our salmon) and they are the ones who are not returning due to a collapsing marine ecosystem. As ocean acidification continues to alter the pH of our oceans, diatoms and the zooplankton and fish that feed off of them are struggling to find food. This results in fewer prime prey and also less nutritious prey and that can lead to compromised health of our salmon. Adding massive heavy metals and other pollutants to the system will only jeopardize our valuable fisheries even more. So I ask that NOAA denies expanding the Gulf of Alaska Navy Training exercises. thank you, K. Johnson	The Navy is aware there can be cumulative impacts resulting from its actions as discussed in Chapter 4 (Cumulative Impacts) and in specific resource sections such as in the Supplemental EIS/OEIS Section 3.8.3.1.3 (Long-Term Consequences to the Individual and the Population) and Section 3.8.5 (Summary of Observations During Previous Navy Activities). Regarding ocean acidification, see the 2011 GOA Final EIS/OEIS Section 4.2.1.2 (Greenhouse Gases) and the sub-section "Ocean Acidification," where this topic is discussed.
R. Johnson (Electronic)	I live in Alaska where fish n whales are a treat for us. Fish supplements my diet n whales make me happy to b able to view them in the wild. Please consider testing in the winter months instead of the summer months. Thank you	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. The analysis conducted for the 2011 GOA Final EIS/OEIS and the analysis conducted for the Supplemental EIS/OEIS indicate there will be no impact on your ability to enjoy the presence of whales and no impact on fish as a supplement to your diet. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Kasulka-01 (Electronic)	I am writing to encourage the Navy to not conduct senseless and damaging war games in Alaska. However, after much public outcry it appears that the Navy is going to continue with this detrimental plan.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. See the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy is not proposing to conduct "senseless" or "damaging" training as the comment asserts. Also, as presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade.
H. Kasulka-02	So, if the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
H. Kasulka-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Kasulka-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
H. Kasulka-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
H. Kasulka-06	While it is important for the Navy to maintain readiness, its proposed war-games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. If the Navy has to do such training, it should do it elsewhere.	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA.
B. Klemms (Written)	It's always great to see the Navy come to Alaska. I believe it's important for the Navy to train in Alaska. I wish they had a base here. I think the Navy does a great job operating in the ocean environment.	Thank you for participating in the NEPA process.
C. Kohlhasse (Electronic)	The USN's use of mid-frequency sonar for test training is outrageous. They can train better and cover more ocean conditions by using land-based computer simulations. Instead they will harm 31,000,000 marine creatures over the next three years by their training operations and also do great harm with their operations plans for the region off the Alaska coast. Stop this harm to marine creatures immediately and try to protect the last of Earth's beleaguered biodiversity! C. Kohlhasse scientist, environmentalist	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. See Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities), which also discussed this topic. It is not clear where the value of 31,000,000 quoted in the comment originates. Refer to the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) and specifically 3.8.3.3 (Analysis of Effects on Marine Mammals) for an accurate assessment of predicted effects on marine mammals from sonar activities (see also Tables 3.8-16 and 3.8-17).

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
J. Kvasnikoff (Electronic) Nanwalek IRA Council	While reading through this document it was noticed Subsistence use is not listed under 3.10, however it is considered a part of our Culture Resources that we use on a daily basis. To this day we continue the use of our Traditional Resources, many of us depend on this to fill our freezers for the hard winter days here in Alaska. It is pertinent that this matter or issue is addressed in this document. It is our livelihood, our way of life, we are driven to thrive on what remains of our Ancestral way of life. This is what keeps feeding our spirituality, keeps us connected to our roots. We need to know what the long term effects are going to be when this is taking place and after the fact, so here are a few questions and concerns we have about this issue: What type of residue (explosions) will be left in the waters from the bottom to the top of the ocean? How does this effect everything that is reliant on feeding in the waters including humans that are also consuming what comes from the ocean? In front of Nanwalek we are known to have the nursery for all of Kachemak Bay area's kelp and seaweed, how will all this be impacted by these activities being practiced in the Gulf of Alaska? Why do these activities need to be practiced in the Gulf of Alaska and not further out in the Pacific Ocean where there would be less damage or impact on cultural resources? Why is there a need for the United States to allow this man-made disaster which causes damage and leaves long term effects for years and years? As you have seen with the Exxon Oil spill that still has lingering effects on our lands and ocean to this day on our; fish, marine mammals, water fowl, vegetation, and other resources. Not only will it leave long term effects with our Subsistence use it will also impact the economy of many who are dependent on the above state resources. With the current technology why aren't simulators being used rather than creating long term effects on subsistence foods which our people rely on? When you are planning decisions about Cultural Resources, please be sure to include Coastal communities and their Governing bodies out of respect for their Subsistence way of life and their livelihoods. Thank you for taking the time to read our comments and we look forward to hearing back from you.	Subsistence use of resources is analyzed in each applicable resource section of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS. Navy is fully aware of the resources present in the Gulf of Alaska and the importance of these resources to the people of Alaska. Regarding the potential affects to fish (see Section 3.6 [Fish]) and marine mammals (see Section 3.8 [Marine Mammals]). Please see Section 3.12 (Socioeconomics) where socioeconomic impacts are analyzed. As presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, no impacts are predicted on subsistence use of the resources in the Gulf of Alaska resulting from the continuation of the training that has been occurring for more than a decade. Regarding the comment about residue from the use of explosives, please see the 2011 GOA Final EIS/OEIS Section 3.2 (Expended Material). The Navy's analysis indicates that the Proposed Action will not have adverse impacts on resources such as kelp beds and mollusks in intertidal zones important for subsistence harvests, because those nearshore areas are too distant from the TMAA to be affected directly or indirectly by the training activities. Please see Chapter 1 (Purpose and Need) of the documents regarding why there is a need for Navy training in the Gulf of Alaska. Regarding moving the activities "further out in the Pacific," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore; see also the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). The proposed action has no relationship to the kind of impact that resulted from the Exxon Valdez oil spill and comment asserts that there will be "long term effects with our subsistence" which is not correct. Please see Chapter 4 (Cumulative Impacts) and Section 3.6 (Fish) and Section 3.12 (Socioeconomics) (as examples) of the likely effects. See Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, and note that the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic. Please see the 2011 GOA Final EIS/OEIS Appendix C regarding consultation and inclusion of the Coastal Communities and their Governing bodies.
A. Lalancette (Electronic)	Please do not conduct Navy warfare exercises in the Alaskan waters. It has been proven these exercises will damage the marine ecosystem and will injure and kill marine wildlife. We need to be protecting these waters and their inhabitants. These	Based on the analysis in the Supplemental EIS/OEIS and monitoring conducted during actual training events, the proposed training will not pose a risk to whales, fish, and other wildlife given that these same

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	actions will directly impact the marine life in an extremely negative way. Please do not move forward with these exercises as they damage the ecosystem and are tortuous for marine life.	activities have been conducted for many years in the Gulf of Alaska and in other Range Complexes with no indications of damage to the marine ecosystem at those locations. Please see the recent results supporting this as presented in training ranges monitoring reports available at available at the Navy website (www.navy-marinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental/). Also, these training activities have been ongoing in the Gulf of Alaska for more than a decade, as previously detailed and analyzed in the 2011 GOA Final EIS/OEIS.
Z. LaPerrier (Electronic)	As an American and Alaskan, I find the Navy's proposed Gulf of Alaska training to be unacceptable given the number of anticipated whale and porpoise deaths and impacts. I am fairly confident that the Navy's ingenuity can find a way to train "war games", and to protect our marine mammals at the same time.	The training activities have been ongoing for more than a decade and were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Please note that there are no anticipated whale and porpoise deaths; please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details. Please see Chapter 5 of the documents for information on the ways Navy integrates protection of marine mammals into the training activities.
S. Levites (Electronic)	For the safety of God's creation, other as myself ask if the five year navy training would not be allow in gulf of Alaska. I am sure there are plenty of places to go for navy training without the risk of harming the animals. I pray that this will be resolve. Thank you.	The training activities have been ongoing for more than a decade as were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Please see Section 1.1 (Introduction) and Chapter 2 (Description of Proposed Action and Alternatives) of the 2011 GOA Final EIS/OEIS regarding the need to continue training in the Gulf of Alaska. Also see the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated) regarding moving the training elsewhere.
C. Lillibridge (Written)	The proposed test area is potential genocide for cetaceans of North Pacific. The death of these thinking animals is as immoral as Hitler's genocide of Jews in WWII. Move your test area to West Africa where the humans will dies of Ebola virus anyway.	No marine mammal deaths are anticipated from the continuation of the training the Navy has been conducting in the Gulf of Alaska for over a decade. The Navy does not propose to conduct any testing in the TMAA as part of the proposed action; see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details. Please see Section 1.1 (Introduction) and Chapter 2 (Description of Proposed Action and Alternatives) of the documents regarding the need to continue training in the Gulf of Alaska.
L. Lubin (Electronic)	I am commenting on the Supplemental Environmental Impact Statement /Overseas Environmental Impact Statement (EIS/OEIS) for training activities in the Gulf of Alaska. I believe that the time period for testing is too long. The testing should be limited to a few months when the majority of cetaceans are in their summer feeding grounds and not migrating through the proposed areas. Further, the available space for testing should be limited to further away from shore. Studies need to coincide with the testing	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see Chapter 1 (Purpose and Need) and Chapter 2 (Description of Proposed Action and Alternatives) of the documents regarding the need to continue training in the Gulf of Alaska and for the time periods (April to October annually) analyzed. Regarding moving the activities "further away from

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	to further study effects on fish in the area both during testing and afterwards with accumulated debris on the ocean floor. Studies in regard to distance and decibels of noise pollution need to coincide with the testing. It is important to gain a better understanding of the outlying effects of sonar testing and underwater explosions. Thank you for your time Sincerely L. Lubin	shore," as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Also see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Regarding impacts to fish, as detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. See Section 3.2 (Expended Materials) of the 2011 GOA Final EIS/OEIS regarding the impact from expended materials; regarding impacts from noise, see for example, the Supplemental EIS/OEIS Section 3.8.3.1 (Acoustic Stressors) for information on sound and "noise" and the impact of acoustic stressors on marine mammals. As presented in the Supplemental EIS/OEIS Section 5.5 (Monitoring and Reporting) and in Section 3.8.5 (Summary of Observations During Previous Navy Activities), the Navy has already been engaged in studies coinciding with training and testing events for approximately 8 years and summaries of the findings from some of those studies are presented in that section along with direction to other sources of information.
M. Macaluso (Electronic)	While I understand the need for training the Navy with live fire and live exercise, I strongly oppose the proposed training area in the Gulf of Alaska especially in the summer months. I am an Alaskan resident who commercial fishes for a living. I know the area well. It is a prime mixing ground in the summer months for a vast biomass of marine life. One of which is most relevant to myself is the salmon. It is a mixing ground for salmon all over the north coast for a couple months each year. We do not know the effects of high frequency sonar on salmon. This sonar could potentially make many salmon "lost" and not return to their spawning streams. Salmon is the life blood for many communities here in Alaska. Along with the danger to salmon there is also the danger to other marine life as whales that could be curbed substantially if operations were suspended from April-September. The whales return from warmer waters in the spring and summer to feed and travel through the proposed area. I have personally seen hundreds of whales at once in the proposed area in the spring time while we are herring fishing. If the proposed area could not be relocated I hope at least the Navy suspend activity during the summer. Thank You	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. As detailed in Chapter 2 (Description of Proposed Action and Alternatives), the Navy is not proposing to increase the level of training over that already authorized since 2011, but it is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Pearcy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar — Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy’s analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. Regarding conducting the training outside the April-September timeframe, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area. Also see the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
M. Martin (Electronic)	I am adamantly opposed to the proposed Naval activities for the Gulf of Alaska. This unique and resource rich area stands to be negatively impacted, after just barely recovering from the major oil spill of 1989. I realize the Navy needs a place to practice, but this is NOT the place. Our fish and mammals deserve our full respect. Please find another place, that will not so negatively impact sea life, as the Gulf of Alaska. Thank you.	The training activities have been ongoing for more than a decade and were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Regarding conducting the training elsewhere, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for training in Alaska. Also see the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
M. Martin (Electronic)	I adamantly object to the proposed Naval warfare training in the Gulf of Alaska. Our Alaskan waters are rich in wildlife, renowned therefore, and it is unconscionable to even consider these war games and the threat of death to these maritime creatures. This is simply not the right place. Please, please find another area, not near Alaska. Thank you.	The training activities have been ongoing for more than a decade and were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Regarding conducting the training elsewhere, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for training in Alaska. Please note that there have been no observed or documented deaths of marine mammals from past Navy training activities in the area and no deaths are anticipated to result from the continuation of that training; see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details in this regard.
J. Maybury (Electronic)	PLEASE HELP PROTECT THE WHALES FROM UNDERWATER TESTING.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see Chapter 5 (Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the documents for information on the ways Navy integrates protection of marine mammals into the training activities.
S. Mazen (Written)	I would like to add my name to the list of those strongly objecting to the proposed training activities in the Gulf of Alaska. It is my belief base on reports of potential whale damage due to intrusion of sonar used in the training. I strongly believe the protection of whales is extremely more important and other potential intrusion into the Gulf of Alaska's area is inappropriate.	Your objection is duly noted. Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details in this regarding the science behind the Navy's analysis and conclusions for marine mammals. Please see Chapter 5 (Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of the documents for information on the ways Navy integrates protection of marine

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
R. Mcallistar (Electronic)	The navy's intention to practice explosive device off the shore in the gulf of Alaska is emphatically ill advised. The timing of summer effects the schools of fish and marine mammals that are streaming to All local fisheries and summer breeding grounds the potential for catastrophic effect is very high. This absolutely cannot happen	mammals into the training activities. The training activities have been ongoing for more than a decade and were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Regarding fish and fisheries, as detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details in this regarding the science behind the Navy's analysis and conclusions for marine mammals. Regarding conducting the training outside the April-September timeframe, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for training in Alaska. Also see the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern and the Navy has established a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard. The Navy is committed to the minimization of impacts while safely meeting its training requirements.
K. McLaughlin-01 (Electronic)	I urge the Navy to take "no action" against marine mammals. Do not hold unnecessary active sonar training activities in the North Gulf of AK that will result in the direct killing at least 1/2 million marine mammals. And what about the ones that are just injured, harassed and stressed?	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please see Chapter 1 (Purpose and Need) of the documents to understand why the training is necessary and why it must take place in the Gulf of Alaska. Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) to understand that the training activities have been ongoing for more than a decade and were

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Please note that the continuation of Navy training will not result in the direct killing of marine mammals; see Section 3.8.3 (Environmental Consequences) for details. Based on past training in the area and the analysis presented in the Supplemental EIS/OEIS, no mortalities (deaths) of marine mammals are anticipated.
K. McLaughlin-02	If the Navy refuses to acknowledge the public's concerns and interest in protecting our marine mammals and continues to push for its preferred alternative then I will add my voice to fellow conservationist and Alaskan, Rick Steiner's, whose recommendations I fully support.	The Navy listens to the public's concerns and provides comment responses to those concerns; see the 2011 GOA Final EIS/OEIS Appendix G to review how that occurred previously. Your opposition to the preferred alternative is noted.
K. McLaughlin-03	If the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
K. McLaughlin-04	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
K. McLaughlin-05	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
K. McLaughlin-06	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		actual combat and is not related to the Navy determining “how to sink ships.” The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
M. McMahon (Electronic)	Please do not do this in the summer you will complete endanger the wildlife and my family whose life is based on the ocean there.	The training activities have been ongoing for more than a decade and were previously detailed and analyzed in the 2011 GOA Final EIS/OEIS. Regarding not conducting the training in the summer as has always been done, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for training in Alaska. Please see Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of the fisheries, or socioeconomic conditions in Alaska.
M. Meininger-01 (Electronic)	How many of the following marine mammals WILL be affected by your sonar events in the Gulf of Alaska? Blue, Fin, Sei, Minke, Sperm, Killer, Right, Gray, and Humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. Are you only avoiding harm to the larger whales --- or all marine mammals?	Please refer to the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details on how many and which species of marine mammals are predicted to be affected. Specifically for the effects from sonar, see Section 3.8.3.3.5 (Alternative 2) for the preferred alternative. As detailed in Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring), the mitigation measures apply to all marine mammals.
M. Meininger-02	I am especially concerned about these exercises and wish you would practice with high quality simulators to replace the actual sonar. Is there no other way you can develop to detect silent subs?	See Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic.
M. Mickelson (Electronic)	I would like to express my desire to scale back future military activities in the Northern Gulf of Alaska. While I understand and fully support military training, this is not the place to be conducting extensive war games. All of the coastal communities depend on fisheries which have the potential to be harmed. Not enough is known about fish species migration to ensure that the area the Navy is applying for permits for will not affect fisheries. There are many seamounts that provide fish rearing habitat that could be negatively affected. In addition, marine mammals are not always easy to spot when scouting and much of the tourism in this area focuses around marine mammals. Thank you for the opportunity! M. Mickelson	Your desire to “scale back future military activities in the project area” is noted. However, the proposed action only deals with Navy training activities as detailed in Chapter 2 (Description of Proposed Action and Alternatives). Please see Chapter 1 (Purpose and Need) regarding the need to train in the Gulf of Alaska. Navy is well aware of the resources present in the Gulf of Alaska. Regarding fish, as detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska.
M.B. Mickelson	I object to the proposed bombing of ships in the Gulf of Alaska. This area supports the	Your opposition to the “bombing of ships,” is noted but please see the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	fisheries and marine mammals on which our community of Cordova--as well as many other Alaskan ports survive. And our fisheries feeds lots of people both in the United States and around the world. Little is known about salmon migrations--and these fish depend on the ocean for much of their life cycles. Salmon along with whitefish, herring, crabs, and shrimp are some of the biggest economic revenues in the state--in addition to providing thousands of jobs--the most in fact of any state industry. Bombing will effect fish due to the impacts of the loud noise and waves--plus pollution. We've already been through one major oil spill that impacted our salmon for over 20 years--and the herring still haven't returned. The Navy knows lots about sinking ships. We need to protect our fish and fisheries!	2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX) to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The SINKEX activity will have no effect on fisheries or the economy of the state; see Section 3.12 (Socioeconomics) of both documents for details. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
J. Miles-01 (Electronic)	I am opposed to the Navy's plan to use active sonar which will result in more than 182,000 impacts (takes) to marine mammals causing behavioral effects and some permanent injuries. The Navy must either adopt its "No Action" alternative, cancel the expanded training and continue training as usual or at least make changes to the plan.	Your opposition is noted. Regarding marine mammal takes, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. The Navy is not proposing an expansion of training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS.
J. Miles-02	These should include changing the time to winter to minimize effects on migratory whales in the area in summer.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
J. Miles-03	Cancel the ship sinking... do you really need to do that?....	Regarding cancelling "ship-sinking," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
J. Miles-04	Restrict the training area away from the continental shelf and slope and at least 100 miles from the nearest seamount.	With regard to the suggestion to restrict training, see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
J. Miles-05	Your current preferred alternative does not do enough to protect marine mammals.... Please make changes....	Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
M. Mize-01 (Electronic)	To the Dept. of the Navy, While it is important for the Navy to maintain readiness, its proposed war-games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
M. Mize-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
M. Mize-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
M. Mize-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. My father served in the Navy for 30 years, so the Navy is close to my heart. Please, please re-plan the training activities. Sincerely, M. Mize	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
P. Moctezuma-01 (Electronic)	Sir/Madam, I am profoundly disturbed by what seems to be a regular slaughter and injury of advanced marine mammals by my Navy. There is no global ocean warfare, or imminent security threats to justify this terrible cost (which, I might add, is borne not only by America).	Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences), where the analysis shows that there are no marine mammal mortalities predicted and none anticipated in the continuation of training that has been occurring in the area for over a decade. For a summary of the science behind the findings, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
P. Moctezuma-02	I believe that your Gulf of Alaska exercise plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
P. Moctezuma-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer See Section

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
P. Moctezuma-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
P. Moctezuma-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
P. Moctezuma-06	I also strongly protest the use of underwater seismic studies, ELF sonar, and all other forms of radical acoustic invasion of the underwater environment, resulting in the injury and death of marine mammals. Find another way. Thank you for your time and consideration, P. Moctezuma	Please note that seismic studies and the use of low frequency sources are not part of the Navy's proposed action; see Chapter 2 for details. Additionally, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
A. Mullen (Electronic)	Please listen to the experts on the detrimental effects that your training will have on the ecosystem. No one disagrees with the fact that the Navy must participate in this type of training but do it in another area or at times when animals aren't on their migration routes.	For a summary of the science behind the Navy's findings, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
D. Nelson (Electronic)	As a concerned Alaska resident and 26 year merchant mariner on the Alaskan waters, I am strictly opposed to the Navy testing that is proposed. Alaska is home to one of the last wild stock of salmon on earth and in the past 10 years we have seen changes and lower returns, and a total loss of the king salmon. If the military have to do training, please limit it to the winter months and please do not litter our ocean with debris from sinking or exploding ships. Once our ocean is poisoned we cannot recover her, and if she is poisoned, we will lose much of our food supply. Thank you for listening from those of us who make our living from the ocean.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on fisheries in the area. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Regarding the "sinking or exploding ships", please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX)) to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and will not result in a "poisoned" ocean.
L. Nelson-01 (Electronic)	In order to best protect the sea creatures inhabiting the proposed area for these Navy War Games I ask that you 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount.	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
L. Nelson-02	2. Change the timing of operations from summer (Apr – Oct) to winter (Nov – Mar), in order to minimize effects on migratory whales in the area in summer.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
L. Nelson-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
L. Nelson-04	4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. Since the marine mammals affected by these games do not have a voice in this matter, I am using my voice to disapprove of these activities as they stand now.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
P. O'Donnell (Oral-Kodiak)	Yes. If I talked -- my name is Patrick O'Donnell. I'm a trawler, fisherman, at Kodiak so. For you guys in the Navy, we trawl on the ocean floor. So, I do have concerns, some of which we talked about tonight. And it's -- my main concern is under the third alternative, it says that it includes conducting one sinking exercise per carrier strike. And the only thing I would say there is that it would be good for you guys, in the event that something like that is going to happen, that you get together with industry here, the trawl industry, the fishing industry, and coordinate in an area where it's not going to impact trawl fisheries. Because, you know, I'm on a vessel and the ocean floor where we trawl, we get snagged on that. You're talking about endangering lives and what have you in that event. Plus, I mean, the chances of losing hundreds of thousands of dollars worth of fishing gear. So, we have a trawler association here in town. And it's a small community. We're easy to get a hold of. So in the event that this does come about, I think having -- working with industry here would be in the best interest for you guys, as well as the best interest for us. And that's -- that's all I have to say on that issue. And we did work with you guys in the past on this -- on these exercises, so I don't have any problem with the exercises, as long as we're made aware, and as long as it doesn't impact fishing activity around the island here, which you guys -- talking with you tonight assured me that it wouldn't and it hasn't over the past 30 years. So that's all I have to say. Thank you.	Please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX)) to understand the nature of this activity. At the meeting in Kodiak, this concern was discussed with Navy representatives who relayed that a SINKEX can only occur more than 50 miles from land and where the water depth is in excess of 1,000 fathoms. Navy was told in response that because of this depth restriction, the sunken vessel will be far beyond the depth at which trawls occur. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
B. Oleson (Electronic)	I think we, as a species, have done enough harm to all the other species. I see no upside of your war games in the gulf of Alaska, except at an ego, arrogant, condescending activity with total disregard to the original inhabitants, the animals. You're continuing the great white man's domination of the planet, just to sink a ship and blow off a few arms. Not allowing outside observers only raises my suspicion of your lethal activity we all know you won't be honest about the harm you do to the species of the sea. If you ever need to fight a war in the gulf, I'm sure you'll do just fine without the initial death toll of animals.	Thank you for participating in the NEPA process.
M. Olson (Electronic)	PLEASE DO NOT DO THIS! Not only is it unnecessary to do this in Alaska at this time of year, it is in most instances unnecessary to do at all. Computer simulations give you	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training; Please note that

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	a much broader and deeper picture --with a fraction of the cost and a no adverse effects on marine life. Please do not do this. And if you must, change the time and the place to mitigate the effects. THANK YOU	Navy training is necessary. Specifically see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and why his has been occurring in the area at the same time of year for over a decade as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). As explained in Section 2.3.2.4 of the 2011 GOA Final EIS/OEIS, the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic. As noted, Navy and Marine Corps training exercises already use, to a large extent, computer-simulated training and conduct command and control exercises without operational forces (constructive training) whenever possible. However, as described in Section 2.3.2.4 of the EIS/OEIS, "Unlike live training, simulated training does not provide the requisite level of realism necessary to attain combat readiness, and cannot replicate the high-stress environment encountered during combat operations." This section and Section 1.4.1 (Why The Navy Trains), goes further to explain the importance of live training and the current limitations of simulated training. As described in Section 2.3.2.4 of the EIS/OEIS, alternatives such as simulation have great value during different phases of training, but ultimately, the training value generated by the actual firing of live weapons cannot be recreated by other means currently available.
L. Padawer (Electronic)	As a commercial fisherman, business owner and new mom, I am concerned about the proposed training activities in the Gulf of Alaska. It is prime salmon habitat. I would like to see activities restricted between October and April and I would like to see amount of activity proposed cut by 50-90% of current proposal. Thank you, L. Padawer	The training activities have been ongoing for over a decade in this same area. See Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fisheries in the area. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Please see Chapter 2 (Description of Proposed Action and Alternatives) to understand the three alternatives being discussed in the documents.
L. Page-01 (Written)	I want to comment on the Gulf of Alaska Navy Training Activities Draft Supplemental EIS/OEIS. I believe conducting sonar experiments in the Gulf of AK area is detrimental to whales and other sea mammals. There have been documented deaths of Sperm Whales in the proposed training area after previous trainings were conducted there.	Please note that the Navy is not proposing to conduct sonar experiments in the Gulf of Alaska as part of the proposed action. Navy is unaware of any documented deaths of any marine mammals associated with previous Navy training in the area.
L. Page-02	Conducting sonar experiments in this area when whales are present is harmful to whales, akin to hitting a dog in the head with a big club. Ordinary citizens would be charged with animal cruelty if caught clubbing dogs.	The proposed action is the continuation of Navy training in the Study Area and does not involve any "experiments." For an accurate description of how sonar systems may affect marine mammals, refer to the Supplemental EIS/OEIS Section 3.8.3.1 (Acoustic Stressors) and Section 3.8.3.3 (Analysis of Effects to Marine Mammals).
L. Page-03	I know the Navy needs to conduct sonar tests. I would urge that the Navy find other whale free areas to conduct such tests, or only conduct them when whales or other sea mammals are not present.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. See Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
J. Pahl (Electronic)	Concerning war game activity south of Prince William Sound, I am opposed to this. I have concerns that the salmon heading for the Copper River will in some way lose their way or possibly be out right killed by this action. Speaking in fish terms this is in our back yard. I understand nobody wants this in their neighborhood but please not in ours. These fish are our livelihood, we cannot "go get another job". Should a problem arise it would not be provable hence making a lawsuit a moot effort. Why would the Navy risk messing up their own people. Take this elsewhere please, please, please.	The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. As detailed in Chapter 2 (Description of Proposed Action and Alternatives), the Navy is not proposing to increase the level of training over that already authorized since 2011, but it is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for training in Alaska and why the same training cannot be conducted elsewhere. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Percy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m), (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). Also see Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. The Navy has, however, affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern.
L. Patty (Written)	I disapprove of Navy testing of sonar and explosives off the coast of Alaska everywhere. There is an abundance of sensitive marine mammals species that visit coastal and offshore Alaska that I believe would be harmed by the proposed testing and training projects.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) regarding impacts to marine mammals. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
L. Pepi (Electronic)	I urge you to limit your sonar testing to winter times when less mammals and also fish would be affected by it.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
J. Person (Written)	After reading the materials provided by the Navy – I notice it is full of words such as “safe”, “ideal”, which I assume refer to Naval personnel. As an Alaskan, I know that the best preparation for variable situations should be done under less than ideal situations. If the goal is to prepare for “natural disasters, homeland security etc” it seems we would be better served for training to be done under tough situations. Ideal conditions would be fine if crisis' only occurred then. I am concerned about the marine mammals in the area during the proposed training time and suggest training in the winter when less marine mammals are present and the goals of adequately training navy personnel (to respond under and conditions) would be better accomplished.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Regarding your concerns about marine mammals, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
D. Peterson (Electronic)	I would like to comment on the Navy Plans for the Gulf of Alaska which may impact marine mammals. What we do to the earth and the sea, we do to ourselves. Please do not move forward with this plan unless there is NO impact to marine mammals and plants.	Please be aware that the proposal is for the continuation of training in the same area where training has been ongoing for over a decade. Based on the analysis in the Supplemental EIS/OEIS and monitoring conducted during actual training events, the proposed training will not

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	Thank you for your time.	pose a risk to whales, fish, and other wildlife given that these same activities have been conducted for many years here and in other Range Complexes with no indications of population level impacts that are either injurious or of significant biological impact to marine mammals, fish, or wildlife at those locations. Please see the recent results supporting this conclusion as presented in training ranges monitoring reports available at available at the Navy website (www.navy.marinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental/).
A. Phass-01 (Electronic)	Navy War Games in Alaska Would Impact Thousands of Marine Mammals The extremely loud underwater noise from active sonar and ship sinking explosions will propagate for hundreds of miles through the offshore ecosystem, and have "the potential to disturb, injure, or kill marine mammals." The area proposed for these war games - the northern Gulf of Alaska - is one of the most productive regions anywhere in the world ocean. Marine mammals in the area include Blue, Fin, Sei, Minke, Sperm, Killer, Right, Gray, and Humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. Active sonar exercises have been implicated in mass strandings of certain whale species elsewhere. The Marine Mammal Protection Act establishes two levels of impacts, or "takes," of marine mammals: "Level A" - actions that may injure (or kill) a marine mammal or marine mammal population; and "Level B" - actions that may disturb a marine mammal or marine mammal population, causing disruption of critical behaviors such as migration, surfacing, nursing, breeding, feeding, or sheltering, "to a point where such behavioral patterns are abandoned or significantly altered." Despite the Navy's proposed mitigation plan, including marine mammal lookouts and clearance zones, the Supplemental Environmental Impact Statement (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing, unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals. Given this expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in	Please see Chapter 3 (Affected Environment and Environmental Consequences) in the 2011 GOA Final EIS/OEIS and in the Supplemental EIS/OEIS, where the Navy presents information on resources potentially impacted by the continuation of Navy training in the Study Area, including all the marine mammal species noted in the comment. See the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) for a discussion of strandings and the referenced Navy Cetacean Stranding Technical Report (U.S. Department of the Navy 2013c) for information regarding strandings. For an analysis of Navy training impacts to marine mammals based on the best available science, see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been "severely injured" or died as a result of Navy training. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem. Unfortunately it seems the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these damaging war-games in the Gulf of Alaska, regardless of public concerns.	
A. Phass-02	So, if the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore", east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
A. Phass-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
A. Phass-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
A. Phass-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
A. Phass-06	While it is important for the Navy to maintain readiness, its proposed war-games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. If the Navy has to do such training, it should do it elsewhere. This proposed activity is shocking and disgraceful. I am thoroughly appalled by the lack of empathy for our inhabitants of the oceans. Sincerely, A. Phass	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA.
B. Phelps (Electronic)	Personally I wish that we would just stop practicing techniques that we are unsure of the damage it will cause! Especially when it comes to the earth and its inhabitants! We are destroying our only resource "earth" one step at a time! Eventually our great grand children will be saying what was a whale like?? Anyhow you get my point, but we as humans won't figure it out until it's too late so carry on with your destruction just be wise! At least do this test at a time when there is less marine animals in the area to be affected! Thank you	Please see the Supplemental EIS/OEIS presenting the science behind the analysis of impacts. For example, see Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Regarding conducting the training at a time "when there is less marine animals in the area," please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
T. Pogson (Electronic)	Thank you for the opportunity to comment on this action. Because the project area covers one of the richest biological marine ecosystems in the world, and because this ecosystem supports the one of the largest sources of employment in Alaska, serious care is needed as you move forward with your plans. Detailed studies of the impact of your actions are needed to re-assure the citizens of Alaska that you have carefully considered cumulative impacts of your activities on the livelihood and well-being of the citizens of the State that depend on the Gulf of Alaska for their livelihood. Further, the ecosystem in the GOA supports millions of migrant birds and fish, many of which do not have primary economic value, but which are all integral parts of the GOA ecosystem. In the Kodiak community, which is almost entirely dependent on the GOA for the economic viability of the fisheries here. These fisheries are the largest economic engine on the island, and there is serious apprehension and cynicism regarding the large-scale nature of your plans and the possible impacts on the economic viability of the fisheries and biological systems that support those fisheries. We like to think of our military as being supportive of citizens, showing concern for the overall well-being of the Nation. The magnitude of this proposed action has inflamed local attitudes. I urge you to carefully consider the long term impacts of the actions involved in such a large program.	The proposal is the continuation of training that has been ongoing for over a decade; see the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS presenting the detailed analysis of the impacts from the proposed action. As evident from those documents, the Navy is aware of the resources in the area and their importance to the people of Alaska. Long term consequences are analyzed in the appropriate resource sections of the documents. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		the likely presence of civilian vessels and aircraft in that general area. See Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more detail in this regard.
R. Pollack (Electronic)	I am writing to express my concern over the proposed training plans of the Navy which involve annual summertime bombing maneuvers in Alaska over the course of a five year period. I am surprised that in 2014 the Navy would propose and would be allowed to undertake training activities that would have such clear harmful effects on various members of the ecosystem in question. Whales are feeding during the summer months. Why are these training procedures not being done in the winter months when the whales are in Baja? Why are these maneuvers not taking place far from the continental shelf where their impact on all marine life will be greatly lessened. Why has a study on the impact of the migration of salmon not been made, or made public if it has been done? What are the possible effects of contamination from the detonated materials and the ships that would be sunk? There are many ways in which our lives need to be protected as Americans. Military attack is not the only threat. We also need to have our environment and the livelihood of those who fish our waters protected. We should not have to be fighting ourselves in seeking this kind of protection. Please have a more inclusive and expansive understanding of how the Navy can protect us.	The proposal is the continuation of training that has been ongoing for over a decade; see the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS presenting the detailed analysis of the impacts from the proposed action. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines). Also, not all whales leave the area in the fall and winter. As detailed in Section 3.6 (Fish), studies have been done and are summarized regarding impacts to salmon. For the impacts from "detonated materials and ships," see Section 3.2 (Expendable Materials). Also regarding "ships that would be sunk," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX)) to understand the nature of this activity. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
C. Potter (Electronic)	To The Department of the Navy, I understand and support the necessary training activities for today's Navy but today I am asking that you reconsider plans to bomb and	Please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX)) to understand the nature of this activity. As noted

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	sink vessels in the Gulf of Alaska. As you know from statements in your own EIS statement "The training area is a highly productive region for fish and shellfish populations and supports some of the most productive fisheries in the USA. It is not empty! These marine resources have been carefully and painfully managed to be the most productive in the world. Here in the Prince William Sound and Copper River Delta Area we are just now returning to Pre Exxon Valdez levels of our marine mammal and salmon fisheries (the herring fishery never did recover. Our Salmon are under attack from big oil, big mining, over fishing in international waters and global weather change. Our Chinook salmon are particularly vulnerable and protecting "Essential Fish Habitat" is critical to keeping communities like mine viable here in Alaska. I have concerns as well for my family and friends who work on the water in the Gulf. Your plan to do these maneuvers in the summer when fishing, material transportation, oil transportation, cruise ship traffic and sport use of these waters is at its highest does not appear to be well considered. Please reconsider this 5 year damaging and dangerous plan for this area that is so important to the economic and subsistence needs of Alaskans. Thank you, C. Potter	in that section, a SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Navy is aware of the resources present in the Gulf of Alaska; see Chapter 3 for details. Specifically in Sections 3.6 (Fish) and 3.12 (Socioeconomics), of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on populations of fish or the health of the fisheries and socioeconomics in Alaska. As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. As detailed in the sections noted above, the proposed training activities will not damage habitat in the area or impact subsistence needs of Alaskans.
L. Pottinger-01 (Electronic)	The Navy should cancel the ship sinking (SINKEX) exercises in Alaska altogether, to avoid killing thousands of marine mammals. If the exercise is not cancelled, I strongly urge the Navy to either change the location of the practice from Alaska to the Pacific where whales will not be impacted	Please note there are no mortalities anticipated as a result of the continuation of training in the area that has been ongoing for over a decade. Scientific analysis and modeling and a long history of having conducted SINKEX training events indicates there should be no mortalities resulting let alone "thousands" as indicated by this comment. Regarding cancelling the "ship sinking," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX) to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. Please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area and why the location cannot be moved, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). Please also note that the Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
L. Pottinger-02	- OR if the Navy insists on staying in the Gulf of Alaska, amend the practice plan to restrict the training area only to areas far offshore, e.g., away from the continental shelf and slope, where most marine mammals are found. I understand this should be east of	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	143 W. Longitude, and at least 100 miles from the nearest seamount.	on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
L. Pottinger-03	In addition, I request you change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
L. Pottinger-04	I insist you figure out a process to accommodate independent scientific observers during the exercises to confirm the effectiveness of the mitigation plan.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
K. Procter-01 (Written)	Dear Ms. Burt: I have read about the Navy's plans to engage in war games in the Gulf of Alaska. I am horrified to learn of the certain damage that will affect marine life in this area. Whales, dolphins, porpoises, sea lions, seals, and other mammals will be disturbed, injured, or killed by the extremely loud underwater noise caused by active sonar and ship-sinking explosions that are planned. The Navy predicts its five-year Gulf of Alaska training exercises will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral effects and some permanent injuries. This is an astonishing number of marine mammal impacts. Of course, some of these mammals won't just be "affected"; they will be seriously injured and killed.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these same activities were last analyzed in the 2011 GOA Final EIS/OEIS. Please note that the analysis presented concludes no significant damage will result from the continuation of ongoing training and that marine mammals will not be killed; see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for details. Specifically see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
K. Procter-02	I think these war games should be set aside permanently. However, if the Navy insists upon playing war, at a bare minimum its plan should be amended as follows:	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	1. Restrict the training area only to areas far offshore (away from the continental shelf and slope), east of 143 W. Longitude (and at least 100 miles from the nearest seamount).	on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
K. Procter-03	2. Change the timing of the operations from summer to winter (November- March) in order to minimize the effects on migratory whales in the area in the summer.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
K. Procter-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of mitigations.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
K. Procter-05	4. Cancel the ship sinking (SINKEX) exercises altogether as the Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
K. Procter-06	While it is important for the Navy to maintain readiness, its proposed war games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. If the Navy has to do such training, it should carefully locate another place where the impacts would not be so severe.	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA.
J. Public (Electronic)	I do not support this training at all. it is very clear that marine life sufferer immensely injuries and death from any use of jet level sonar in the oceans. They rely on hearing immensely and the navy has huge jet noise travelling through the oceans which	Your opposition to the continuation of Navy training in the area is noted. Please see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) to understand the nature of sound in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	hemorrhage the brains of the marine life. They are doing this throughout the world representing a massive death assault upon marine life - and an environmental threat to the entire world. I very much oppose the navy training here and believe all training can be accomplished by training the wars that are going on all over the world an in practice that doesn't kill anything to train. Pilots train without fling. The navy can do similar. You don't need to kill to practice killing.	the ocean. Note also that as presented in Section 2.3.2.4 (Simulated Training) of the 2011 GOA Final EIS/OEIS, the Navy currently uses computer simulation for training whenever possible. Also note in the Supplemental EIS/OEIS Section 5.3.3.1.2 (Replacing Training with Simulated Activities) which also discussed this topic.
M. Raynolds (Electronic)	The Navy's record of protecting marine mammals during its training operations is dismal. That is why the Natural Resources Defense Council is suing the Navy and why the Navy is the focus of actions by many other environmental groups. Studying and modeling the impacts of high decibel activities while escalating their use is not acceptable. The Navy should be reducing its use of active sonar and explosives during its training exercises until the studies and models determine ways to eliminate the negative effects on marine mammals.	The Navy's record of protecting marine mammals can be reviewed in the 80+ monitoring and scientific research reports prepared as part of permit compliance requirements and demonstrating the Navy's commitment to the protection of marine mammals during training. These are publicly available at the following Navy website (www.navy.mil/speciesmonitoring.us/) or at the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications). For a thorough assessment of the likely impacts to marine mammals, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
S. Rediske (Electronic)	I am opposed to the Navy's plans to use high frequency sonar and munitions in the Gulf of Alaska. I wanted to be at the public comment meeting that was held in Homer, but due to short notice advertising on the Navy's part in our community, I was unable to leave work to attend. This proposed testing is counter to any attempts to protect marine mammals that the Federal government has instituted and is a direct threat to Alaska's great fisheries. What happens to our fishing fleet when they move through these waters during scheduled testing? or is this great area simply off limits to movements of our fishing vessels? How are family economics going to be affected by this testing - fishermen at the mercy of Navy testing during the short months of Alaskan fishing? Why is the Navy proposing something like this during the great migrations of marine mammals into Alaskan waters??? Has no one in the Navy thought about this? Is the goal to subject marine mammals to the most disruptive assault we humans can inflict? Do not test high frequency sonar and munitions in the Gulf of Alaska and most urgently, do not do it during the summer migrations.	The training activities being analyzed have been occurring in the same training area for more than a decade and the use of sonar was authorized part of the overall effort centered around the 2011 GOA Final EIS/OEIS and in this Supplemental EIS/OEIS. While there are some high frequency sources used by the Navy while training, those same high frequencies are in use by commercial vessels, fishermen, and researchers in the Gulf of Alaska. Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. See Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the training and the requirements for training in Alaska waters as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
J. Reichhold-01	I am writing regarding the proposed Navy activity in the Gulf of Alaska, and I am writing	As presented in Section 1.1 (Introduction) of the Draft Supplemental

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	to ask that it not happen within the Gulf of Alaska. As a resident of Cordova, AK for many years, I've fished salmon commercially in Prince William Sound and the Gulf, and I care very much for the people and places around Cordova and Kodiak.	EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The Proposed Action detailed in the Supplemental EIS/OEIS are not new. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on populations of fish or the health of the fisheries in Alaska.
J. Reichhold-02	I do not believe that these exercises are necessary for training, and if they are I believe that they need to be done in deeper waters far offshore and away from the continental slope and shelf (east of 143 W. Longitude and at least 100 miles from the nearest seamount).	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
J. Reichhold-03	I am also writing to request that individual observers be mandatory on all of these ships, if any ships are indeed going to be present.	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally,

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
J. Reichhold-04	Also, any training needs to be strictly limited to the months of November to March, when migratory whales will be less impacted by training.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
J. Reichhold-05	I am deeply concerned about possible pollution to our waters, our fish (this is much too close to the best of America's last great salmon runs) and other subsistence resources and wildlife. The military has a history of leaving toxic waste in Alaska's waters and on our land, and without full disclosure of what toxins, heavy metals, and other pollutants will be added to our waters (and without economic benefit) I see no reason why the	Please note that Navy training in the Gulf of Alaska has been occurring for many years and that the continuation of training in the Gulf of Alaska will not result in pollution to our waters. Additionally, there have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	people should be allowing something like this. These training exercises are unnecessary, and to propose that they go in the Gulf of Alaska is especially inappropriate. If these training exercises move forward, money, jobs, or aid needs to be brought to local economies from these operations. Why are none of the materials that will be in our waters recorded, and why are no clean-up efforts promised? This area is a vital treasure of our national heritage and the source of many of our greatest jobs and foods. Thank you for your time, and for protecting the Gulf of Alaska from these proposed Naval trainings.	training in the TMAA. Please see Section 3.2 (Expended Materials) of both documents regarding the impact from expended materials. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed continuation of training activities should not have an impact on populations of fish or the health of the fisheries in Alaska. Please see the discussion in Chapter 5 for the Supplemental EIS/OEIS regarding standard operating procedures and mitigation measures that will be implemented to protect the environment. The Navy has agreed to implement three specific areas and activity mitigation measures while training in the TMAA. These are (1) precluding a SINKEX event from occurring in Habitats of Particular Concern; (2) prohibiting use of explosives during training in the Portlock Bank area; and (3) establishing a North Pacific Right Whale Cautionary Area where the use of surface ship hull mounted mid-frequency sonar or explosives will not occur in the June to September timeframe. The Navy is committed to the minimization of impacts while safely meeting its training requirements.
M. Reichman (Written)	Of all the locations on this planet, why choose Alaska, one of the most pristine environments remaining in the world to do your exercises? Please choose an already degraded area.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training. As described in the 2011 GOA Final EIS/OEIS Section 2.3.2.1 (Alternative Locations), the Navy considered, but rejected, alternatives that included moving this exercise to other locations. Such alternatives fail to meet the purpose of and need for the proposed action. The continuation of Navy training in the area, which has been ongoing for over a decade, will not degrade the area. As discussed in Chapter 2, Section 2.3.2.1 of the 2011 GOA Final EIS/OEIS, the GOA TMAA provides a strategically important and unique venue for conducting required Navy training activities and meeting the mission of Alaskan Command. As analyzed in detail in Chapter 3 of the Supplemental EIS/OEIS, Navy activities would not result in significant impacts to threatened or endangered marine species or seabirds located in Gulf of Alaska. The Navy has completed the appropriate level of consultation with NMFS and USFWS for their proposed activities in GOA.
S. Richards (Electronic)	Please stop your plan to play your silly wargame "training" in the Gulf of Alaska, which will impact and kill marine animals, especially sensitive whale species. This plan sounds totally ill-conceived. The active sonar will disturb all marine animals in that area (not to mention wasting tax-payer dollars so you children can play your wargames). The mindset of the government and the military-industrial complex never ceases to amaze me in its selfishness and idiocy. America has lost in Iraq, so don't waste more money and marine life for you pointless exercises. Yes, I said pointless. How mindless you all	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training. Additionally, as presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS; the training activities detailed in the Supplemental EIS/OEIS are not new. The analysis

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	are but then, I know what kind of people join the military. "nuff said.... S. RICHARDS NORTH PORT, FL	presented in the Supplemental EIS/OEIS Section 3.8 (Marine Mammals) and the past history of conducting these same training events indicates that the future continuation of training will not kill marine mammals.
K. Richter (Electronic)	I ask that you test Navy equipment elsewhere than the Gulf of Alaska. The biological richness of this geological area puts an increased number of animals at risk.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please see the analysis presented in the Supplemental EIS/OEIS to understand the nature of expected impacts from the continuation of training that has been occurring for over a decade.
D. Sarrafzadeh (Electronic)	Please don't allow the navy war games to happen in the Gulf of Alaska! The fact that we have the highest trained navy as well as spend more on our military budget then than next 20 countries combined shows that this is unnecessary. The impact and devastation it will cause to one of the most active areas for marine wildlife is not worth the cost of 5 years of drills! Please news reports have been coming out one after another stating that the world's wildlife populations have decreased around 50% over the past 40 years is proof we need to do all we can! I'm proud of our military and the men & women who serve our country but I'm sure if most of them knew the cost that these games will have they would not be for it! Neither would most of the country. Therefore I ask again please do not allow the naval war games to go forward.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The Navy training activities detailed in the Supplemental EIS/OEIS are not new. Please see the analysis presented in the Supplemental EIS/OEIS to understand that there will be no devastation resulting from the continuation of training in the area. See specifically Section 3.8.5 (Summary of Observations During Previous Navy Activities) of the Supplemental EIS/OEIS, where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
C. Savonen (Electronic)	no summer testing. test in winter.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. In addition, the detection and avoidance of whales in the winter likely would be more difficult given the sea conditions.
R. Schuetze (Electronic)	I'm writing in opposition to the Navy's expansion of its warfare training in the Gulf of Alaska. I selected "Marine Mammals/Sonar" from the drop down menu, but my concerns go beyond that. The impact on marine mammals is too great with the planned expansion, and the ship sinking training seems unnecessary. As a Cordova resident and commercial fisherman, these waters are too close to home for me to feel comfortable increasing their occurrence. Once again I'd like to stress my opposition. Thank you, R. Schuetze	Your opposition to the continuation of Navy training in the Gulf of Alaska is noted. Please note that the Navy is not proposing an expansion of training activities. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX) to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on populations of fish or the health of the fisheries in Alaska. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen from any past Navy training in the TMAA. Given, however, the expressed concerns of fishermen from the Native Village of Afognak and the Sun'aq Tribe of Kodiak during government-to-government consultations, the Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general area.
K. Sexton (Electronic)	Please limit the use of active sonar as much as possible. This activity interferes with communications at low levels and can cause injury, confusion, and death as levels are increased. You know the science.	As presented in the Supplemental EIS/OEIS Section 5.3.3.1.3 (Reducing Sonar Source Levels and Total Number of Hours), the Navy already reduces the use of active sonar as much as possible. Please refer to the Supplemental EIS/OEIS Section 3.8.3.1 (Acoustic Stressors) to understand the science regarding the potential impact from active sonar. See specifically Section 3.8.5 (Summary of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Observations During Previous Navy Activities) of the Supplemental EIS/OEIS, where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
D. Shedd (Electronic)	If the navy's proposed actions are carried out in the winter time instead of summer, less wildlife will be in the area. This will mean less exposure to wildlife and ultimately less risk. The risk of the proposed actions on wildlife is too inconclusive not to consider the point above.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Also, the detection and avoidance of wildlife in the winter likely would be more difficult given the sea conditions, and there is no scientific data suggesting that wildlife would be better avoided by training in the winter.
D. Sherwood-01 (Electronic)	I am writing this morning to voice my concerns regarding the US Navy's plans to begin exercises using sonar in the Gulf of Alaska. The disastrous impacts of military sonar on the health of large marine mammals are well documented elsewhere and I am very concerned for the wellbeing of those resident and migratory marine mammals traveling through our waters that will be impacted by these exercises. To plan to use this vast area that is so vital to a healthy ocean habitat for migratory and resident animals year round over a 5 year period is irresponsible as is the disregard for knowledge gained from studies demonstrating the deleterious effects of military sonar over the past 20 years or more.	Please note that, as presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade. Additionally, there have been no disastrous impacts resulting from the use of sonar at any of the intensively used range complexes in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades; see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) for details. See the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) for a thorough review of the science in regard to potential impacts to marine mammals.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
D. Sherwood-02	There are many steps that can be taken to reduce the heightened risk to the large population of marine mammals and starting with seasonal exercises during non-migratory times of the year for the largest of the marine mammals would be one suggestion.	Please see Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) discussing the steps Navy already takes to protect marine mammals and other species. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. In addition, the detection and avoidance of whales in the winter likely would be more difficult given the sea conditions.
D. Sherwood-03	I am a veterinarian who works in Homer, Alaska and I have a special interest in the health of all species in my world. To relieve pain and suffering is my commitment to animals under my care and that extends to all animals in my world. I appreciate the important role the US Navy performs on a daily basis but I absolutely regret the need to carry out exercises known to cause severe stress, trauma and even death to so many marine mammals. Such land based exercises impacting land based mammals would not be tolerated but because what happens below the surface of our oceans is often not seen does not give carte blanche to any of us to continue to disrespect our oceans and the life living within them. Thank you for accepting comments during this period. Dr. D. Sherwood. MSc. MVB. MRCVS.	As the analysis presented in Section 3.8.3 (Environmental Consequences) of the Supplemental EIS/OEIS shows, the continuation of training that has been ongoing for over a decade in the Gulf of Alaska will not result in marine mammal deaths. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. These and other monitoring and research efforts specifically designed to look for the effects of Navy training activities clearly indicate the comment's characterization that impacts are "often not seen" is not supported by evidence.
S. Smith-01 (Electronic)	I strongly object to the Navy's proposed war games over the next 5 years in the Gulf of Alaska that will impact dolphins, whales, and other ocean mammals in disastrous ways. Our oceans are be, illegal whaling, and pollution. The Navy cannot justify the suffering its plans will cause ocean mammals and further degradation of our oceans and the life	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and that these activities were last analyzed in the 2011 GOA Final EIS/OEIS. As

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	within it. It is time to start rebuilding our earth and oceans, not further destroy them and the creatures that inhabit them. Dolphins and Whales are highly intelligent and will suffer greatly.	presented in Chapter 3 of the documents, the continuation of training in the Gulf of Alaska is not expected to result in long-term population-level impacts to marine mammals. Impacts from acoustic stressors on marine mammals are predicted by the Navy's acoustic effects model, but training activities are not likely to adversely affect the continued existence of threatened and endangered marine mammal species or critical habitat (see Section 3.8.3.3, Analysis of Effects on Marine Mammals).
S. Smith-02	The Navy must change its plans. I am also against training dolphins for military exercises and am in agreement with these changes to the proposed "preferred" plan: Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	Please see the information detailed in Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand that Navy has not proposed to train dolphins for military exercises as part of the proposed action. With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
S. Smith-03	Change the timing of operations from summer (Apr – Oct) to winter (Nov – Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Please see the general discussions presented in Chapter 3.8 (Marine Mammals) regarding migrating whales and specifically Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas) regarding an analysis for gray whales and their designated migration routes. With regard to gray whales, also note that there are no predicted MMPA effects to this species anticipated to result from the continuation of Navy training in the Gulf of Alaska.
S. Smith-04	Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
S. Smith-05	and Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships." The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
G. Snyder-01 (Electronic)	The Navy's use of sonar causes whales and other marine life to beach themselves in mass suicides. It also kills them or damages their nervous systems irreparably. The Navy knows how its sonar systems work now. It has already had plenty of experience testing and using sonar in multiple trainings already. At what point does repeating the same types of testing and training become redundant? How can the Navy so casually, so carelessly engage in activities that kill marine life? As a citizen, I appreciate the role the Navy plays in protecting America and Americans. But when it wantonly and casually kills and maims marine life, my appreciation of the U.S. Navy plummets like the ships it sinks and the fish it kills.	Please see the discussion presented in the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) to understand the science and potential for impacts to marine mammals. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training and note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. Please note that the Navy does not casually or carelessly engage in any of the training activities; see Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) for details. Also, as presented in Chapter 3.8 (Marine Mammals), the continuation of the training activities that have been occurring for over a decade will not kill marine mammals. See specifically the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
G. Snyder-02	The Navy already knows how to sink ships. It has already proven itself very capable in that activity. Why endanger and kill thousands of animals in their home, the ocean, where they live and have no other place to go? That is beyond cruel and inhumane.	Regarding the sinking of a vessel, please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. As noted, SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat.
G. Snyder-03	In law, Americans are concerned with doing the right thing and believe that they should observe standards that maintain respect for people by respecting them enough to accord them fair and just and humane treatment. Why does the Navy simply ignore that the animals who live in the ocean are also living, feeling, creatures that have just as	See specifically the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	much right to exist as we do? In fact, they were here before we were. So, in terms of longevity, maybe they should have even MORE rights to live peacefully in their domain that we do. But the Navy ignores that these animals have any rights at all or that they should have any rights. I don't want to think of the U.S. Navy as being wanton killers of thousands of innocent lives, of being destructive simply because it can do so in the name of training and preparedness. But, as long as the Navy so cavalierly kills or maims so many thousands of innocent sea creatures with its use of sonar, and blasts, and whatever they use that kills and maims, I will not think of the U.S. Navy as defending my interests. My interests are more aligned with being fair to the other animals that we share the earth and the oceans with. As long as the Navy so casually kills and maims, I think it is doing what most Americans think is wrong.	mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The Navy has supported and continues to support scientific research to aid in the understanding of how marine mammals and other marine species interact in the marine environment and how human activities, including sonar use, may affect marine species. Refer to Section 3.8.5.3 (Monitoring and Research at Other Pacific Navy Range Complexes) for a description of Navy support for marine mammal research.
G. Snyder-04	I am not for the use of sonar by the Navy except for use maybe in wartime. Because the use of sonar is so destructive to marine life, I am against its use for training purposes. The Navy has used sonar for a long time now. It knows this system and knows how to use it. That should be good enough until when it becomes necessary to use it for a real purpose. It doesn't take any more training to understand how to use it or how it functions. The Navy already knows all that.	Please see discussions presented for the various resource chapters (for example Chapter 3.6 for fish or Chapter 3.8 for marine mammals) to understand the nature of likely impacts from sonar, which is certainly not destructive to marine life as stated in the comment. To understand why Navy must train, see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training including the use of sonar as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated) which also explains why training with sonar needs to occur.
G. Snyder-05	Who decided to chose as a spot for training, one of the richest, most abundant and fertile marine wildlife biosystems on Earth and at a time when it is at its peak of productivity as a place and time to do naval sonar and ship sinking testing and training? Are there no other places on Earth where there are far fewer animals that would be endangered by training activities? I am not saying that I think Navy training activities should take place anywhere in the world's oceans. But if they do take place, why can't they take place where there is much less life at risk of death and or permanent neurological damage to be inflicted on the animals in those waters? There is ocean life everywhere on earth, but there must be areas where there is comparatively little and times when even in those areas, there is less life there that at peak times. When the Navy looks at the world's oceans and determines where to do testing and training, if it were to keep those kinds of considerations in mind, it would make better decisions with much less risk to life and not just all the Americans who care about such things would find relief in that, but all people, around the world, who believe in living in harmony with the Earth and ALL it's creatures, would also find relief.	See Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing and location of the exercise event. See also Chapter 2 (Description of Proposed Action and Alternatives) where other alternatives were discussed as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). Also, please note that the proposed continuation of training does not involve any testing in the Gulf of Alaska.
G. Snyder-06	Just because the Navy can bomb, kill, maim, and destroy marine life in one of the world's most fecund marine ecosystems doesn't mean that it should do so. The upper brass or those who make those kinds of decisions for the Navy should reconsider where and how they proceed with training and testing so that it proves to the world that	The Supplemental EIS/OEIS contains a thorough analysis of the effects of the Navy's proposed action using the most current and best available science, as required by NEPA. The Supplemental EIS/OEIS is a reconsideration of the 2011 GOA Final EIS/OEIS as presented in

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	maybe there was some thought behind it. It might help elevate respect for the Navy as a branch of the military that can do things the right way if given the chance to do so.	Section 1.1 (Introduction). As such, any new information received via comments has been thoroughly analyzed and incorporated as necessary into this Final Supplemental EIS/OEIS.
G. Snyder-07	Finally, consider this. You are a whale and you have just had a baby and survived a dangerous migration of thousands of miles back to where there is food because by that point, you and your baby are very hungry. And, at that moment, just when you get back and are able to start eating to replenish your strength, the Navy starts blasting you with sound that is so loud that you cannot think. Immediately your baby's ears are burning with blasting sound. There is nowhere to go. You can't get away.	Again, please see the discussion presented in the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences) to understand the science and potential for impacts to marine mammals; your characterization reflects a misunderstanding of the facts involving the proposed action, marine mammal hearing, and the likely impacts resulting from the proposed action. Please see Section 3.8.3.1.2.1 (Direct Injury) through Section 3.8.3.1.2.8 (Stranding) for a review of potential impacts on marine mammals from sonar, and then review the types of impacts predicted by the Navy's acoustic effects model in Section 3.8.3.3.2 (Model Predicted Effects from Use of Sonar and Other Active Acoustic Sources). The overwhelming number of effects are temporary behavioral effects, which would not result in individual mortalities or population level impacts.
H. Sommer-01 (Electronic)	Hello, I am writing today to ask that you amend/halt your sonar activities. The damage to marine life is significant and deadly to them. We must maintain a humane and environmental balance between your war game activities and actual living beings where these games are being held. The extremely loud underwater noise from active sonar and ship sinking explosions will propagate for hundreds of miles through the offshore ecosystem, and have "the potential to disturb, injure, or kill marine mammals." The area proposed for these war games – the northern Gulf of Alaska – is one of the most productive regions anywhere in the world ocean. Marine mammals in the area include Blue, Fin, Sei, Minke, Sperm, Killer, Right, Gray, and Humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. Active sonar exercises have been implicated in mass strandings of certain whale species elsewhere (Ed Sibylline: all whales are sensitive to sonars). The Marine Mammal Protection Act establishes two levels of impacts, or "takes," of marine mammals: "Level A" – actions that may injure (or kill) a marine mammal or marine mammal population; and "Level B" – actions that may disturb a marine mammal or marine mammal population, causing disruption of critical behaviors such as migration, surfacing, nursing, breeding, feeding, or sheltering, "to a point where such behavioral patterns are abandoned or significantly altered." Despite the Navy's proposed mitigation plan, including marine mammal lookouts and clearance zones, the Supplemental Environmental Impact Statement (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy	Please see Chapter 3 (Affected Environment and Environmental Consequences) in the 2011 GOA Final EIS/OEIS and in the Supplemental EIS/OEIS, where the Navy presents information on resources potentially impacted by the continuation of Navy training in the Study Area including all the marine mammal species noted in the comment. See the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding) for a discussion of strandings and the referenced Navy Cetacean Stranding Technical Report (U.S. Department of the Navy 2013c) for information regarding strandings. For an analysis of Navy training impacts to marine mammals based on the best available science, see the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences). Alternative 2 of the proposed action has been authorized since 2011, and there have been no reports of or evidence indicating that marine mammals have ever been "severely injured" or died as a result of Navy training. For a science based assessment of the likely impacts, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. Recent results supporting this determination are available at the following Navy website (www.navymarinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing, unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals.	(www.nmfs.noaa.gov/pr/permits/incidental/)
H. Sommer-02	Given this expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
H. Sommer-03	If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem.	Regarding moving the historically occurring activities out of the TMAA to "the central Pacific Ocean," see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area and the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
H. Sommer-04	But despite many such public comments submitted to the original 2011 EIS, the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these damaging war-games in the Gulf of Alaska, regardless of public concerns.	The Navy takes the public's comments and concerns very seriously as well as its role as a steward of the maritime environment. In the Supplemental EIS/OEIS, the Navy has taken a hard look at potential environmental consequences of the Proposed Action and alternatives, and has considered new information from which the predicted effects to the environment are expected to change from those quantified in the 2011 GOA Final EIS/OEIS using the best available science, and made it available for peer and scientific review and analysis. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
H. Sommer-05	So, if the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
H. Sommer-06	Change the timing of operations from summer (Apr – Oct) to winter (Nov – Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Sommer-07	Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
H. Sommer-08	and Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all “ship-sinking exercises,” please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining “how to sink ships.”
E. Stauffer-01 (Electronic)	If the Navy remains insistent on conducting exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
E. Stauffer-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	of the TMAA is located 140 miles offshore. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
E. Stauffer-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers), Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
E. Stauffer-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all “ship-sinking exercises,” please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining “how to sink ships.” The Navy undertakes SINKEX in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEX event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard.
R. Steiner-01 (Written)	1. I prefer the “No Action Alternative” 2. If not that, then Alternative 1 3. If not that, then amend Alt II as follows: a. Shrink TMAA to only area east of 142 W long b. Shift time of year to Nov-Mar only to avoid migrating whales c. Accommodate independent observers aboard	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. With regard to comment 3a, see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Regarding comment 3b, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, which discusses the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). With regard to independent observers (comment 3c), please see the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
R. Steiner-1-01 (Electronic)	Dear US Navy, Thank you for the opportunity to comment. I request that the "No Action" Alternative be selected, as I feel your existing training regime (pre-2011) should be sufficient for force readiness.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
R. Steiner-1-02	RE: SINKEK, the U.S. Navy clearly knows how to sink a ship, and should need no additional training in such in the Gulf of Alaska. If however, you opt to proceed, then I request the following: 1. you limit the exercise to the period November - March, which is when migratory whales are less present in the Gulf. There is no reason to conduct such an exercise in the summer, precisely when the most whales are in the region;	Regarding SINKEK, please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEK)) to understand the nature of this activity. As noted, SINKEK is designed to teach and maintain skills that our men and women would have to use in actual combat. The Navy undertakes SINKEK in compliance with a general permit for the activity as issued by the EPA. Additionally, the Navy has agreed to preclude a SINKEK event from occurring in Habitats of Particular Concern; see Section 5.4.1 (Area and Activity Specific Mitigation Measures in the TMAA) for more details in this regard. Regarding conducting the training in the November-March timeframe, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS which discusses the necessary timing of the exercise event and

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated) and specifically the discussion in Section 5.3.3.1.11 (Avoiding Marine Species Habitats and Biologically Important Areas).
R. Steiner-1-03	2. you limit the area of your proposed TMAA to only the area east of 142° W Longitude, well offshore, and at least 100 miles away from the closest seamount, to minimize potential exposure of marine mammals to underwater sound;	With regard to the suggestion to limit area of training, east of 142° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
R. Steiner-1-04	3. you accommodate an independent scientific observer aboard during the active sonar and/or SINKEX exercises, to monitor/confirm area clearance and impacts to marine mammals. Thanks for your consideration, Rick Steiner, Professor (Univ. of Alaska ret.) Anchorage	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
R. Steiner-2-01 (Electronic)	Dear US Navy, I would like to add to my previous comments on your SEIS for your proposed GOA training exercise, as follows: First, please accept this article I posted today as comment: http://www.huffingtonpost.com/richard-steiner/navy-war-games-in-alaska-_b_5830080.html Next, I wanted to encourage you to report in the Final EIS the total amount of marine mammal "takes" (impacts) predicted for the entire 5-years of the proposed project, as you did in the original EIS in 2011. The SEIS table simply reports takes for 1-year (e.g. 36,000 Level B takes), without explanation. I feel this is a deliberate attempt to mislead the public on this issue, and must be corrected in the Final EIS. Thanks. R. Steiner, Professor, Anchorage Alaska	Your article was reviewed for applicable content and information as part of the following comment response. The Final Supplemental EIS/OEIS reflects an improved analysis over that prepared in the and for the 2011 GOA Final EIS/OEIS, including updated marine mammal density data and updates to the Navy's acoustic effects model. Tables 3.8-16 and 3.8-17 in Section 3.8.3.3.2 (Model Predicted Effects from Use of Sonar and Other Active Acoustic Sources) present predicted marine mammal exposures and indicate in the table heading that the estimates are annual totals. Navy is providing the quantification of effects from each stressor separately, when they actually may be presented simultaneously in a given training event, and are already a conservative overestimate of the likely effects as discussed in the Supplemental EIS/OEIS Section 3.8.3.1.6 (Quantitative Analysis). A total such as that suggested would group together simultaneous acoustic stressors, multiple stocks and species, and that is why NMFS provides authorization pursuant to MMPA for each stressor, stock, Distinct Population Segment, and species.
R. Steiner-3-01 (Electronic – Posted Article)	Navy War Games in Alaska Would Impact Thousands of Marine Mammals Posted: 09/17/2014 10:03 am EDT Updated: 09/24/2014 11:59 am EDT For the past few years, the U.S. Navy has been developing plans to expand its warfare training exercises in the Gulf of Alaska, which they admit will impact thousands of marine mammals. The exercises are planned each summer (Apr - Oct) for five years, over an area about 300 miles x 156 miles (42,146 square miles) of the northern Gulf of Alaska, just south of Prince William Sound, and east of the Kenai Peninsula and Kodiak Island. The war games would include two Carrier Strike Groups, use of high-frequency and	Please note that the Navy has no plans to expand its warfare training exercises in the Gulf of Alaska. The activities that are being proposed in the Final Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and presented in the record of decision in the 2011 GOA Final EIS/OEIS document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. There are no predicted mortalities to any marine mammals, none are expected, and no authorization of mortalities is being sought pursuant to the MMPA. Additionally, please note that there is no scientific basis for asserting that the training activities could severely injure or kill marine mammals,

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	mid-frequency active sonar for Anti-Submarine Warfare exercises, training on new weapons systems, and two ship-sinking exercises each year. The live weapons used would include surface-to-air missiles, air-to-air missiles, air-to-surface missiles, surface-to-air deck guns, air-to-surface bombs, air-to-surface guns, surface-to-surface guns, and heavyweight torpedoes. The extremely loud underwater noise from active sonar and ship sinking explosions will propagate for hundreds of miles through the offshore ecosystem, and have "the potential to disturb, injure, or kill marine mammals." The area proposed for these war games - the northern Gulf of Alaska - is one of the most productive regions anywhere in the world ocean. Marine mammals in the area include Blue, Fin, Sei, Minke, Sperm, Killer, Right, Gray, and Humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. Active sonar exercises have been implicated in mass strandings of certain whale species elsewhere. The Marine Mammal Protection Act establishes two levels of impacts, or "takes," of marine mammals: "Level A" - actions that may injure (or kill) a marine mammal or marine mammal population; and "Level B" - actions that may disturb a marine mammal or marine mammal population, causing disruption of critical behaviors such as migration, surfacing, nursing, breeding, feeding, or sheltering, "to a point where such behavioral patterns are abandoned or significantly altered." Despite the Navy's proposed mitigation plan, including marine mammal lookouts and clearance zones, the <u>Supplemental Environmental Impact Statement</u> (SEIS) released last month predicts thousands of such marine mammal takes to result from the proposed exercises. The SEIS predicts that each year, active sonar use will result in 36,453 Level B takes of marine mammals, and 3 Level A takes. And explosives (missiles, bombs, heavy deck guns, torpedoes, ship-sinking, etc.) are predicted to result each year in 112 Level B takes, and 3 Level A takes of Dall's porpoises. Thus, the Navy predicts that the five-year Gulf of Alaska training exercise will result in over 182,000 impacts ("takes") to marine mammals, causing behavioral impacts and some permanent injuries. While this is less than the original prediction of over 425,000 takes, this is still an astonishing, unnecessary, and unacceptable number of marine mammal impacts. And regardless of the Navy's predictions, these activities could still severely injure or kill marine mammals. Given this expected and potential impact, the Navy should simply adopt its "No-Action" alternative, cancel the expanded training, and continue training as usual. If the Navy really needs to conduct these real-fire, active sonar exercises, it should relocate them far offshore in the central Pacific, thereby minimizing potential exposure to marine mammals and Alaska's coastal ecosystem. But despite many such public comments submitted to the <u>original 2011 EIS</u>, the Navy is sticking with its "preferred" plan. It's pretty clear the Navy intends to conduct these	given the history of conducting these same activities for over a decade and given the information presented in the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Regarding moving the historically occurring activities out of the TMAA to "the central Pacific Ocean," see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the requirements for the training area and the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	damaging war-games in the Gulf of Alaska, regardless of public concerns.	
R. Steiner-3-02	So, if the Navy remains insistent on conducting these exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
R. Steiner-3-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
R. Steiner-3-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns); and	increased risk to personnel safety and the sonar operator's ability to achieve mission success. With regard to the effectiveness of the mitigation measures, please note that the monitoring and reporting that the Navy has been providing to National Marine Fisheries Service since 2006 has included long-term data on distribution, abundance, and habitat use patterns by marine mammals within Navy activity areas and monitoring data during individual training or testing activities. The Navy also contributes to the funding of basic research, including behavioral response studies specifically designed to determine the effects to marine mammals from the Navy's main mid-frequency surface ship anti-submarine warfare active acoustic (sonar) system. The monitoring program is intended to provide important feedback for validating assumptions made in analyses and allow for adaptive management of marine resources, including changes to mitigation measures based on emerging science. Monitoring and reporting has been and will continue to be required for compliance with the Letters of Authorization issued for the Proposed Action under the MMPA and will be developed in coordination with NMFS through the regulatory process. With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
R. Steiner-3-05	4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
R. Steiner-3-06	The public comment period is open until Oct. 20, 2014, and the public can <u>comment on-line</u> . While it is important for the Navy to maintain readiness, its proposed war-games in the Gulf of Alaska would be in the wrong place, at the wrong time, and would cause too many impacts to marine mammals. If the Navy has to do such training, it should do it elsewhere.	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA.
R. Steiner-4 (Electronic)	Dear USN, I have commented before on the EIS for the GOA training exercises, but wanted to submit the link here to a petition in opposition to the training (e.g., favoring the "no-action" alternative): http://www.thepetitionsite.com/806/158/057/dont-endanger-marine-life-with-war-games/ As of today (Sunday Oct. 19), the petition has over 39,000 signatures. As well, I want to submit as commit a piece I wrote for several media outlets last month on this: September 17, 2014. Navy War Games in Alaska Would Impact Thousands of Marine Mammals. http://www.huffingtonpost.com/richard-steiner/navy-war-games-in-alaska-_b_5830080.html Thanks, R. Steiner, Professor Anchorage Alaska	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses in the Final Supplemental EIS/OEIS, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. A review of the referenced petition indicates it presents generally incorrect information regarding the proposed action and the likely impacts resulting from the continuation of Navy training in the Gulf of Alaska. Regarding your piece written to media outlets, please reference the responses directly above.
M. Stickney-01 (Electronic)	It is crucial to the marine mammals that are threatened by this training, that is wrongly placed, incorrectly timed (migratory season), and not necessary to be the size and scope that is planned.	Please see the Supplemental EIS/OEIS Chapter 3.8 (Marine Mammals) to understand that marine mammals are not "threatened" by the continuation of Navy training that has been ongoing for over a decade. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and Chapter 2 (Description of Proposed Action and Alternatives) of the documents to understand what Navy is proposing. Specifically with regards to not conducting the training in the summer, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
M. Stickney-02	If the Navy remains insistent on conducting these training exercises in Alaska, at a minimum, its plan should be amended as follows: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
M. Stickney-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		achieve mission success.
M. Stickney-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
M. Stickney-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. Please listen to the citizens that support the Navy's effectiveness, but also respect the importance of protecting marine mammals.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
E. Stolarczyk-01 (Electronic)	I am not in favor of the Navy's proposed action or any of the alternatives listed. I request the permit be denied and all future actions that propose to create a war zone in the waters of the Gulf of Alaska be denied. The Gulf of Alaska is not an area to destroy with weapons of war. Its waters support one of the most economically valuable fisheries in the USA. Commercial fishing is the largest employer in the State of Alaska and these proposed actions pose a threat to these fisheries and jobs. The most valuable (and quickly disappearing) fish in these waters is the Chinook Salmon. There is NMFS (National Marine Fisheries Service) has documentation of Chinook salmon occurrence	Your opposition to Navy training activities being analyzed in the Supplemental EIS/OEIS that have been occurring in the same training area for more than a decade and that were last analyzed in the 2011 GOA Final EIS/OEIS is noted. Please note that the Navy is not proposing to create a war zone in the waters of the Gulf of Alaska. It is a training venue, one of many that the Navy uses and one that has been used for over 30 years. Secondly, the analysis shows that the continuation of Navy training activities will not destroy the Gulf of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	in the area of interest (TMAA) during the time of interest (April - October) (including Chinook salmon originating from ESUs listed as threatened or endangered under the ESA). In addition, EFH (Essential Fish Habitat) areas for all five species of Pacific Salmon are within the TMAA. This is reason enough to deny the permits for the proposed actions for the Navy. The Navy has failed to prove that the proposed training exercises called Northern Edge will not cause adverse affects to the waters and environments in and around the Gulf of Alaska and the fish and mammals that reside within them. I request additional and independent studies and evaluations be conducted. In the 2011 FEIS, Section 3.6 - Fish, it is repeated over and over that these training activities will, or have the potential to, cause harm - how can we the public be expected to comment on whether something will or will not do one thing or another? For example (from Section 3.6 Fish): 1. "Fish would have the potential to be affected by vessel movement, aircraft overflights, explosive ordnance, nonexplosive ordnance use, weapons firing disturbance, and expended materials." Well, which is it? I am going to assume that since negative affects cannot be ruled out, the Navy expects them. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Alaska with weapons of war; see Chapter 3 for details. The activities the Navy proposes to conduct in the Gulf of Alaska are all outlined in the 2011 Final GOA EIS/OEIS and the Supplemental EIS/OEIS. Regarding overall impacts to fish, as detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations, the health of fisheries, or socioeconomic conditions in Alaska. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m), (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-02	2. "impacts may occur to migratory juvenile or adult individuals physical injury to salmonids could occur within the distances of an explosion. Impacts to fish from explosions would be possible..." The Navy exists to protect my rights and those of my fellow citizens. The Navy does not exist to destroy the lands and waters that I and the community I call home depend upon for food. Seems like the only entity threatening my rights is the very one that supposedly exists to protect them. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-03	3. "Potential stressors to fish and EFH include vessel movements (disturbance and collisions), aircraft overflights (disturbance), explosive ordnance, sonar training (disturbance), weapons firing/nonexplosive ordnance use (disturbance and strikes), and expended materials (ordnance-related materials, targets, sonobuoys, and marine markers)." The Navy does not have my permission nor my support to knowing stress and/or damage the areas within the proposed TMAA. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-04	4. - "There have been very few studies on the effects that human-generated sound may have on fish." Until the Navy has extensively studied the effects of human-generated sound on fish they cannot make an educated decision, and since no educated decision can be made these actions should not be allowed. To reference a popular children's poem titled Humpty Dumpty - "Humpty Dumpty sat on a wall, Humpty Dumpty had a great fall. All the king's horses and all the king's men Couldn't put Humpty together again." If the Navy conducts these proposed actions, and apparently	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	permits themselves their preferred alternative - and damages the perfect ecosystem that is already under threat from factors like climate change and ocean acidification (which these exercises would exacerbate) it will never ever be able to be restored to its present productivity. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	
E. Stolarczyk-05	5. "little is known about the very important issues of nonmortality damage in the short- and long-term, and nothing is known about effects on behavior of fish." Don't make me repeat Humpty Dumpty. Until these things can be studied and independently found not to damage fish, the trainings should not be carried out. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever. CONTINUED IN THE NEXT COMMENT	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses in Final Supplemental EIS/OEIS, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-06	6. "Potential effects of explosive charge detonations on fish and habitat include disruption of habitat; exposure to chemical by-products; disturbance, injury, or death from the shock (pressure) wave; acoustic impacts; and indirect effects including those on prey species and other components of the food web." Exposure to chemical by-products, who would want to eat those fish? The ones who have spent their life living in toxic chemical laden waters? NO ONE. These exercises have the potential to destroy the entire economy of the community I live in. Thousands of people would be out of a job. We have seen this before, after the Exxon Valdez oil spill. Is the Navy proposing an environmentally damaging catastrophe of similar magnitude? Sure sounds like it. Our fish still have detectible levels of radioactive isotopes leftover after nuclear military testing carried out in the Gulf of Alaska in the 1950's. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	As noted above, see Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on fish populations or the health of fisheries in Alaska. See Section 3.2 (Expended Materials) regarding the impact from expended materials. Please note that the continuation of Navy training is not environmentally damaging or in any way comparable to an oil spill such as the Exxon Valdez event. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses in Final Supplemental EIS/OEIS, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-07	7. "Munitions constituents can be released from sonobuoys, targets, torpedoes, missiles, aerial targets, and atsea explosions. Petroleum hydrocarbons released during an accident are harmful to fish. Jet fuel is toxic to fish but floats and vaporizes very quickly. Assuming that a target disintegrates on contact with the water, any residual unburned fuel may be spread over a large area and dissipate quickly. In addition, fuel spills and material released from weapons and targets could occur at different locations and at different times." Jet fuel (that doesn't go directly in to the air we breathe - and cause air pollution) does float, but some of it, on the molecular level, mixes with water. And jet fuel does not dissipate quickly, especially in cold and often cloudy weather. Gasoline will, but not jet fuel. Jet fuel is much more persistent. Sounding a lot like a planned Exxon Valdez like environmental catastrophe. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarczyk-08	8. "It is possible that persistent expended ordnance could be colonized by benthic organisms, and mistaken for prey, or that expended ordnance could be accidentally ingested while foraging for natural prey items." Again the Navy is demonstrating that	See Section 3.2 (Expended Materials) of both documents regarding the impact from expended materials. No impact on populations of fish or the health of the fisheries in Alaska is predicted as a result of the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	these activities will harm fish. The fish could then wind up on someone's plate. Have you studied the effects of pregnant women and children who eat the fish that have accidentally eaten the expended materials? We know the fish still have detectable levels of radioactive isotopes from nuclear military testing done in the 1950's. The Navy has not studied the long term affects of the expended materials. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	proposed activities. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarcyk-09	9. "While the impact of anthropogenic sound on marine mammals has been extensively studied, the effects of sound on fish are largely unknown...No studies have established effects of cumulative exposure of fish to any type of sound or have determined whether subtle and long-term effects on behavior or physiology could have an impact upon survival of fish populations..." These quotes again reinforce the fact that the Navy does not have near enough information to safely conduct the exercises proposed in Alternative 1 and 2. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarcyk-10	10. "...exposure to broadband sounds with high frequencies cause behavioral modification in Pacific herring." Pacific Herring have never recovered from the toxic Exxon Valdez oil spill. These trainings will damage an already damaged species. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
E. Stolarcyk-11	These quotes from the 2011 FEIS clearly show that these military trainings are a bad idea. Navy representatives I spoke with told me their justification for the location of these trainings was in part to give Navy sailors the chance to experience a challenging marine environment and one they might encounter in times of war. While I can appreciate the need for training, I do not accept this logic. The Gulf of Alaska may just be a challenging marine environment for some; however for many it is home. It is the basis of their livelihood, culture, community and has intrinsic value that should never be subject to damaging war games.	Please review Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS for a description of potential environmental impacts from Navy training activities. As presented in Section 1.1 (Introduction) of the Draft Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and were previously analyzed in the 2011 GOA Final EIS/OEIS. See Section 5.5.2 (Reporting) of the Supplemental EIS/OEIS regarding past and future reporting on training activities, and see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
E. Stolarcyk-12	In the 2011 Record of Decision, the NMFS (National Marine Fisheries Service) disagreed with the Navy's findings. "Navy concluded that activities would not adversely affect fish populations or Essential Fish Habitat (EFH) as defined under the Magnuson-Steven Fishery Conservation and Management Act (MSFCMA). NMFS disagreed with	The rationale presented in the 2011 Record of Decision for the concurrence and non-concurrence regarding the EFH recommendations remains valid. Your opposition to the continuation of any Navy training in the Gulf of Alaska has been noted. The selection

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	the Navy's conclusions regarding EFH, and submitted four conservation recommendations. These included: 1) conducting all training activities that will result in expended materials outside of HAPCs, 2) developing a long-term monitoring plan for expended materials in the GOA, 3) coordinating exercises with NMFS to not displace research activities within the TMAA, and 4) developing a fish mortality reporting plan for Navy training activities. The Navy response included concurrence with recommendation 3, and non-concurrence with recommendations 1, 2, and 4." How were these trainings permitted in the first place years ago? The Navy needs to include concurrence with all four of the conservation recommendations. Their failure to do so shows that they do not have the protection of American's rights and values at heart. These trainings will damage the areas and people they exist to protect. Therefore, I reject the proposed actions and alternatives and demand that the Navy not conduct any training activities in the Gulf of Alaska, ever.	of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
T. Stoops (Electronic)	Please do these exercises in the winter to reduce incidental marine life injuries and deaths.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. As presented in the Supplemental EIS/OEIS, there are no marine mammal mortalities expected.
D. Swanson-01 (Electronic)	I strongly oppose the Navy's choice of location of the Gulf of Alaska training exercises. Under no circumstances should such high-impact activities as these occur in an area so important to fisheries and wildlife.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training in the Gulf of Alaska. As presented in Chapter 3, the Navy is aware of the important fisheries and wildlife present in the Gulf of Alaska.
D. Swanson-02	At the very least the Navy should restrict these activities to the high seas, not the continental shelf of Alaska or adjacent seamounts,	With regard to restricting training to areas "high seas," and "not the continental shelf of Alaska or adjacent seamounts," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. See an explanation of the assessment process in Section 5.2 (Introduction to Mitigation) and why these suggested measures would likely be ineffective at reducing environmental impacts, have an unacceptable operational impact based on the operational assessment, or are incompatible with Section 5.2.2 (Overview of Mitigation Approach).
D. Swanson-03	and carry them out during the winter when many migratory species are not present. It is absolutely unnecessary and irresponsible to conduct intensive military training over the continental shelf of Alaska during the summer! Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
S. Swanson-01 (Electronic)	Thank you for the opportunity to comment on the proposed naval warfare training exercises in the Gulf of Alaska. I advocate the "No-Action" plan for this very ecologically	Your advocating for the No Action Alternative is noted. The selection of an alternative by the decision maker will be based on a review of all

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	inappropriate training exercise which will have significant short and long term effects on the marine and coastal environments in the proposed area. The proposed training area encompasses highly diverse oceanic habitat, home to unique marine mammals that are already suffering from human activities and habitat alteration in many parts of their range. These species are particularly sensitive to underwater sonar and would face a number of weapons (bombs and torpedoes) and shrapnel and debris from exploded (and unexploded) ordinances and the proposed ship sinkings. There also will undoubtedly be many other environmental contaminants introduced into the ocean with the ship sinkings.	relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. Please note that the analysis does not indicate any long term effects on marine and coastal environments; see for example Section 3.8.5 (Summary of Observations During Previous Navy Activities) in the Supplemental EIS/OEIS that details 8 years of scientific monitoring. Regarding "ship sinkings," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. As stated in the Supplemental EIS/OEIS, the Navy recognizes that the likelihood of there being two SINKEX events in any one year in the TMAA is low. In order to ensure flexibility to meet potential Fleet training requirements, however, this Supplemental EIS/OEIS conservatively analyzes the potential impacts of conducting up to two SINKEX events per year in the TMAA. See Section 3.2 (Expended Materials) regarding the impact from expended materials.
S. Swanson-02	If the US Navy is unable to do the right thing and cancel this training exercise, I would suggest they: 1) restrict training to areas far offshore (East of 143 W Longitude and at least 100 miles from the nearest seamount);	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
S. Swanson-03	2) change the timing of this activity from summer to winter to minimize impacts on	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	migrating whales and critical marine mammal reproductive periods;	winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
S. Swanson-04	3) allow independent scientific observers to determine the effectiveness of the mitigation plan;	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		exercise objectives.
S. Swanson-05	and 4) cancel the unnecessary ship sinking exercises (SINK-EX).	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
S. Swanson-06	These would be true mitigation measures that would effectively prevent further degradation to Alaskan marine habitats and ensure the health of the unique marine mammal populations we are mandated to protect through the Marine Mammal Protection and Endangered Species Acts. S. Swanson Fairbanks, AK	Thank you for participating in the NEPA process. Please see the responses to your above comments in regards to the location, timing, and impacts from Navy training in the TMAA. For additional discussions on Navy's mitigation measures, please see Chapter 5 of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS discussing mitigation measures and note that the current mitigation measures were developed in collaboration between Navy scientists, acoustic experts, and marine mammal scientists with the National Marine Fisheries Service.
K. Swatzbart-01 (Electronic)	I'm very concerned about the Navy's developing plan to expand warfare training exercises in the Gulf of Alaska, which they admit will impact thousands of marine mammals, fish, and invertebrates. As a 30 year biologist in the Gulf of Alaska, I see firsthand the rich productive habitat this area is for a very large variety of marine species. The Navy predicts that the five-year GOA training exercise will result in over 182,000 impacts (takes) to marine mammals, causing behavioral impacts and permanent injuries.	Please note that the Navy is not planning to expand training exercises in the Gulf of Alaska. As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and were last analyzed in the 2011 GOA Final EIS/OEIS. Please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS regarding the necessary timing of the exercise event (why winter is not an option) as well as the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated). See the Supplemental EIS/OEIS Section 5.5.2 (Reporting) regarding past and future reporting. Also for example, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
K. Swatzbart-02	Given this impact the Navy should adopt its "NO-ACTION" alternative, cancel the expanded training in the GOA.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission. As stated above, the Navy is not planning on expanding training exercises in the GOA.
K. Swatzbart-03	I am not against navy training and feel it is important for our National Security, however,	With regard to moving training to "far off shore in the central Pacific,"

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	I would like the see the training be relocated to far off shore in the central Pacific, minimizing potential exposure to all marine species in this important Alaska's coastal ecosystem. This training needs to be done far away from the continental shelf and slope, where most marine species are found due to the high productivity of nutrients for invertebrates, fish, and marine mammals. Thank you for your consideration on this important issue. Sincerely, K. Swartzbart Cordova, Alaska	and "far away from the continental shelf," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. See an explanation of the assessment process in Section 5.2 (Introduction to Mitigation) and why these suggested measures would likely be ineffective at reducing environmental impacts, have an unacceptable operational impact based on the operational assessment, or are incompatible with Section 5.2.2 (Overview of Mitigation Approach).
G. Terpening (written)	Because of the presence of large numbers of marine mammals at most times of the year in the Gulf of Alaska, Navy exercises should not be conducted in Alaska.	Please see Chapter 1 (Purpose and Need of the Proposed Action) of the 2011 GOA Final EIS/OEIS explaining why Navy needs to train in Alaska.
K. Terpening-01 (Written)	Please reconsider the place and time of year for these exercises. Because whales feed here in northern waters in summer months June is the worse time of year for this. The chances of Whale/ship collisions is greatly increased.	Regarding the timing of Navy training, please see Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, which discusses the necessary timing of the exercise event and requirements for the training area, as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
K. Terpening-02	Additionally, I'm not convinced that sonar effects on those sensitive marine mammals has been determined conclusively.	Regarding sonar effects on marine mammals, see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
J. Thomas (Electronic)	I am concerned that there will be a significant and negative impact on salmon runs. I am against the navy war games in the Gulf of Alaska as there could be unforeseen consequences to the salmon and environment.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were previously analyzed in the 2011 GOA Final EIS/OEIS. The

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Proposed Action detailed in the Supplemental EIS/OEIS is not new. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on Alaskan fish populations or the health of Alaskan fisheries. See Section 3.2 (Expended Materials) regarding the impact from expended materials on the environment
J. Thompson-01 (Electronic)	As a concerned citizen, tax payer, and mother I am very upset to hear of the navy's plans in the Gulf of Alaska one of our nation's most active and prized natural habitats remaining. After reading of the likely impact on Marine Mammals brought up by expert biologists, I ask that the Navy reconsider these plans, and at the very minimum take honest consideration and augmentation of the planning based on the advice of unaffiliated experts. I.e. not Navy Scientists. Here are the recommendations that are the least the navy could do based on current Scientific assessment. I am a mother of two young children. And with each blow against our wildlife already under such extreme strain, I fear the incredible diversity of our world won't even be here for my children's future.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were previously analyzed in the 2011 GOA Final EIS/OEIS. The analysis presented in Section 3.8 (Marine Mammals) of the Supplemental EIS/OEIS presents the best available science regarding the likely effects to marine mammals.
J. Thompson-02	Please reconsider... 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
J. Thompson-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
J. Thompson-04	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
J. Thompson-05	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. Sincerely, J. Thompson, Los Angeles CA	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
D. Tobin-01 (Oral-Homer)	Hi, everyone. I wasn't planning to speak today, because I'm suffering from a cold. And I will clean this afterwards. So, I was just going to submit my testimony in written form. But I am sitting over there and I just can't help not say something.	Thank you for participating in the NEPA process.
D. Tobin-02	First off, I sat down and watched the video when I came in the room here. And I was struck by one comment made during the Stewards of the Sea video, which it said that the Navy takes steps to protect the marine environment with which it is entrusted. And I take a little bit of -- a conflict with that, because I think that marine environment is everyone's. It's not the Navy's, it's not just the U.S.'s, that the whales and all the organisms, plants, bacteria, animals, everything that lives in the marine environment shouldn't basically not be compromised unless it absolutely has to be. So -- and I know, I agree with the other folks in the audience who have said that there are places where, you know, certain events have already made these environments come to a state, which unfortunately they may or may not ever recover from. But that hasn't happened here. And I truly don't think it should. The timing for these events, like others have said, is just so poor. And so many organisms, many documentary films have been made about all the different types of organisms and the whales that come up here to feed during that time of the year in the summer when, you know, the Alaska seas are so prolific.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
D. Tobin-03	I also wanted to mention a couple of things that I took some notes on here, so I apologize for my flipping around. But some of the species that live in the trenches that your map overlays include, you know, the -- some areas where examples like beaked whales, for example, spend a great deal of time. And the class -- some of the students that are here with me today from my marine mammals class, they probably haven't seen any of this yet, but there's a section of the book that shows the Mesoplodont species, the beaked whales, we know next to nothing about so many whales, but these other whales, they very rarely come to the surface. It is hard to detect them when they are anywhere near around. And we know they're here, because our class is actually	Please see the analysis presented in the Supplemental EIS/OEIS in Section 3.8 (Marine Mammals) where information on beaked whales and other marine mammal species is presented.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	articulating a Stejneger beaked whale skeleton that was washed into the bay nearby, across the bay, two years ago. And we have another skull that came in from out the Aleutian Chain recently that beached over there. And there's another one hanging in the Pratt Museum. So they are around, and they're using these waters. And the very best picture in our marine mammal book that we use is a very blurry picture. And it's like the best picture in the world of this species. Next to nothing is known about the whales.	
D. Tobin-04	And you know, even the whales we do know a lot about, the killer whales and humpback whales and others, there's still so much unknown about the marine environment as a whole that I truly think that, you know, taking this into consideration, and in an area that is still relatively pristine, and, you know, where we know many species do make migrations through and come specifically here for that -- and we truly, at a different time of the year or at a different place entirely, we should really consider doing that, if at all possible. Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. With regard to training "at a different place entirely," please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training in the Gulf of Alaska. Also, see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
V. Vermillion (Electronic)	Dear Sirs/Ma'ams, Please cancel live exercises in or near the Gulf of Alaska that could impact marine life. Thank you, V. Vermillion	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training in the Gulf of Alaska. The purpose of the Proposed Action is to conduct training activities to ensure that the Navy meets its mission and obligation under Title 10, Section 506 of the U.S. Code of Federal Regulations. Please also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii, where Navy training has been occurring year-round for decades.
R. Vernon (Electronic)	Sirs: The idea of you playing "war games", destroying marine life, shooting holes in our fiscal solvency to demonstrate to phantom Chinese that the coast is not clear is ludicrous. If this is the best that homo sapiens can come up with to assure our survival, we deserve to go extinct. Why don't you do something for the oceans you are supposed to protect? Why do they have to be destroyed in order to save them? quite disgusted that the navy can't think through a problem, G. Vernon Homer, Alaska	Thank you for participating in the NEPA process.
S. Vonderloh-01 (Electronic)	There are steps that can be taken to reduce the harm to marine wildlife. Please consider the following amendments to protect the unnecessary and unacceptable number of marine mammal impacted by these test. 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
S. Vonderloh-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
S. Vonderloh-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
S. Vonderloh-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. Thank you.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
O. Von Ziegesar-1-01 (Oral – Homer)	Okay. Well, I'm the director of the north -- of Eye of the Whale Research. And we're a non-profit that studies humpback whales. Shelley works with me.	Thank you for participating in the NEPA process.
O. Von Ziegesar-1-02	The humpbacks have made a great recovery, but there are many endangered species that are in this area. I've read quite a bit about the trials that went on, about the stranded beaked whales in the Bahamas, and the lawsuit between the Navy and the NRDC, which is the National Resource Defense Council. And NRDC won the first round, and the decision was that these exercises should be in areas where there's not a very -- it's not an important food source for the marine mammals. And this is one of the hugest food sources for huge populations of marine mammals that are all condensing in the North Gulf. And it's not an appropriate place for this.	Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training in the Gulf of Alaska. As presented in Chapter 3 (Affected Environment and Environmental Consequences), the Navy is aware of the presence of marine mammals in the Gulf of Alaska and has analyzed the potential impacts of Navy training activities on marine mammals. Based on the analysis the vast majority of impacts are predicted to be short term behavioral effects (see Section 3.8.3.3.2 [Model Predicted Effects from Use of Sonar and Other Active Acoustic Sources]). As detailed in Section 3.8.3.1.6.3 (Navy Acoustic Effects Model) of the Supplemental EIS/OEIS, the Navy's acoustic model includes conservative assumptions (e.g., assumes that the animals do not move horizontally, assumes they are always head-on to the sound source so that they receive the maximum amount of energy, etc.) resulting in a more conservative (i.e., greater) assessment of potential impacts from acoustic sources than is predicted.
O. Von Ziegesar-1-03	The sonar is lethal for marine mammals. It is. It's been shown. There's been mass strandings in areas where sonar has been set off. And it's hard to prove. Stranded marine mammals are difficult to study, because they're either damaged at the time	The Navy's analysis does not support the conclusion that whales will be stranded as a result of the Proposed Action. Please refer to the Supplemental EIS/OEIS Section 3.8.3 (Environmental Consequences)

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	they're found or the tissue gets crushed during the investigation. By freezing the skulls and using CAT scans it has been proven that some stranded whales have blood around their brains and that they have suffered from something that's very similar to what we call the bends. So it does affect them.	for an accurate assessment of the likely impacts of the proposed action based on the best available science. Also, refer to Section 3.8.3.1.2.8 (Stranding) for a discussion on known stranding events where sonar has been determined to be a contributing factor.
O. Von Ziegesar-1-04	There have been many mass strandings that have been related to sonar activities in the vicinity. Not just our Navy but other navies. To ignore the danger it causes marine mammals is ridiculous.	Please see the discussion of strandings in general presented in the Supplemental EIS/OEIS Section 3.8.3.1.2.8 (Stranding).
O. Von Ziegesar-1-05	Truly we do not have any way of knowing the whole story of the effect of Navy mid range sonar and large explosives on sea mammals. Quantifying the temporary or permanent damages caused by the animals by the Navy activities is guesswork. And this EIS, actually the abundance estimates for all the marine mammals I thought was quite accurate. The research -- the Navy has done their homework. It's a great resource for what we have out there for marine mammals. But there have been thousands of hours of study and millions of our tax dollars have gone in trying to prove the sonar is not damaging marine mammals. And we all know that it can and it does. In the North Gulf Coast there are many species listed as endangered under the Marine Mammal Protection Act. The Western North Pacific grey whale, the North Pacific right whales, of which there are only 31 left, the Alaska North Pacific stock of sperm whales, the Stellar sea lion, the heavily hunted Sei and minke whales. Though not listed, there are also three kinds of beaked whales of the family Mesoplodont. And these are the ones that were affected in the Bahamas. And this, as you can see on the map, there's an incredibly deep trench that goes right through this area that they want to do the sonar. And I know that they aren't planning to do sonar next year, but it -- they could and they will. And I think -- I understand that we are at time of great peril in the world, and there is a lot of terrorism, there's a lot of things that we, in Alaska, really don't deal with. But I think that it's very important to not do these exercises at the prime time when these endangered whales are speaking -- I mean, are eating. Sorry. That's mine -- that's the end of my four minutes. So.	Please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades.
O. Von Ziegesar-2-01 (Oral – Homer)	I think it would be good to explain the takes. I have to apply for a permit also. And a take for me, means that I go -- I approach a humpback whale within 300 feet, or 100 yards. And I do it to take a fluke photograph of the individuals, and each individual is different. So I can -- my permit is to take -- I only take a couple hundred a year, but the takes I think they're talking about, it means that you can approach them within 100 yards, is that what your takes are? Or what are your takes? Can.... MS. TURNER: They'll -- they can answer that question afterwards. Oh, they can't -- okay. They can answer that later. Anyway, a take does not mean you kill it. But these beaked whales that we're talking about, they come up once an hour to breathe at best. And so, the thought that you might be able to detect them, I don't think you could. They are way smaller than a submarine, and they're very quiet, and they're	Regarding the "takes," please see Section 3.8.3.1.4 (Thresholds and Criteria for Predicting Acoustic and Explosive Impacts on Marine Mammals) thru Section 3.8.3.1.5 (Behavioral Responses) of the Supplemental EIS/OEIS to understand the different types of takes under the MMPA.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	almost prehistoric. They're very odd looking. They're very sensitive. And they are the ones that were highly affected in the Bahama trench.	
O. Von Ziegesar-2-02	Let's see. The other thing that I didn't get to talk about is that I think they have not decided yet on whether they are going to be allowed to do the Alternative 1 or 2 or just continue as they've been doing, which has not included sonar or underwater explosions. And so I would like to propose that the -- if there is going to be any action here by the Navy, that it still -- that they do not do Alternatives 1 or 2, but they continue to have the No Action Alternative, it's called.	The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
O. Von Ziegesar-2-03	There are -- there are -- there's too much at stake. There are -- and you have found that with your son -- your hydrophone arrays that were out, and that was a really interesting study, too, in your EIS, that they had hydrophones out all year, the Navy did, and they recorded marine mammals, all of these endangered species all year, winter and summer. And actually, there was an amazing amount of vocalizations in the winter, which surprised me. I would love to have access to those. I don't know if that's possible, but I'd like to hear the humpback calls in the winter. They do sing their mating song in the winters in Alaska. And I'm sure they have some of that. So that's all I really wanted to say, is just that the timing is terrible. I mean, June is peak of daylight. It's the peak of food. And it is a terrible time to be even considering doing any kind of sonar or underwater explosives. And that if there is going to have to be a choice, I would say the No Action. I would recommend that. Thank you.	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. The selection of an alternative by the decision maker will be based on a review of all relevant facts, impact analyses, comments received via the Supplemental EIS/OEIS public participation process, and the requirements of the Navy in order to fulfill its mission.
S. Waisanen (Electronic)	As a long-time Alaskan, I have been disappointed in the military's action in regard to marine mammals. It's not just a matter of protection and survival, it is a matter of destroying our very important species which contribute to the stability of our resources. We need to protect and preserve them. The means does not justify the end. Please do not "experiment" in our waters out of Alaska. Please do not destroy our marine mammals with this testing.	Please note that the Navy is not proposing to conduct any experiments or testing in the TMAA as part of the proposed action. Also, as presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were previously analyzed in the 2011 GOA Final EIS/OEIS. The proposed action detailed in the Supplemental EIS/OEIS is not new and will not destroy our marine mammals; see Section 3.8.5 (Summary of Observations During Previous Navy Activities), where

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations.
D. Walton-01 (Electronic)	Alaska may not be the best place for training envisioned, and is definitely not the best place given consideration for the whales. You should either change the location of the practice from Alaska to the Pacific where whales will not be impacted -	Thank you for participating in the NEPA process. Please see the responses to your subsequent comments in regards to the location and impacts from Navy training in the TMAA.
D. Walton-02	OR if the Navy insists on staying in the Gulf of Alaska, amend the practice plan: Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
D. Walton-03	Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean.

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
D. Walton-04	Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan;	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
D. Walton-05	and Cancel the ship sinking (SINKEX) exercises altogether.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
C. Ward-01	Dear Sirs/Ms, I'm writing in concern of the proposed 'war games' to be enacted in the	As presented in Section 1.1 (Introduction) of the Supplemental

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
(Electronic)	North Gulf coast of Alaska to begin next summer. I'm a 61yr old resident Alaskan who resides in and fishes commercially resources that not only transit the area in question but also depend on the pristine environment and ecosystem there-in for their and my sustenance. I find it very difficult to believe that in the very name of defense readiness the you are planning to defile, contaminate, kill/injure large numbers of fish, mammals, and plankton, litter the bottom and coastline with ships and jetsam without regard to those of us who trawl, set ground-line, and otherwise rely on the proposed area to earn our livelihoods and otherwise live in the area.... AND claim to not know what effects these exercises will bring?	EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were previously analyzed in the 2011 GOA Final EIS/OEIS. Please note that these activities will not defile, contaminate, kill/injure large numbers of fish, mammals nor will they result in litter of the coastline. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities should not have an impact on populations of fish or the health of the fisheries providing you with sustenance. See Section 3.2 (Expended Materials) regarding the impact from expended materials. The information presented in that section of the Supplemental EIS/OEIS leads to the conclusion that there will be no significant impacts related to expended materials.
C. Ward-02	You sound as soul-less as EXXON! (Exxon Valdes oil spill was adjacent to your proposed activities in '89). Boy! That sounds VERY suspicious and irresponsible as does using spent Uranium(guess we had to get rid of that nasty stuff anyway!) to shell Iraq and any other sovereign nation, contaminating the earth, causing birth-defects, and inflicting undue harm to innocent by-standers. Business as usual I guess? Would I get away with such actions? I would be labeled Environmental Terrorist and be hauled off accordingly! Alaska is part of the U.S. too you know! If our country's environment continues to be defiled and contaminated (and by its own hand!) what will there remain to be fought for, corporate profit? Certainly NOT the pristine beautiful environment enabling a healthy, happy, and thriving populace. U.S. war, whether it be declared or 'games/exercises' don't bode well for this world we live in. Whether it be drone strikes(w/ 'collateral damage') war based on lies (Iraq), U.S. ushered corruption/'regime change', militarization of our nation's civil police(just to name a few). Continued aggression only begets aggression, whether it's international or domestic. I really think making friends by bombardment has been shown NOT to work. So, why keep repeating it? So, in conclusion, I'M ADAMANTLY OPPOSED to your proposed operations in an area I hold vital to my existence and to that of the natural ecosystem contained there-in.	Thank you for participating in the NEPA process.
C. Ward-03	Our U.S, territorial waters extend 200 miles offshore. If you must, how about hold your games right out there on the edge where the environmental damage will less likely impact YOUR OWN COASTLINE? COME ON! I DON'T WANT TO BE COLLATERAL DAMAGE TO YOUR OPERATIONS nor should be PRISTINE COASTAL ALASKA!	Regarding moving the training, as shown on Figure 1.2-1 of the Supplemental EIS/OEIS, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary and the approximate middle of the TMAA is located 140 miles offshore. Regarding the suggestion to conduct training even farther offshore, see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
L. Ward (Electronic)	I am disturbed to hear that the Navy will be conducting practice activities in areas of the ocean where it will have a significant impact on marine life. I do not wish to support, with my intentions or my tax dollars, the rehearsal of killing/endangering/traumatizing	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	other human beings with the immediate killing, endangering, traumatizing of sentient beings that live in the ocean.	were previously analyzed in the 2011 GOA Final EIS/OEIS. Additionally, see the analysis in Supplemental EIS/OEIS Section 3.8; there are no mortalities to marine mammals expected.
E. Wasserman (Electronic)	Please consider holding your Gulf of Alaska activities during the winter when less fish and marine mammals will be present. Thank you, E. Wasserman	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. As detailed in Sections 3.6 (Fish) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on populations of fish in Alaska. Additionally, as presented in the Draft Supplemental EIS/OEIS, there are no marine mammal mortalities expected.
C. Wassilie (Electronic)	Dear Navy Commander, U.S. Pacific Fleet: re: Gulf of Alaska Naval Training Exercises The existing developmental EIS document states many things in all subject matters that is important for the cultural and physical survival of myself and thousands of indigenous peoples along all the migratory pathways of marine mammals, sea life, and waters of the North Pacific Ocean, Bering Sea, Bristol Bay, Kuskokwim Bay, Bering Strait and Arctic Ocean. The Gulf of Alaska Naval Exercises EIS currently documents significant impacts to Alaska Native and Tribal Natural Resources that causes significant spiritual, cultural, physical, mental and environmental harms that directly and indirectly damage myself and my family. "Fish would have the potential to be affected by vessel movement, aircraft overflights, explosive ordnance, nonexplosive ordnance use, weapons firing disturbance, and expended materials." "impacts may occur to migratory juvenile or adult individuals physical injury to salmonids could occur within the distances of an explosion. Impacts to fish from explosions would be possible." Warfare Areas and Associated Environmental Stressors- "Potential stressors to fish and EFH include	As presented in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the Navy is fully aware of the resources present in the Gulf of Alaska and the importance of these resources to the people of Alaska. The proposed action analyzed in the Supplemental EIS/OEIS is a continuation of training that has been ongoing for more than a decade. As detailed in Chapter 2 (Description of Proposed Action and Alternatives), the Navy is not proposing to increase the level of training over that already authorized since 2011, but it is reviewing the alternatives analyzed in the 2011 GOA Final EIS/OEIS. Information on fish migration patterns is described in the 2011 GOA Final EIS/OEIS Section 3.6.1.1 (Existing Conditions). Briefly, the ocean migrations of salmonids was defined by Percy (1992) as (1) the coastal phase of juveniles, (2) the oceanic feeding phase, (3) the

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	vessel movements (disturbance and collisions), aircraft overflights (disturbance), explosive ordnance, sonar training (disturbance), weapons firing/nonexplosive ordnance use (disturbance and strikes), and expended materials (ordnance-related materials, targets, sonobuoys, and marine markers)." Acoustic Effects of Underwater Sounds to Fish- "There have been very few studies on the effects that human-generated sound may have on fish." Explosive Sources - "little is known about the very important issues of nonmortality damage in the short- and long-term, and nothing is known about effects on behavior of fish." Potential effects of explosive charge detonations on fish and habitat include disruption of habitat; exposure to chemical by-products; disturbance, injury, or death from the shock (pressure) wave; acoustic impacts; and indirect effects including those on prey species and other components of the food web." Expended Materials (from Bombs, missiles, etc)- "Munitions constituents can be released from sonobuoys, targets, torpedoes, missiles, aerial targets, and at sea explosions. Petroleum hydrocarbons released during an accident are harmful to fish. Jet fuel is toxic to fish. Assuming that a target disintegrates on contact with the water any residual unburned fuel may be spread over a large area. In addition, fuel spills and material released from weapons and targets could occur at different locations and at different times." "It is possible that persistent expended ordnance could be mistaken for prey, or that expended ordnance could be accidentally ingested while foraging for natural prey items." Active Sonar - "While the impact of anthropogenic sound on marine mammals has been extensively studied, the effects of sound on fish are largely unknown. No studies have established effects of cumulative exposure of fish to any type of sound or have determined whether subtle and long-term effects on behavior or physiology could have an impact upon survival of fish populations." And "exposure to broadband sounds with high frequencies cause behavioral modification in Pacific herring." Carrier Strikes - "Aspects of the exercise that have potential effects on fish are vessel movement, aircraft overflights, active sonar, surface firing noise, shock waves from munitions hitting the water, munitions constituents, missile launches, shock waves, underwater detonations, and presence of expended materials (fragments of missiles and bombs)." Given the significance of the hundreds of subsistence species along the migratory range and the proposed damages to Alaska Natives and Alaska Tribes, I would suggest that an adequate assessment of the Tribal Natural Resources of all migratory species, waters and coastal areas negatively impacted by Naval exercises in the North Pacific Ocean. I would also suggest an adequate Risk Communication with all Alaska Tribal Governments to ensure a full list of the Releases of Toxics, Effect of the Cradle-to-Grave Toxic Releases; and an Ecosystem Assessment with Traditional Knowledge. The US Navy must continue to ensure protections of the US National Natural Resources, Cultural Resources and continue respectful engagement with Federally Recognized Tribes in Alaska when Tribal Interest is extremely significant. As a Yupiaq American from the Arctic, I appreciate your concerns for our National Security as the communities along the Alaska Coast are your first defenders.	return of maturing fish from oceanic to coastal waters, and (4) coastal migrations of adults that terminate in freshwater. The distance traveled and the times spent in each of these phases vary greatly within and among species. Pacific salmon smolts from the Pacific Northwest and California generally move up and around the West Coast of North America following the continental shelf. Juvenile salmon, including those originating from Alaska (such as the Copper River), were found to remain over the continental shelf until the start of the Aleutians before moving offshore into the Gulf of Alaska. As such, many salmon species from Alaska, California, Washington, and Oregon would be expected to be present in the Gulf of Alaska for at least part of their oceanic feeding phase. The Navy, NMFS, and the USFWS reviewed best available science in the fall of 2015 and determined sonar and explosive criteria for fishes based on taxonomy that represents all fish species, including salmon. Sonar – Salmon and the majority of other fish species cannot hear mid-frequency sonar and therefore would not elicit a behavioral response. Any potential for a response via particle motion (not pressure) would require the fish to be very close (within a few body lengths) of the source. This is unlikely to occur because (1) the fish would need to be in the immediate vicinity of the bow of the ship (within 14 m) (2) the school of fish would need to maintain the speed of the ship in order to stay within the near-field of the moving source, and (3) the school would need to maintain that swim speed for a duration of time in order to accumulate exposure. None of these three factors are reasonable or biologically supported based on what we do know about fish behavior, and therefore populations are not likely to be affected by sonar. There are studies that indicate that fish species move away from a moving vessel, thus making the potential for exposure at close range that much more remote. Sonar – For fish species that can hear mid-frequency sonar, such as herring, a recent study concluded that the use of naval sonar poses little to no risk to populations of herring regardless of season, even when an entire population is aggregated during sonar exposure (Sivle et al., 2015). Explosives – The Navy's analysis concluded that the use of explosives during training may injure individual fish, if present, that are close to the surface and within the immediate vicinity of detonations. Salmon have the potential to be affected by explosions occurring near the surface as sub-adult life stages use the TMAA for growth to maturity. However, the short-term potential for exposure during training every

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	Quyana (Thank you), C. Wassilie Yupiaq Biologist Alaska's Big Village Network	other year drastically reduces the potential for effect to large numbers of salmon or other species using the upper water column. No spawning areas or early life stages would be affected as they are not located in or near the TMAA. Other commercially important fish species such as groundfish (any species, e.g., halibut, flounder, sole, rockfish, cod) would not be affected by surface explosions because these species are associated with benthic (seafloor and deep water column) habitats and would not be near the surface in the zone of effect. Furthermore, certain groundfish species have a poorly developed swim bladder (or lack one all together), further reducing their potential for injury from pressure effects (such as those from explosions). See Section 3.12 (Socioeconomics) in the 2011 GOA Final EIS/OEIS regarding potential impacts to fisheries. Navy training has been occurring for more than a decade, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. Please note that there will be no damage to the environment that would cause direct or indirect impacts to individual persons or communities. There would be no impacts to traditional subsistence practices as a result of the proposed activities.
A. Waters (Electronic)	Please do not harm marine animals. They are doing us no harm and don't deserve the loud noises that our navy is pounding into their environment. Let's protect life, not threaten it. Sincerely, A. Waters	Thank you for your comment. As presented in the Supplemental EIS/OEIS, there are no marine mammal mortalities expected. See Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations.
M. Webber-01 (Electronic)	The effects of this testing are unknown on our fisheries. The fisheries of the northern Gulf of Alaska support communities all over Alaska and the fish are a food source for people all over the country. If you devastate these fisheries you devastate communities from Cordova to Kodiak to Sitka to the lower 48.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The Proposed Action detailed in the Draft and Final Supplemental EIS/OEIS is not new. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on populations of fish or the health of the fisheries in Alaska.
M. Webber-02	You can't promise no significant impact, therefore, you should not add any additional training exercises and you should keep all exercises far away from the continental shelf	Regarding the suggestion to conduct training "far away from the continental shelf and slope," see the Supplemental EIS/OEIS Section

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	and slope. Thank you.	5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines), as well as the discussion in the Supplemental EIS/OEIS Section 5.3.3 (Mitigation Measures Considered but Eliminated).
P. Wells (Electronic)	Re: U.S. Navy's plans to expand warfare training in Gulf of Alaska I am deeply concerned about the U.S. Navy's proposed 5-year war games in the Gulf of Alaska's critical marine and fisheries habitat which will result in disruptive, indeed devastating, consequences for thousands of marine mammals. (Marine Mammal Protection Act and the Navy's SEIS 2014). To have minimal impact from the Navy's preferred expanded war exercises, I reference renowned Alaska marine conservation biologist, Rick Steiner's amended proposal; including, moving these real fire, active high and mid frequency sonar noise pollution and chemically toxic exercises to areas far off the Continental Shelf and switching to the less productive winter season thus avoiding the whale migrations and detriment to our rich coastal ecosystem; and canceling the expansion plans. From a public and scientific perspective, the proposed independent observers would provide the Navy with crucial environmental impact data aiding in future exercise policies while taking into careful consideration the nation's readiness for war. Our oceans are already under tremendous stress as a result of unabated human activity. These threats include ocean acidification, plastics and all manor of man-made debris, toxic chemical waste, and global warming. Our number one security for the nation should be to minimize our carbon footprint and protect the ecological health of the oceans-and in this case, the Gulf of Alaska-upon which all life depends. Respectfully submitted.	Please note that the Navy is not planning to expand warfare training in the Gulf of Alaska. The activities that are being proposed in the Supplemental EIS/OEIS are the exact same activities that were identified, analyzed, and received a Record of Decision for in the 2011 document (please see Section 1.7, Scope and Content, of the Supplemental EIS/OEIS). None of the proposed activities are new or in addition to those presented in the 2011 GOA Final EIS/OEIS. Please also see responses to Rick Steiner's comments above since this comment presents identical issues. As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
M. Whalen (Electronic)	I object to the Navy's plans to conduct extensive testing and disruptive activities in shallow marine waters of the Gulf of Alaska. Sonar has been implicated in the stranding of some whale species in several instances indicating that this type of activity should be relegated to deep, offshore waters that are less populated by marine mammals. The relatively near shore environments of the Gulf of Alaska are highly sensitive and are inappropriate for these operations.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. The proposed action is to continue on-going training activities that have occurred in the Gulf of Alaska for nearly a decade. Restricting training activities to deep, offshore waters would not be an effective protective measure, because while there are marine mammal species that reside in shallow coastal waters, there are also marine mammals in deeper waters offshore. Please see the discussion of strandings presented in Section 3.8.3.1.2.8 (Stranding) for additional information on stranding events in the region. Additionally, the Navy's proposed activities will occur at minimum approximately 24 nm from shore; the approximate

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		middle of the TMAA is located is 140 miles offshore and consists of very deep offshore waters. Also see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines).
M. Williams (Electronic)	I understand the Navy's planned high frequency sonar and munitions will negatively impact 180,000 marine mammals over a period of 5 years. Impacts to fish are yet unknown. I would ask you to cancel this entirely, but at the very least, implore you to reschedule this experiment schedule to winter rather than summer, to avoid contact with whales and fish, to create less damage to them and the environment.	Please note that the impacts to fish are known; see Section 3.6 (Fish) in the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS. The proposed training activities are predicted to have no impact on populations of fish or the health of the fisheries in Alaska. The training activities being analyzed have been occurring in the same training area for more than a decade and the use of sonar was an authorized part of the overall effort centered around the 2011 GOA Final EIS/OEIS. While there are some high-frequency sources used by the Navy while training, those same high-frequencies are in use by commercial vessels, fishermen, and researchers in the Gulf of Alaska. Also, moving the training activities to the winter months would not "avoid contact with whales and fish" given many species are present year-round. Additionally, As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Willis-01 (Electronic)	I'm writing to ask that you please reconsider the proposed activity in the Gulf of Alaska. Our whale populations already face an uphill battle due to the amount of pollutants entering the water, run-ins with commercial fishermen, and a lack of regulations in the rest of the world around whaling. I ask that you'll be a positive example to the rest of the world, and to change your plans to reflect a growing respect in the US for the ocean and its inhabitants.	As presented in Section 1.1 (Introduction), the Supplemental EIS/OEIS is a reconsideration of the training activities that were previously analyzed in the 2011 GOA Final EIS/OEIS and have been occurring in the same training area for more than a decade. Additionally, as presented in the Supplemental EIS/OEIS, there are no marine mammal mortalities expected. See Section 3.8.5 (Summary of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations.
H. Willis-02	The recommendations in the Huffington Post article seem reasonable. They were: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	With regard to the suggestion to restrict training to “areas far offshore,” east of 143° west longitude, and “and at least 100 miles from the nearest seamount,” see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors’ abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator’s ability to achieve mission success. Additionally, as shown on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope, the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA’s northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
H. Willis-03	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
H. Willis-04	3. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships. Thanks for listening.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
K. Wilson (Electronic)	I am deeply concerned that the Navy is planning it's destructive activities in the Gulf of Alaska. I am a third generation resident of Prince William Sound, and a co-owner of a Commercial Fishing business. Our fisheries take us from Sitka to Attu, long lining for sablefish and halibut. My husband has been a fisherman for over 40 years. My father was a salmon fisherman in Prince William Sound, as are many of my friends and neighbors. The type of activity the Navy is proposing to conduct will permanently alter salmon migration patterns, killing a large majority of them. It will disturb or eliminate habitats for ling cod, halibut, numerous types of rockfish (whose life spans are known to over 70 yrs), sablefish, not to mention the undoubted injuries and deaths to marine mammals. Blue whales, gray whales, minke, orca, humpbacks, several species of porpoise, sea otters, sea lions, and many more species I don't know about because I'm not a marine biologist. What I really don't understand is why they are allowed to bomb in the areas of critical habitats. Namely sea mounts that are projected to the point that we as fishermen are not allowed to set our gear over or near them. The Navy should not be exempt simply because they are the government. Take the war games farther offshore to eliminate any habitat loss, mammal killings, and marine life eliminations. Sink your ships in the open ocean. There are way too many communities that would be impacted negatively by the current proposed action by the Navy. PLEASE DO NOT CONDUCT THESE 'GAMES' IN THE GULF OF ALASKA!!!!!!!!!! Sincerely and vehemently, K. Wilson F/V Pacific Sojourn	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. The Proposed Action detailed in the Supplemental EIS/OEIS is not new. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on populations of fish or the health of the fisheries in Alaska. Please note that the continuation of training will not permanently alter salmon migration patterns, killing a large majority of them nor will it eliminate habitats. Additionally, the analysis shows that training activities that may take place over the seamounts in the TMAA will not result in habitat loss, mammal killings, and marine life eliminations; there are no mortalities expected. The SINKEX event already takes place in the open ocean; see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise (SINKEX)) to understand the nature of this activity.
M. Wilson (Electronic)	Hello? Is anyone there? You? Hello, whoever you are, whose job it is to assess public opinion on matters such as this. Thank you for taking the time and energy needed for such an important task. Yours is not an easy job. My name is Marissa. All I can give you right now, to understand me, are symbols on a screen; a plea in pixels. It feels painfully insignificant. I feel insignificant. Seeing as this issue affects my livelihood, though, I must try anyway. I have a relationship with the ocean that is difficult to successfully articulate except to fellow seafarers. My food, my excitement, my calm, my	Thank you for your comment. The Navy shares your passion and concern for the environment, marine life, and the Gulf of Alaska. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose and need for Navy training and note that as presented in Section 1.1 (Introduction), the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
	paychecks, my unbelievable memories, my most difficult times and my most jubilant ones come from my life on the water. I have grown to understand myself, my father, and generations of ancestors who are part of the intricately woven tapestry of our natural world. I commercial fish. To some, that means nothing more than a ridiculous reality TV show. To me, it means that from Sitka to Attu, I have fallen in love with our coastline enough times to last through countless rounds of reincarnation (if the Buddhists are correct). I have dedicated my off-season to the preservation of our diverse and abundant marine ecosystems, as well as the livelihoods that rely on such precious natural resources. That's me. Or, at least, enough of me to get my point across. I understand that what the Navy does is important. What I want to articulate is that the proposed plan, which is supposedly in my best interest, is highly counterproductive with regards to my security as an Alaskan. Our oceans are facing countless threats, from ocean acidification to warming temperatures, pollution to overfishing. Politics, weather, tides, finances... the list of things for a fisherman to be wary of goes on and on. Military drills and sonar testing - which the Navy itself says has no reliable peer-reviewed studies of its effects on marine life - is yet another threat that DOES NOT belong anywhere; especially not in the rich waters of the Gulf of Alaska. My mind is buzzing with energy for this issue, though I don't feel I can say much more. I don't know whether anyone is reading this, whether public comment can be heard over the roar of the machine, but I say "no". And my voice resonates with the hundreds more who haven't sought out this avenue to make their voices heard.	Final EIS/OEIS. Please note that there is no testing in the proposed action. Additionally, there are many reliable peer-reviewed studies regarding the effects of Navy activities on marine life. See for example the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), where over 8 years of monitoring effort at intensively used range complexes has found no evidence that Navy training activities have had any impact on marine mammal populations in the Pacific in areas such as Southern California and Hawaii where Navy training has been occurring year-round for decades. As detailed in Sections 3.6 (Fish) and 3.12 (Socioeconomics) of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS, the proposed training activities are predicted to have no impact on populations of fish or the health of the fisheries in Alaska.
T. Xander-01 (Electronic)	In regards to the proposed Navy war games and testing in the Gulf of Alaska, I wish to voice my opposition toward the proposed Level B impact on marine mammals in this sensitive area, and am pleading for the Navy to follow the following recommendations: 1. Restrict the training area only to areas far offshore, (away from the continental shelf and slope, where most marine mammals are found), east of 143 W. Longitude, and at least 100 miles from the nearest seamount;	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. With regard to the suggestion to restrict training to "areas far offshore," east of 143° west longitude, and "and at least 100 miles from the nearest seamount," see Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success. Additionally, as shown

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		on Figure 1-1, a large portion of the TMAA already consists of deep ocean located away from the continental shelf and slope; the nearest shoreline (on Kenai Peninsula) is located approximately 24 nm from the TMAA's northern boundary, and the approximate middle of the TMAA is located 140 miles offshore.
T. Xander-02	2. Change the timing of operations from summer (Apr - Oct) to winter (Nov - Mar), in order to minimize effects on migratory whales in the area in summer;	As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.
T. Xander-03	3. Accommodate independent scientific observers during the exercises to confirm effectiveness of the mitigation plan (Note: the Navy objects to independent observers, asserting they are "not necessary," and would present "security" concerns);	With regard to independent observers, please see the discussion in the Supplemental EIS/OEIS Section 5.3.3.1.13 (Conducting Visual Observations Using Third-Party Observers). Use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken. Additionally, multiple training events can occur simultaneously and in various areas throughout the Study Area, and can last for days or weeks at a time. The Navy does not have the resources to maintain third-party observers to accomplish the task for every event. The use of third-party observers would compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. Reliance on the availability of third-party personnel would impact training flexibility. The presence of observer aircraft in the vicinity of

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		naval activities would raise safety concerns for both the independent observers and naval aircraft. Furthermore, Navy vessels have limited passenger capacity. Training event planning includes careful consideration of this limited capacity in the placement of personnel on ships involved in the event. Inclusion of non-Navy observers onboard these vessels would require that in some cases there would be no additional space for essential Navy personnel required to meet the exercise objectives.
T. Xander-04	and 4. Cancel the ship sinking (SINKEX) exercises altogether. The U.S. Navy already knows how to sink ships.	Regarding cancelling all "ship-sinking exercises," please see the 2011 GOA Final EIS/OEIS Section 2.6.1.1 (Sinking Exercise [SINKEX]) to understand the nature of this activity. A SINKEX is designed to teach and maintain skills that our men and women would have to use in actual combat and is not related to the Navy determining "how to sink ships."
T. Xander-05	With an estimated negative impact of over 180,000-200,000 intelligent whales, dolphins, and other sensitive marine life, the proposed testing will leave many deaf, injured, and permanently impacted - if not killed outright and forced into mass strandings/beachings. The acoustic impact of the explosions, sonar blasts and weapons systems will disrupt calving, feeding, breeding and migratory patterns, damage/rupture eardrums, and seriously disrupt marine mammals' ability to communicate, navigate and survive. These games, as proposed, are entirely unnecessary, cruel and inhumane. We the people and taxpayers in the United States have a say in how our forces operate and how our taxes are used to prepare the military. I am asking that these war games and testings be carefully administered and observed by the independent and global scientific community, and that ALL precautions be taken to minimize and limit the amount of marine life affected. The current proposed specifications by the Navy do NOT meet these objectives, and will result in grave, serious and massive harm. We the people will hold the Navy responsible for the negative impacts your testing creates, and the global community will also not tolerate intentional harm to our sensitive ecosystems and marine mammals through negligence or a blatant disregard for the safety and security of our marine wildlife. Thank you.	Please note that the Navy is not proposing to conduct any testing in the TMAA as part of the proposed action. The analysis presented in Section 3.8 (Marine Mammals) indicates that mortalities are not anticipated. Please see Chapter 1 (Purpose and Need) of the documents regarding the purpose of and need for Navy training and note that, as explained in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were last analyzed in the 2011 GOA Final EIS/OEIS. Regarding "independent" studies", see Section 5.5.2 regarding past and future reporting. Also see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities), summarizing over 8 years of monitoring effort at intensively used Navy range complexes.
V. Ziemelis (Written)	Apparently, the Navy has scheduled hi and mid frequency training exercises in the Gulf of Alaska, which will impact and potentially traumatize, injure, or kill thousands of marine mammals. I agree that it is important for the Navy to maintain readiness, but there are other alternatives. The war-games could be conducted in the winter to minimize trauma to whale migrations, or far offshore in the central pacific, away from the continental shelf and slope. Such areas are less frequented by whales, porpoises, dolphins, sea lions and seals. Please help us protect and conserve our environment and wildlife which is so fragile and precious.	As presented in Section 1.1 (Introduction) of the Supplemental EIS/OEIS, the training activities being analyzed have been occurring in the same training area for more than a decade and these activities were previously analyzed in the 2011 GOA Final EIS/OEIS. Please note that the continuation of this training will not kill thousands of marine mammals. In fact, the analysis shows that there are no marine mammal mortalities expected from Navy training activities. Regarding the suggestion to conduct training "far offshore in the central Pacific," see the Supplemental EIS/OEIS Section 5.3.3.1.10 (Avoiding

Table D.4-5: Responses to Comments from Private Individuals (continued)

Commenter	Comment	Navy Response
		Locations Based on Distances from Isobaths or Shorelines). As described in Section 1.1 (Introduction) of the 2011 GOA Final EIS/OEIS, because of the severe environmental conditions during winter months, exercises normally occur in the summer. See Section 5.3.3.1.10 (Avoiding Locations Based on Distances from Isobaths or Shorelines) and Section 5.3.3.1.7 (Avoiding Locations Based on Bathymetry and Environmental Conditions) of the Supplemental EIS/OEIS. The unique and complex bathymetric and oceanographic environment in the TMAA presents a challenging ASW training opportunity. The complexity of the sea bottom, the input of freshwater into the sea, and the areas of upwelling and ocean currents combine in the TMAA like in no other training area in the Pacific Ocean. Numerous air, surface, and subsurface assets within a Navy CSG gain valuable experience by conducting ASW training in this environment. Areas where training activities are scheduled to occur are carefully chosen to provide safety and allow realism of events. Training with reduced realism would alter Sailors' abilities to effectively operate in a real world combat situation, thereby resulting in an unacceptable increased risk to personnel safety and the sonar operator's ability to achieve mission success.

D.4.1 PETITION

The Navy received a petition entitled "Don't Endanger Marine Life With War Games!" circulated by Care2 petitions containing over 39,500 signatures at the close of the comment period (20 October, 2014). Table D.4-6 provides the Navy's response to the overview of the petition, as the petition itself is an almost verbatim copy of the overview. The responses to the overview, and thus the petition, were prepared and reviewed for scientific and technical accuracy and completeness. Some individuals who signed the petition added their own remarks, while most did not. A few individuals repeated the concerns spelled out in the overview and petition, or expressed general opposition to the Proposed Action.

Table D.4-6: Response to the Petition from the Environmental Protection Information Center

Comment	Navy Response
Overview: The U.S. Navy is planning summer training exercises in the Gulf of Alaska that will take place from April to October for a five-year period. These "war games" will involve use of high-frequency and mid-frequency sonar for submarine exercises, plus a wide variety of live weapons. The Navy admits that their games will negatively impact thousands of marine mammals. Extremely loud noise from sonar and explosions has the potential to carry for hundreds of miles, disturbing, injuring or even killing marine mammals in its path. The marine mammals that will potentially be affected include blue, fin, sei, minke, sperm, killer, right, gray, and humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. The impact of these war games on marine mammals is unacceptable. If the Navy really needs to conduct these exercises, they can do so in the central Pacific ocean, where fewer animals will be harmed and Alaska's rich ecosystem will be undisturbed. Please sign the petition to urge the U.S. Navy to cancel their plans to endanger marine life with war games.	The Navy is fully aware that even with implemented mitigations, training in the GOA Study Area will result in impacts to a number of marine mammals, which is precisely why those predicted effects are quantified and have been requested pursuant to MMPA and ESA. With regard to the specific concern over the use of sonar, please see the Supplemental EIS/OEIS Section 3.8.5 (Summary of Observations During Previous Navy Activities) that details 8 years of scientific monitoring. Along with behavioral response studies and the results of research efforts and monitoring before, during, and after training and testing events across the Navy since 2006, the Navy's assessment is that it is unlikely there will be impacts to populations of marine mammals that have any long-term consequences as a result of the proposed continuation of training in the ocean areas historically used by the Navy including the TMAA. Please see Chapter 2 of the 2011 GOA Final EIS/OEIS and the Supplemental EIS/OEIS. Sonar does not have the potential to kill marine mammals in its path. While the sound from a sonar or explosion can potentially be detected at long distances, the range at which sonar is able to cause injury to a marine mammal is very short; generally within 10 meters of the sonar.
Petition: We, the undersigned, are concerned with the Navy's planned training exercises in the Gulf of Alaska, and their impact on marine mammals. We understand that the Navy is planning summer training exercises in the Gulf of Alaska that will take place from April to October for a five-year period. These "war games" will involve use of high-frequency and mid-frequency sonar for submarine exercises, plus a wide variety of live weapons. As you know, these games will negatively impact thousands of marine mammals. Extremely loud noise from sonar and explosions has the potential to carry for hundreds of miles, disturbing, injuring or even killing marine mammals in its path. The marine mammals that will potentially be affected include blue, fin, sei, minke, sperm, killer, right, gray, and humpback whales, three species of beaked whales, Pacific white-sided dolphins, harbor porpoise, Dall's porpoise, sea lions, fur seals, elephant seals, harbor seals, ribbon seals, and sea otters. The impact of these war games on marine mammals is unacceptable. If the Navy really needs to conduct these exercises, they can do so in the central Pacific ocean, where fewer animals will be harmed and Alaska's rich ecosystem will be undisturbed. We respectfully urge you to discontinue your plans to endanger marine life with war games. Thank you for taking the time to read and consider our petition.	As the "Petition" is an almost verbatim copy of the "Overview" directly above, please see responses to the Overview.

D.4.2 KODIAK AREA TRIBES CONSULTATION COMMENTS

The Navy received comments from five Alaska Native federally-recognized tribes with traditional use areas and resources in the Kodiak archipelago area in spring 2016. The Navy engaged in government-to-government consultation to further discuss these concerns. The Alaska Native Tribes in the Kodiak area have expressed concerns regarding the potential of Navy training activities to affect migratory routes and populations of fish species and marine mammal species in the Gulf of Alaska. The Navy continues its consultation with these five Alaska Native Tribes regarding improving coordination of Navy training activities in the Gulf of Alaska in order to minimize any potential impacts to protected resources. Government-to-government consultation and staff-to-staff communications will continue, as appropriate, after the Final Supplemental EIS/OEIS and Record of Decision.

Table D-4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation

Commenter	Comment	Navy Response
Kodiak Area Tribes	A. Navy partner with Tribe, Federal, State, and other organizations to help provide "take" (or catch rate) biomass data of important indicators species, as if Navy training activities/sonar operations/release of "expended materials" were similar to subsistence, sport, or commercial fishing activities and related. Research and report similar for avian species. In support of item "A." listed above, we believe US Navy has a prime opportunity and the right timing to partner with Tribal, Federal, State, Borough, and other organizations to help provide research necessary for meeting those of all residents, not to mention GOA Tribal concerns, who rely on a healthy marine ecosystem for subsistence food and commerce. Navy has the financial ability to fund university-level researchers or to help support operations of a Tribal Consortium or similar local partnerships as envisioned by the "Alaska Research Consortium".	Navy provides reports on the application of marine mammal mitigation measures to National Marine Fisheries Service (NMFS), in compliance with our Marine Mammal Protection Act (MMPA) permit. Those reports are publically available documents and found at http://www.nmfs.noaa.gov/pr/permits/incidental/military.htm. Any potential direct impacts to species from Navy training activities are not visibly observable (like fisheries by-catch). The vast majority of impacts are behavioral changes. If there was an incident with observable impacts to marine species, like a vessel collision, the Navy reports that incident to NMFS. Based on reporting of past events in the GOA TMAA, the Navy has not had an observable take in the GOA of a marine mammal or fish species. Navy training activities and impacts also do not generate incidental take (mortality) in the same sense as by-catch from commercial fishing. The vast majority of "takes" predicted in our Environmental Impact Statement and addressed in the MMPA permit are "behavioral" reactions of marine mammals, meaning they are simply a temporary shift in a common behavior that is generally impossible to observable. For this reason, NMFS requires Navy to adhere to MMPA authorized permit limits of sonar use, acoustic source levels, and number of explosives as means to ensure no exceedance of authorized impacts under MMPA and also Endangered Species Act (ESA) authorizations. Navy had not exceeded prior permit authorization limits, as documented in reports submitted to NMFS that are publicly available. The livelihoods of fishermen were considered in Section 3.6 (Fish) and Section 3.12 (Socioeconomics) in both the 2011 GOA Final EIS/OEIS and the Draft and Final Supplemental EIS/OEIS documents as well as in numerous discussions and input from the public having taken place since the development of the 2011 GOA Final EIS/OEIS. Please see Section 3.2 (Expended Materials) regarding an analysis of impacts from expended materials. Navy training has been occurring for more than a decade on a

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
		biennial cycle, and the continuation of that training should not have an impact on populations of fish, the health of the fisheries, or socioeconomics in Alaska. As described in Section 3.6, Fish, of the GOA Final Supplemental EIS/OEIS the best available science indicates that for impacts to fish species: (1) most species do not hear sonar, so there are no physical impacts to those fish from sonar usage in the area of the fish. For species that can hear sonar (herring), any effect would only occur when the fish is very close to the sonar source for a prolonged duration of time that is not likely to occur (because of both moving of a ship using the sound source and moving fish in the area); and (2) impacts from explosives are limited to the immediate vicinity very close to where the activity occurs. The majority of explosives used would detonate at the water surface or just below, and do not go farther than the immediate vicinity, so these explosives would not interfere with fish that may occur deeper in the water column. Navy or NMFS do not collect data or quantify impacts to fish following training activities. As discussed in Section 3.9 of the GOA Final Supplemental EIS/OEIS, there are no significant impacts to migratory or sea birds identified from the proposed training activities based on best available science and no significant adverse effect on migratory bird species populations. In regard to research priorities, the Navy is engaged in a long-term adaptive management for its permit-mandated monitoring program and works closely with NMFS in this effort. The adaptive management program is based on scientific information and includes comprehensive consideration of the potential environmental impacts of Navy training and testing. The program is applied across all areas worldwide and allows for consideration of unique species, habitat areas, and environmental conditions. The adaptive management process provides a means for NMFS and the Navy to evaluate new science and new data to consider modifications to how mitigation measures are applied and which scientific objectives have the highest priority for management decisions related to potential Navy impacts. This also drives the focus of how much and what types of regional monitoring will be required on an annual basis. The Navy's adaptive management program is not a research extension of NMFS or other agencies and should not be viewed as such. The monitoring conducted in this program is required by NMFS permits and focuses exclusively on effects from Navy training and testing activities. A multitude of factors are considered when deciding where to focus scientific efforts regarding impacts from training and testing and ultimately what studies are funded. Factoring into this consideration are the level of Navy activity in one geographic area as compared to another, species of interest with priority on marine mammals, monitoring objectives and questions to be answered, consideration of projects in one

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
		area vs. another, and finally logistic and fiscal feasibility. Given the majority of the Navy's training ranges and Fleet is centered in Southern California, Hawaii, and the Marianas Islands, the main focus of permit required Navy compliance monitoring has been and will continue to be focused in those areas. Based on adaptive management meetings in 2015 and 2016, Navy and NMFS agreed current and future GOA monitoring will remain focused primarily on marine mammal monitoring around and in context of biennial exercises in the GOA TMAA between April and October. In terms of the Alaska Native concerns about non-marine mammal species such as economically valuable fish species, the Navy would point out that the North Pacific Research Board (http://www.nprb.org/) annually solicits and competitively funds Alaska research projects including many focused on short-term and long-term fishery related issues. There is also an ongoing Gulf of Alaska Project entitled "Gulf of Alaska Integrated Ecosystem Research Program" funded by the North Pacific Research Board with more detailed information available on their website. For all of Alaska, the North Pacific Research Board provided over \$7 million in funding covering 33 proposals in 2015. In addition, the North Pacific Research Board also solicits potential research topics into which given groups can propose new individual studies. The Navy would encourage the Alaska Native tribes to explore the North Pacific Research Board as a future funding partner in regard to regional GOA fisheries studies. A more detailed description of the adaptive management process can be found in Chapter 5 Section 5.5 (page 5-65) of the GOA Final Supplemental EIS/OEIS.
Kodiak Area Tribes - 2	B. Reschedule "Northern Edge" exercise dates to late fall/early winter months, and partition exercises to particular sectors of the "TMAA" when least potential for adverse impacts to marine food chain species occurs, and in particular, to avoid migration routes of key species such as whales and salmon.	Based on the best available science and years of having conducted much more routine and intensive training elsewhere, there should be no impacts to the marine food chain from Navy training in the TMAA. Areas where training activities are scheduled to occur are carefully chosen to provide a realistic training scenario and to ensure the safety of Navy personnel and the public. These areas may fluctuate each specific biennial Northern Edge exercise based on tactics and techniques determined to be requirements for training. The TMAA is intentionally located away from existing commercial air traffic routes and most commercial shipping lanes. The size of the TMAA is essential to create realistic training scenarios in order for a Carrier Strike Group to operate in the area and that prepares Navy sailors for conducting real-world operations. Such training cannot be partitioned to particular sectors of the TMAA as suggested, given the area requirements of Navy training at sea. As discussed in the GOA Final Supplemental EIS/OEIS in Section 5.3.3.1.7, restricting or scheduling the training so it will occur in the winter has been considered. As detailed in Section 3.6 (Fish) of the GOA Final Supplemental EIS/OEIS, based on the best available science, Navy training activities in the TMAA would not have an impact on populations of fish, the health of the fisheries, or the ability of fishermen to fish. It is also important to note that training has been conducted for many years in the TMAA and there have been no reported impacts to any fish or fishery activities. Training in the

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
		winter would not be practicable and would not be effective in avoiding impacts to fish or fisheries, but would unnecessarily increase risk and threaten the safety of the Navy personnel engaged in training. While Navy is prepared to operate in real world situations in all conditions, risk management dictates appropriate conditions for training. Navy training is proposed to occur between April to October for the safety of the exercise participants and due to the severe conditions in the GOA in the winter months. Due to the high sea states and cloud cover in the TMAA during winter months, training in the TMAA has historically occurred in the summer (June–July). These factors were a consideration in the Alternatives Development of the 2011 GOA Final EIS/OEIS (Chapter 2, Section 2.3), which was used in the GOA Final Supplemental EIS/OEIS alternatives analysis. The training activities in the GOA are also part of a larger joint training exercise with Army, Air Force, and Coast Guard assets that utilize the GOA and existing over land training areas within the state of Alaska. The timing of the exercise is planned based unit deployment schedules for real world operations and on other joint training exercises in the Pacific theater, supporting progressive training needs of various Department of Defense participants. Regarding avoidance of whale migration routes, the identified gray whale migration route is almost entirely avoided by the placement of the TMAA. With the gray whale migration between November through January and March through May, the Navy's training within the April to October timeframe would have no temporal overlap with this November through January migration period. There is only minimum temporal overlap between the months of March through May migration period and the potential range of time during which the proposed Navy training might occur. The majority of Navy training activities, including sonar and explosives use within the TMAA, have historically occurred in summer months (June–July) outside of the gray whale migration period designated for the migration area; this training involving sonar and explosives typically takes place some distance away from an operating area boundary to ensure sufficient sea or air space for tactical maneuvers, sufficient water depth, and to avoid interference from civilian vessels and aircraft (civilian ship and air transits are high in number along the nearshore boundary of the TMAA). In addition, as detailed in Section 3.8 (Marine Mammals), there are no expected sonar or explosive effects predicted for gray whales, nor are there requested takes based on acoustic effects modeling that considered gray whale occurrence and density as well as the types and quantities of Navy training being authorized. Given the lack of overlap for the majority of Navy activities in time and space and the lack of impact to the migration activity, the Navy finds that a time and area avoidance of the whale migration routes does not provide a practicable benefit to the population in balance with the impacts to training events. Additionally, the Navy has agreed to a special consideration for the endangered and small population of North Pacific right whales, and as a result will preclude use of surface ship hull-mounted mid-frequency sonar or explosives within the approximate

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
		2,050 km ² area of the North Pacific right whale feeding area that overlaps the TMAA during training between the June and September timeframe when the species could be feeding in that area.
Kodiak Area Tribes -3	C. Until more is known about potential for adverse impacts to migratory and resident fish and birds that tend hold to coastlines and off-shore canyons, or areas designated as "Essential Fish Habitat," move exercises further off-shore into/over deeper waters, off the continental shelf. Proof of "no adverse impacts" by Navy exercises is verified by data obtained and tracked over time in item "a." described above In support of item "C." listed above, some Alutiiq tribal members and descendants participate in trawl fisheries which are susceptible to "expended materials" being snagged in fishing nets. Moving military training exercises further off-shore into/over deeper waters, off the continental shelf will also lessen the danger of a trawl net becoming ensnared in "expended materials."	The analysis in the GOA Final Supplemental EIS/OEIS and also the GOA EIS/OEIS of March 2011 for fish (Sec 3.6) and birds (Sec 3.9) is supported by the best available science and research, and concludes that there would be no significant impacts to fish or birds (or significant adverse effect on migratory bird species populations) from Navy proposed actions in the TMAA. The analysis and appropriate consultations have been completed with the appropriate resource agencies (NMFS, US Fish and Wildlife Service) that are responsible for managing these species. The rationale presented in the 2011 Record of Decision for the concurrence and non-concurrence regarding the EFH recommendations remains valid. As discussed in response to comment 1 above, collection of data would not be feasible or possible at this time for these temporary and transient activities, currently done for a two week period every other year in the GOA. Even if it was possible to collect data, there would be many unknowns about other potential influences on a population or species and causation factors (i.e., overfishing, climate change, ocean acidification, disease, bycatch, etc.). Regarding expended material causing damage to trawl fishing gear, as stated above, the Navy, in general, does most of its training activities well away from areas where fishing occurs. In the decades of training in the GOA, the Navy is not aware of any incident of such damage occurring. If in the future there were to be an incident, all maritime claims arising from operation of a Navy vessel are handled by the Office of the Judge Advocate General (Code 11). Information on how to submit an Admiralty Claim can be found at http://www.jag.navy.mil/organization/code_11.htm.
Kodiak Area Tribes -4	D. Move exercises away from locally-important Portlock Bank, its canyons, and deep ocean seamounts for similar reasons explained in item "c." above In support of item "D." listed above, the Temporary Maritime Activities Area (TMAA) should be reconfigured to exclude "Portlock Bank", located NE of the Kodiak Archipelago. This region is biochemically important to many aquatic and seabird species and significant to Tribal commerce and subsistence. The TMAA's western boundary should begin from a point located at the current SW corner, and extend northeasterly towards Middleton Island where it intersects with the current line. All marine waters WNW of this line should be removed from the TMAA.	The bathymetric feature known as Portlock Bank is located offshore to the east of Kodiak Island and overlaps with the far western portion of the TMAA. There is minimal overlap with the majority of training activities in the TMAA since most training events occur farther offshore and away from commercial shipping traffic, other civilian vessels, and air traffic routes. There have been no indications of impacts to fish or fisheries or reported impacts to the activities of fishermen in the Portlock Bank area from any past Navy training in the TMAA. However, given the expressed concerns the Kodiak area Tribes during a government to government consultation conducted in July 2016, Navy has affirmed that the use of explosives will not occur in Portlock Bank during Navy training events in the TMAA due to standard safety considerations and the likely presence of civilian vessels and aircraft in that general nearshore area. See Section 5.3.3.1.7 (5.3.3.1.7 Avoiding Locations Based on Bathymetry and Environmental Conditions). Regarding removing portions of the TMAA beyond the specific geographic measures discussed in Chapter 5, the TMAA is designed based on the required area. The TMAA is

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
Kodiak Area Tribes -5	E. No aviation or marine vessel fuel discharges over water to lessen adverse impacts to avian species and shallow-swimming biota (unless emergency). Report all discharge events.	offshore and avoids coastal areas. There is no impact to avian species or shallow swimming biota because by existing Navy policy, the Navy does not dump vessel or aircraft fuel unless required by safety. There have been no reported situations during past training events where there has been fuel dumping.
Kodiak Area Tribes -6	F. Adopt seasonal marine mammal and other protections as granted to "Biologically Important Areas" in new rules set for Navy training ranges in Hawaii and Southern California; Also relates in part to item "b." above.	As described in Section 5.3.3.1.11 of the Final GOA Supplemental EIS/OEIS, the Navy considered mitigation measures for marine species habitats and identified areas of biological importance in the TMAA on a case-by-case basis through consultation with the National Marine Fisheries Service (NMFS). The Navy deems avoidance of an area potentially effective mitigation and practicable only if (1) the area has been well documented as important habitat for particular species based on the best available science, (2) the potential impacts of Navy activities spatially and temporally overlap with the areas to be avoided, (3) that overlap is likely to have biologically meaningful effects in the identified area, and (4) avoidance of the area would not result in unacceptable impacts on military readiness. Overall, the Navy has determined that it is most effective to implement mitigation measures whenever and wherever a marine mammal is detected, regardless of the probability that a marine mammal may be in a specified location or area, since they are highly migratory. In response to public comments and as part of ongoing discussions with NMFS under the Marine Mammal Protection Act permitting process, the Navy was asked to reconsider whether additional mitigation is warranted, in two areas that have been identified as biologically important to two specific species and that partially overlap the TMAA. As presented in Section 3.8.2 of the Final Supplemental EIS/OEIS, these areas include a North Pacific right whale feeding area (Figure 3.8-2) and a gray whale migration area (Figure 3.8-5), which were designated for consideration specifically because of those feeding and migrating behaviors at specific time periods. After consideration of what training could occur in these overlap areas, and the endangered status and extremely small numbers of North Pacific right whales in the population, the Navy has agreed to establish a North Pacific Right Whale Cautionary Area in the GOA between June and September each year. During the June to September time period in the North Pacific Right Whale Cautionary Area, the Navy will not use surface ship hull mounted mid-frequency sonar or explosives during proposed training events. Regarding avoidance of whale migration routes, the identified gray whale migration route is almost entirely avoided by the placement of the TMAA. With the gray whale migration between November through January and March through May, the Navy's training within the April to October timeframe would have no temporal overlap with this November through January migration period. There is only minimum temporal overlap between the months of March through May migration period and the potential range of time during

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
		which the proposed Navy training might occur. The majority of Navy training activities including sonar and explosives use within the TMAA have historically occurred in summer months (June–July) outside of the gray whale migration period designated for the migration area; this training involving sonar and explosives typically takes place some distance away from an operating area boundary to ensure sufficient sea or air space for tactical maneuvers, sufficient water depth, and to avoid interference from civilian vessels and aircraft (civilian ship and air transits are high in number along the nearshore boundary of the TMAA). In addition, as detailed in Section 3.8 (Marine Mammals), there are no expected sonar or explosive effects predicted for gray whales, nor are there requested takes based on acoustic effects modeling that considered gray whale occurrence and density as well as the types and quantities of Navy training being authorized. Given the lack of overlap for the majority of Navy activities in time and space and the lack of impact to the migration activity, the Navy finds that a time and area avoidance of the whale migration routes does not provide a practicable benefit to the population in balance with the impacts to training events. There is no overlap of the TMAA or any of the Navy proposed training activities in time or space with any other designated biologically important areas in Alaska (see Section 3.8.2, [Affected Environment] for species specific details).
Kodiak Area Tribes -7	G. Similar to nearly all commercial fisheries, maintain complete 3rd party Observer coverage.	As discussed in Section 5.3.3.1.15 of the Final GOA Supplemental EIS/OEIS, use of third-party observers is not necessary because Navy personnel are extensively trained in spotting items on or near the water surface. This includes the U.S. Navy Marine Species Awareness Training. Consistent with current requirements, all personnel standing watch on the bridge, Commanding Officers, Executive Officers, maritime patrol aircraft aircrews, anti-submarine warfare helicopter crews, civilian equivalents, and Lookouts will successfully complete the Marine Species Awareness Training prior to standing watch or serving as a Lookout. The Marine Species Awareness Training provides information on sighting cues, visual observation tools and techniques, and sighting notification procedures. Use of Navy Lookouts ensures immediate implementation of mitigation if marine species are sighted, incorporating these measures into the chain of command and military rule structure. Navy Lookouts are trained to act swiftly and decisively to ensure that appropriate actions are taken to inform the appropriate person in the chain of command. The use of third-party observers on other vessels and aircraft would also compromise security for some activities involving active sonar due to the requirement to provide advance notification of specific times and locations of Navy platforms. That would impede realism of the training. Reliance on the availability of third-party personnel would impact training flexibility, given most events cannot be scheduled for a specific time and often occur more than 100 miles offshore.
Kodiak Area Tribes -8	H. Navy agrees to work harder to build trust among all Kodiak citizens (and throughout the GOA). In just decades, misunderstood or the	The Navy and the Alaska Command have taken a more proactive role to our communications and outreach, including notifying tribes as early as January 2013, and

Table D 4.7: List of Comments and Other Considerations received from the Kodiak Area Tribes during Government-to-Government Consultation (continued)

Commenter	Comment	Navy Response
	unintentional consequences of Navy's training activities could adversely impact a culture that has survived in one place for thousands of years.	attending and presenting GOA Navy training activities at the recent ComFish Alaska trade show in March/April 2016. We would appreciate your input early in processes and welcome ongoing and future communication efforts to ensure our activities are compatible with other activities with the TMAA area and are not disruptive to the communities that depend on the GOA. The Navy, in conjunction with Alaska Command, is willing to discuss specifics of the Northern Edge 2017 exercise and future exercises with any interested Tribes as specific unclassified exercise planning details and information become known in advance of the actual exercise. The best available science has been reviewed and incorporated into the analysis of the Final Supplemental EIS. The Navy is a world leader in sponsoring marine research to better understand environmental impacts to marine mammals and other species. We accomplish this through research, and also monitoring efforts that we undertake within our training areas, including the TMAA. From 2011 to 2015, the Navy has invested \$2.6 million on our monitoring program in the GOA, completing a visual marine mammal survey, a towed array passive acoustic survey and passive acoustic monitoring within the Temporary Maritime Activities Area.
Kodiak Area Tribes -9	I. Items on this list shall be addressed in Navy's GOA "Final SOEIS" and subsequent environmental documents until resolved to our respective Tribal Councils' satisfaction.	The Navy's overall approach to assessing potential mitigation measures was based on two principles: (1) mitigation measures will be effective at reducing potential impacts on the resource; and (2) from a military perspective, the mitigations are practical to implement, executable, and personnel safety and readiness will not be impacted. This table is a summary of the items addressed in tribal comments. Other consultation documents also address these issues, including the expectant Biological Opinion from National Marine Fisheries Service, and the Letter of Authorization permit from National Marine Fisheries Service. The Record of Decision for the GOA Supplemental EIS/OEIS will also include additional clarifying information if required on tribal concerns.

**D.5 FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS
ENVIRONMENTAL IMPACT STATEMENT**

The public has the opportunity to review the Navy's responses to their comments in this Final Supplemental EIS/OEIS. All public comments are considered by the decision-maker prior to making a decision.

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