# Hawaii Range Complex



## Final Environmental Impact Statement/ Overseas Environmental Impact Statement (EIS/OEIS)

Volume 4 of 5: Chapter 14

**May 2008**

Coordinator
Hawaii Range Complex
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kauai, Hawaii 96752-0128




# HAWAII RANGE COMPLEX
# FINAL ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

## Volume 4 of 5

MAY 2008

Coordinator
Hawaii Range Complex
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kauai, Hawaii 96752-0128

THIS PAGE INTENTIONALLY LEFT BLANK

**COVER SHEET**
**FINAL ENVIRONMENTAL IMPACT STATEMENT/**
**OVERSEAS ENVIRONMENTAL IMPACT STATEMENT**
**HAWAII RANGE COMPLEX (HRC)**

| | |
|---|---|
| Lead Agency for the EIS: | U.S. Department of the Navy |
| Title of the Proposed Action: | Hawaii Range Complex |
| Affected Jurisdiction: | Kauai, Honolulu, Maui, and Hawaii Counties |
| Designation: | Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) |


**Abstract**

This Final EIS/OEIS has been prepared by the U.S. Department of the Navy (Navy) in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code § 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [CFR] §§ 1500-1508); Navy Procedures for Implementing NEPA (32 CFR § 775); and Executive Order 12114 (EO 12114), *Environmental Effects Abroad of Major Federal Actions*. The Navy has identified the need to support and conduct current, emerging, and future training and research, development, test, and evaluation (RDT&E) activities in the Hawaii Range Complex (HRC). The alternatives—the No-action Alternative, Alternative 1, Alternative 2, and Alternative 3—are analyzed in this Final EIS/OEIS. All alternatives include an analysis of potential environmental impacts associated with the use of mid-frequency active (MFA) and high-frequency active (HFA) sonar. The No-action Alternative stands as no change from current levels of HRC usage and includes HRC training, support, and RDT&E activities, Major Exercises, and maintenance of the technical and logistical facilities that support these activities and exercises. Alternative 1 includes all ongoing training associated with the No-action Alternative, an increased tempo and frequency of such training (including increases in MFA and HFA sonar use), a new training event (Field Carrier Landing Practice), enhanced and future RDT&E activities, enhancements to optimize HRC capabilities, and an increased number of Major Exercises. Alternative 2 includes all of the training associated with Alternative 1 plus additional increases in the tempo and frequency of training (including additional increases in MFA and HFA sonar use), enhanced RDT&E activities, future RDT&E activities, and additional Major Exercises, such as supporting three Strike Groups training at the same time. Alternative 3 would include all of the training and RDT&E activities associated with Alternative 2. The difference between Alternative 2 and Alternative 3 is the amount of MFA/HFA sonar usage. As described under Alternative 2, Alternative 3 would provide increased flexibility in training activities by increasing the tempo and frequency of training events, future and enhanced RDT&E activities, and the addition of Major Exercises. Alternative 3 would consist of the MFA/HFA sonar usage as analyzed under the No-action Alternative. Alternative 3 is the Navy's preferred alternative.

This Final EIS/OEIS addresses potential environmental impacts that result from activities that occur under the No-action Alternative and proposed activities that would occur under Alternatives 1, 2, and 3. This EIS/OEIS also addresses changes and associated environmental analyses that were presented in the Supplement to the Draft EIS/OEIS. Environmental resource topics evaluated include air quality, airspace, biological resources (open ocean, offshore, and onshore), cultural resources, geology and soils, hazardous materials and waste, health and safety, land use, noise, socioeconomics, transportation, utilities, and water resources.



| | |
|---|---|
| Prepared by: | U.S. Department of Defense, Department of the Navy |
| Point of Contact: | Pacific Missile Range Facility Public Affairs Officer |
| | P.O. Box 128, Kekaha, Hawaii, 96752, (866) 767-3347 |


**May 2008**

THIS PAGE INTENTIONALLY LEFT BLANK

# Table of Contents

# TABLE OF CONTENTS

## Volume 1

Page

EXECUTIVE SUMMARY ..... ES-1

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION ..... 1-1
1.1 Introduction ..... 1-1
1.2 Overview of the Hawaii Range Complex ..... 1-2
1.3 Background ..... 1-6
1.3.1 Navy's At Sea Policy ..... 1-8
1.3.2 Why the Navy Trains ..... 1-9
1.3.3 Tactical Training Theater Assessment and Planning Program ..... 1-11
1.3.4 Mission of the Hawaii Range Complex ..... 1-12
1.3.5 Strategic Importance of the Existing Hawaii Range Complex ..... 1-13
1.4 Purpose and Need for the Proposed Action ..... 1-14
1.5 The Environmental Review Process ..... 1-15
1.5.1 Scope and Content of the EIS/OEIS ..... 1-15
1.5.2 Cooperating Agencies ..... 1-16
1.5.3 National Environmental Policy Act ..... 1-16
1.5.3.1 Public Scoping Process ..... 1-17
1.5.3.2 Public Review Process ..... 1-17
1.5.4 Executive Order 12114 ..... 1-21
1.5.5 Marine Mammal Protection Act Compliance ..... 1-21
1.5.6 Endangered Species Act Compliance ..... 1-23
1.5.7 Other Environmental Requirements Considered ..... 1-24
1.6 Related Environmental Documents ..... 1-24

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES ..... 2-1
2.1 Description of the Hawaii Range Complex ..... 2-2
2.2 Proposed Action and Alternatives ..... 2-8
2.2.1 Alternatives Eliminated From Further Consideration ..... 2-9
2.2.1.1 Reduction or Elimination of Training in the Hawaii Range Complex ..... 2-9
2.2.1.2 Alternative Locations for Training Conducted in the Hawaii Range Complex ..... 2-10
2.2.1.3 Computer Simulation Training ..... 2-11
2.2.2 No-action Alternative ..... 2-12
2.2.2.1 Hawaii Range Complex Training for the No-action Alternative ..... 2-13
2.2.2.2 Hawaii Range Complex Support Events for the No-action Alternative ..... 2-16
2.2.2.3 Current Training Events Within the Hawaii Range Complex for the No-action Alternative ..... 2-17
2.2.2.4 Mid-Frequency Active/High-Frequency Active Sonar Usage for the No-action Alternative ..... 2-21
2.2.2.5 Hawaii Range Complex RDT&E Activities for the No-action Alternative ..... 2-23
2.2.2.5.1 Pacific Missile Range Facility ..... 2-25

2.2.2.5.2 Naval Undersea Warfare Center Ranges ..... 2-32
2.2.2.6 Major Exercises for the No-action Alternative ..... 2-36
2.2.2.6.1 Rim of the Pacific ..... 2-36
2.2.2.6.2 Undersea Warfare Exercise ..... 2-39
2.2.2.7 Mitigation Measures for the No-action Alternative ..... 2-40
2.2.3 Alternative 1 ..... 2-40
2.2.3.1 Training Events for Alternative 1 ..... 2-40
2.2.3.2 MFA/HFA Sonar Usage for Alternative 1 ..... 2-40
2.2.3.3 Increased Tempo and Frequency of Training and New Training for Alternative 1 ..... 2-41
2.2.3.4 Enhanced RDT&E Activities for Alternative 1 ..... 2-42
2.2.3.5 Future RDT&E Activities for Alternative 1 ..... 2-42
2.2.3.6 Hawaii Range Complex Enhancements for Alternative 1 ..... 2-46
2.2.3.6.1 EOD Range Enhancements ..... 2-47
2.2.3.6.2 Pearl Harbor Enhancements ..... 2-47
2.2.3.6.3 Offshore Enhancements ..... 2-51
2.2.3.6.4 PMRF Enhancements ..... 2-51
2.2.3.7 Major Exercises for Alternative 1 ..... 2-60
2.2.3.8 Mitigation Measures for Alternative 1 ..... 2-60
2.2.4 Alternative 2 ..... 2-60
2.2.4.1 Training Events for Alternative 2 ..... 2-60
2.2.4.2 MFA/HFA Sonar Usage for Alternative 2 ..... 2-61
2.2.4.3 Increased Tempo and Frequency of Training for Alternative 2 ..... 2-62
2.2.4.4 Enhanced RDT&E Activities for Alternative 2 ..... 2-62
2.2.4.5 Future RDT&E Activities for Alternative 2 ..... 2-62
2.2.4.6 Hawaii Range Complex Enhancements for Alternative 2 ..... 2-64
2.2.4.7 Additional Major Exercises—Multiple Strike Group Training for Alternative 2 ..... 2-64
2.2.4.8 Mitigation Measures For Alternative 2 ..... 2-65
2.2.5 Alternative 3 (Preferred) ..... 2-65
2.2.5.1 Mitigation Measures For Alternative 3 ..... 2-66

3.0 AFFECTED ENVIRONMENT ..... 3-1
3.1 Open Ocean Area ..... 3-1
3.1.1 Airspace—Open Ocean Area ..... 3-3
3.1.2 Biological Resources—Open Ocean Area ..... 3-8
3.1.2.1 Coral ..... 3-8
3.1.2.2 Fish ..... 3-11
3.1.2.2.1 Essential Fish Habitat ..... 3-12
3.1.2.2.2 Offshore Ocean or Pelagic Species ..... 3-13
3.1.2.2.3 Fish Acoustics ..... 3-14
3.1.2.2.3.1 Sound in Water ..... 3-16
3.1.2.2.3.1.1 What Do Fish Hear? ..... 3-17
3.1.2.2.3.1.2 Sound Detection Mechanisms ..... 3-18
3.1.2.2.3.1.3 Hearing Generalists and Specialists ..... 3-19
3.1.2.2.3.1.4 Ancillary Structures for Hearing Specializations ..... 3-19
3.1.2.2.3.1.5 Lateral Line ..... 3-20
3.1.2.2.3.2 Overview of Fish Hearing Capabilities ..... 3-21
3.1.2.2.3.2.1 Variability in Hearing Among Groups of Fish 3-21
3.1.2.2.3.2.2 Marine Hearing Specialists ..... 3-25

3.1.2.2.3.2.3 Marine Hearing Generalists ..... 3-26
3.1.2.2.3.2.4 Hearing Capabilities of Elasmobranchs and Other "Fish" ..... 3-28
3.1.2.2.3.2.5 Data on Fish Hearing ..... 3-28
3.1.2.3 Sea Turtles ..... 3-29
3.1.2.3.1 Green Turtle (*Chelonia mydas*) ..... 3-33
3.1.2.3.2 Hawksbill Turtle (Eretmochelys imbricata) ..... 3-35
3.1.2.3.3 Leatherback Turtle (*Dermochelys coriacea*) ..... 3-35
3.1.2.3.4 Loggerhead Turtle (*Caretta caretta*) ..... 3-36
3.1.2.3.5 Olive Ridley Turtle (*Lepidochelys olivacea*) ..... 3-38
3.1.2.4 Marine Mammals ..... 3-39
3.1.2.4.1 Marine Mammal Occurrence ..... 3-41
3.1.2.4.1.1 Mysticetes ..... 3-41
3.1.2.4.1.2 Odontocetes ..... 3-52
3.1.2.4.1.3 Pinnipeds ..... 3-69
3.1.3 Cultural Resources—Open Ocean Area ..... 3-73
3.1.4 Hazardous Materials and Waste—Open Ocean Area ..... 3-77
3.1.5 Health and Safety—Open Ocean Area ..... 3-86
3.1.6 Noise—Open Ocean Area ..... 3-86
3.1.7 Water Resources—Open Ocean Area ..... 3-89
3.2 Northwestern Hawaiian Islands ..... 3-93
3.2.1 Northwestern Hawaiian Islands Offshore ..... 3-99
3.2.1.1 Biological Resources—Northwestern Hawaiian Islands Offshore ..... 3-99
3.2.1.1.1 Nihoa—Biological Resources—Northwestern Hawaiian Islands Offshore ..... 3-99
3.2.1.1.2 Necker—Biological Resources—Northwestern Hawaiian Islands Offshore ..... 3-100
3.2.2 Northwestern Hawaiian Islands Onshore ..... 3-102
3.2.2.1 Biological Resources—Northwestern Hawaiian Islands Onshore ..... 3-102
3.2.2.1.1 Nihoa—Biological Resources—Northwestern Hawaiian Islands Onshore ..... 3-102
3.2.2.1.2 Necker—Biological Resources—Northwestern Hawaiian Islands Onshore ..... 3-103
3.2.2.2 Cultural Resources—Northwestern Hawaiian Islands Onshore 3-104
3.3 Kauai ..... 3-107
3.3.1 Kauai Offshore ..... 3-107
3.3.1.1 PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 3-107
3.3.1.1.1 Biological Resources—PMRF—Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 3-108
3.3.1.1.2 Cultural Resources—PMRF—Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 3-115
3.3.1.1.3 Socioeconomics—PMRF—Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 3-117
3.3.1.1.4 Transportation—PMRF—Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 3-121
3.3.1.2 Niihau Offshore ..... 3-122
3.3.1.2.1 Biological Resources—Niihau—Offshore ..... 3-122
3.3.1.3 Kaula Offshore ..... 3-124
3.3.1.3.1 Biological Resources—Kaula—Offshore ..... 3-124

3.3.1.3.2 Cultural Resources—Kaula—Offshore ..... 3-125
3.3.2 Kauai Onshore ..... 3-126
3.3.2.1 PMRF/Main Base ..... 3-126
3.3.2.1.1 Air Quality—PMRF/Main Base ..... 3-126
3.3.2.1.2 Airspace—PMRF/Main Base ..... 3-128
3.3.2.1.3 Biological Resources—PMRF/Main Base ..... 3-132
3.3.2.1.4 Cultural Resources—PMRF/Main Base ..... 3-139
3.3.2.1.5 Geology and Soils—PMRF/Main Base ..... 3-141
3.3.2.1.6 Hazardous Materials and Waste—PMRF/Main Base ..... 3-143
3.3.2.1.7 Health and Safety—PMRF/Main Base ..... 3-146
3.3.2.1.8 Land Use—PMRF/Main Base ..... 3-152
3.3.2.1.9 Noise—PMRF/Main Base ..... 3-158
3.3.2.1.10 Socioeconomics—PMRF/Main Base ..... 3-161
3.3.2.1.11 Transportation—PMRF/Main Base ..... 3-165
3.3.2.1.12 Utilities—PMRF/Main Base ..... 3-166
3.3.2.1.13 Water Resources—PMRF/Main Base ..... 3-168
3.3.2.2 Makaha Ridge ..... 3-171
3.3.2.2.1 Air Quality—Makaha Ridge ..... 3-171
3.3.2.2.2 Biological Resources—Makaha Ridge ..... 3-172
3.3.2.2.3 Cultural Resources—Makaha Ridge ..... 3-174
3.3.2.2.4 Hazardous Materials and Waste—Makaha Ridge ..... 3-176
3.3.2.2.5 Health and Safety—Makaha Ridge ..... 3-176
3.3.2.3 Kokee ..... 3-178
3.3.2.3.1 Air Quality—Kokee ..... 3-178
3.3.2.3.2 Biological Resources—Kokee ..... 3-178
3.3.2.3.3 Hazardous Materials and Waste—Kokee ..... 3-180
3.3.2.3.4 Health and Safety—Kokee ..... 3-181
3.3.2.4 Hawaii Air National Guard Kokee ..... 3-183
3.3.2.4.1 Biological Resources—Hawaii Air National Guard Kokee ..... 3-183
3.3.2.5 Kamokala Magazines ..... 3-185
3.3.2.5.1 Hazardous Materials and Waste—Kamokala Magazines ..... 3-185
3.3.2.5.2 Health and Safety—Kamokala Magazines ..... 3-185
3.3.2.6 Port Allen ..... 3-187
3.3.2.7 Kikiaola Small Boat Harbor ..... 3-188
3.3.2.8 Mt. Kahili ..... 3-189
3.3.2.9 Niihau ..... 3-190
3.3.2.9.1 Biological Resources—Niihau ..... 3-190
3.3.2.9.2 Hazardous Materials and Waste—Niihau ..... 3-192
3.3.2.9.3 Health and Safety—Niihau ..... 3-192
3.3.2.10 Kaula ..... 3-195
3.3.2.10.1 Airspace—Kaula ..... 3-195
3.3.2.10.2 Biological Resources—Kaula ..... 3-195
3.3.2.10.3 Cultural Resources—Kaula ..... 3-197
3.3.2.10.4 Geology and Soils—Kaula ..... 3-197
3.3.2.10.5 Health and Safety—Kaula ..... 3-198
3.3.2.10.6 Land Use—Kaula ..... 3-199
3.4 Oahu ..... 3-201
3.4.1 Oahu Offshore ..... 3-201
3.4.1.1 Puuloa Underwater Range—Offshore ..... 3-201

3.4.1.1.1 Biological Resources—Puuloa Underwater Range—Offshore ..... 3-202
3.4.1.1.2 Cultural Resources—Puuloa Underwater Range—Offshore ..... 3-205
3.4.1.1.3 Hazardous Materials and Waste—Puuloa Underwater Range—Offshore ..... 3-205
3.4.1.1.4 Health and Safety—Puuloa Underwater Range—Offshore ..... 3-206
3.4.1.2 Naval Defensive Sea Area—Offshore ..... 3-207
3.4.1.2.1 Biological Resources—Naval Defensive Sea Area—Offshore ..... 3-207
3.4.1.2.2 Cultural Resources—Naval Defensive Sea Area—Offshore ..... 3-208
3.4.1.2.3 Health and Safety—Naval Defensive Sea Area—Offshore ..... 3-209
3.4.1.3 Marine Corps Base Hawaii (MCBH)—Offshore ..... 3-210
3.4.1.3.1 Biological Resources—MCBH—Offshore ..... 3-210
3.4.1.3.2 Cultural Resources—MCBH—Offshore ..... 3-213
3.4.1.4 Marine Corps Training Area/Bellows (MCTAB)—Offshore ..... 3-215
3.4.1.4.1 Biological Resources—MCTAB—Offshore ..... 3-215
3.4.1.4.2 Cultural Resources—MCTAB—Offshore ..... 3-216
3.4.1.5 Makua Military Reservation—Offshore ..... 3-217
3.4.1.5.1 Biological Resources—Makua Military Reservation—Offshore ..... 3-217
3.4.1.5.2 Cultural Resources—Makua Military Reservation—Offshore ..... 3-218
3.4.1.6 Dillingham Military Reservation—Offshore ..... 3-219
3.4.1.6.1 Biological Resources—Dillingham Military Reservation—Offshore ..... 3-219
3.4.1.6.2 Cultural Resources—Dillingham Military Reservation—Offshore ..... 3-221
3.4.1.7 Ewa Training Minefield—Offshore ..... 3-222
3.4.1.7.1 Biological Resources—Ewa Training Minefield—Offshore ..... 3-222
3.4.1.7.2 Hazardous Materials and Waste—Ewa Training Minefield—Offshore ..... 3-223
3.4.1.7.3 Health and Safety—Ewa Training Minefield—Offshore ..... 3-223
3.4.1.8 Barbers Point Underwater Range—Offshore ..... 3-224
3.4.1.8.1 Biological Resources—Barbers Point Underwater Range—Offshore ..... 3-224
3.4.1.8.2 Hazardous Materials and Waste—Barbers Point Underwater Range—Offshore ..... 3-225
3.4.1.8.3 Health and Safety—Barbers Point Underwater Range—Offshore ..... 3-226
3.4.1.9 Naval Undersea Warfare Center (NUWC) Shipboard Electronic Systems Evaluation Facility (SESEF)—Offshore ..... 3-227
3.4.1.9.1 Biological Resources—SESEF—Offshore ..... 3-227
3.4.1.9.2 Health and Safety—SESEF—Offshore ..... 3-228
3.4.1.10 Naval Undersea Warfare Center (NUWC) Fleet Operational Readiness Accuracy Check Site (FORACS)—Offshore ..... 3-229
3.4.1.10.1 Biological Resources—FORACS—Offshore ..... 3-229

3.4.1.10.2 Health and Safety—FORACS—Offshore ..... 3-231
3.4.2 Oahu Onshore ..... 3-232
3.4.2.1 Naval Station Pearl Harbor ..... 3-232
3.4.2.1.1 Biological Resources—Naval Station Pearl Harbor ..... 3-232
3.4.2.1.2 Cultural Resources—Naval Station Pearl Harbor ..... 3-235
3.4.2.1.3 Socioeconomics—Naval Station Pearl Harbor ..... 3-237
3.4.2.2 Ford Island ..... 3-242
3.4.2.2.1 Biological Resources—Ford Island ..... 3-242
3.4.2.2.2 Cultural Resources—Ford Island ..... 3-243
3.4.2.2.3 Water Resources—Ford Island ..... 3-244
3.4.2.3 Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 3-246
3.4.2.3.1 Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 3-246
3.4.2.3.2 Hazardous Materials and Waste—Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 3-246
3.4.2.3.3 Water Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 3-247
3.4.2.4 Explosive Ordnance Disposal (EOD) Land Range— Naval Magazine (NAVMAG) Pearl Harbor West Loch ..... 3-249
3.4.2.4.1 Biological Resources—EOD Land Range—NAVMAG Pearl Harbor West Loch ..... 3-249
3.4.2.4.2 Cultural Resources—EOD Land Range—NAVMAG Pearl Harbor West Loch ..... 3-250
3.4.2.4.3 Geology and Soils—EOD Land Range—NAVMAG Pearl Harbor West Loch ..... 3-251
3.4.2.4.4 Health and Safety—EOD Land Range—NAVMAG Pearl Harbor West Loch ..... 3-251
3.4.2.4.5 Water Resources—EOD Land Range—NAVMAG Pearl Harbor West Loch ..... 3-252
3.4.2.5 Lima Landing ..... 3-253
3.4.2.5.1 Biological Resources—Lima Landing ..... 3-253
3.4.2.5.2 Cultural Resources—Lima Landing ..... 3-254
3.4.2.5.3 Hazardous Materials and Waste—Lima Landing ..... 3-254
3.4.2.5.4 Health and Safety—Lima Landing ..... 3-255
3.4.2.6 U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport ..... 3-256
3.4.2.6.1 Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport ..... 3-256
3.4.2.6.2 Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport ..... 3-258
3.4.2.7 Marine Corps Base Hawaii (MCBH) ..... 3-260
3.4.2.7.1 Airspace—MCBH ..... 3-260
3.4.2.7.2 Biological Resources—MCBH ..... 3-261
3.4.2.7.3 Cultural Resources—MCBH ..... 3-264
3.4.2.7.4 Noise—MCBH ..... 3-265
3.4.2.7.5 Socioeconomics—MCBH ..... 3-267
3.4.2.8 Marine Corps Training Area/Bellows (MCTAB) ..... 3-268
3.4.2.8.1 Biological Resources—MCTAB ..... 3-268
3.4.2.8.2 Cultural Resources—MCTAB ..... 3-269
3.4.2.9 Hickam Air Force Base (AFB) ..... 3-272
3.4.2.9.1 Airspace—Hickam AFB ..... 3-272
3.4.2.9.2 Biological Resources—Hickam AFB ..... 3-273

3.4.2.10 Wheeler Army Airfield ..... 3-275
3.4.2.10.1 Airspace—Wheeler Army Airfield ..... 3-275
3.4.2.10.2 Biological Resources—Wheeler Army Airfield ..... 3-276
3.4.2.11 Makua Military Reservation ..... 3-279
3.4.2.11.1 Biological Resources—Makua Military Reservation ..... 3-279
3.4.2.11.2 Cultural Resources—Makua Military Reservation ..... 3-282
3.4.2.11.3 Health and Safety—Makua Military Reservation ..... 3-285
3.4.2.11.4 Noise—Makua Military Reservation ..... 3-286
3.4.2.12 Kahuku Training Area ..... 3-287
3.4.2.12.1 Biological Resources—Kahuku Training Area ..... 3-287
3.4.2.12.2 Cultural Resources—Kahuku Training Area ..... 3-289
3.4.2.13 Dillingham Military Reservation ..... 3-292
3.4.2.13.1 Biological Resources—Dillingham Military Reservation ..... 3-292
3.4.2.13.2 Cultural Resources—Dillingham Military Reservation ..... 3-294
3.4.2.14 Keehi Lagoon ..... 3-295
3.4.2.15 Kaena Point ..... 3-296
3.4.2.16 Mt. Kaala ..... 3-297
3.4.2.17 Wheeler Network Segment Control/PMRF Communication Sites ..... 3-298
3.4.2.18 Mauna Kapu Communication Site ..... 3-299
3.4.2.19 Makua Radio/Repeater/Cable Head ..... 3-300
3.5 Maui ..... 3-301
3.5.1 Maui Offshore ..... 3-301
3.5.1.1 Maui Offshore ..... 3-301
3.5.1.1.1 Biological Resources—Maui Offshore ..... 3-301
3.5.1.2 Shallow-water Minefield Sonar Training Area-Offshore ..... 3-304
3.5.2 Maui Onshore ..... 3-305
3.5.2.1 Maui Space Surveillance System ..... 3-305
3.5.2.2 Maui High Performance Computing Center ..... 3-306
3.5.2.3 Sandia Maui Haleakala Facility ..... 3-307
3.5.2.4 Molokai Mobile Transmitter Site ..... 3-308
3.6 Hawaii ..... 3-309
3.6.1 Hawaii Offshore ..... 3-309
3.6.1.1 Kawaihae Pier—Offshore ..... 3-309
3.6.1.1.1 Biological Resources—Kawaihae Pier—Offshore ..... 3-309
3.6.2 Hawaii Onshore ..... 3-312
3.6.2.1 Pohakuloa Training Area (PTA) ..... 3-312
3.6.2.1.1 Airspace—PTA ..... 3-312
3.6.2.1.2 Biological Resources—PTA ..... 3-315
3.6.2.1.3 Cultural Resources—PTA ..... 3-319
3.6.2.1.4 Health and Safety—PTA ..... 3-320
3.6.2.1.5 Noise—PTA ..... 3-322
3.6.2.2 Bradshaw Army Airfield ..... 3-324
3.6.2.2.1 Airspace—Bradshaw Army Airfield ..... 3-324
3.6.2.2.2 Biological Resources—Bradshaw Army Airfield ..... 3-324
3.6.2.2.3 Cultural Resources—Bradshaw Army Airfield ..... 3-325
3.6.2.3 Kawaihae Pier ..... 3-326
3.6.2.3.1 Biological Resources—Kawaihae Pier ..... 3-326

3.7 Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) ....3-327
3.7.1 Biological Resources—HIHWNMS ....3-329
3.7.1.1 Kauai—Biological Resources—HIHWNMS ....3-329
3.7.1.2 Oahu—Biological Resources—HIHWNMS ....3-329
3.7.1.3 Maui—Biological Resources—HIHWNMS ....3-329
3.7.1.4 Hawaii—Biological Resources—HIHWNMS ....3-330

# Volume 2

Page

4.0 ENVIRONMENTAL CONSEQUENCES....4-1
4.1 Open Ocean Area....4-3
4.1.1 Airspace—Open Ocean....4-3
4.1.1.1 No-action Alternative (Airspace—Open Ocean)....4-3
4.1.1.1.1 HRC Training—No-action Alternative....4-3
4.1.1.1.2 HRC RDT&E Activities—No-action Alternative....4-5
4.1.1.1.3 Major Exercises—No-action Alternative....4-8
4.1.1.2 Alternative 1 (Airspace—Open Ocean)....4-8
4.1.1.2.1 Increased Tempo and Frequency of Training—Alternative 1....4-8
4.1.1.2.2 Enhanced and Future RDT&E Activities—Alternative 1....4-9
4.1.1.2.3 HRC Enhancements—Alternative 1....4-9
4.1.1.2.4 Major Exercises—Alternative 1....4-9
4.1.1.3 Alternative 2 (Airspace—Open Ocean)....4-10
4.1.1.3.1 Increased Tempo and Frequency of Training—Alternative 2....4-10
4.1.1.3.2 Enhanced and Future RDT&E Activities—Alternative 2....4-11
4.1.1.3.3 Additional Major Exercises—Multiple Strike Group Training—Alternative 2....4-11
4.1.1.4 Alternative 3 (Airspace—Open Ocean)....4-12
4.1.2 Biological Resources—Open Ocean....4-12
4.1.2.1 Coral (Biological Resources—Open Ocean)....4-13
4.1.2.1.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Coral—Biological Resources—Open Ocean)....4-13
4.1.2.2 Fish (Biological Resources—Open Ocean)....4-14
4.1.2.2.1 No-action Alternative (Fish—Biological Resources—Open Ocean)....4-32
4.1.2.2.2 Alternative 1 (Fish—Biological Resources—Open Ocean)....4-33
4.1.2.2.3 Alternative 2 (Fish—Biological Resources—Open Ocean)....4-34
4.1.2.2.4 Alternative 3 (Fish—Biological Resources—Open Ocean)....4-36
4.1.2.3 Sea Turtles (Biological Resources—Open Ocean)....4-36
4.1.2.3.1 No-action Alternative (Sea Turtles—Biological Resources—Open Ocean)....4-41
4.1.2.3.2 Alternative 1 (Sea Turtles—Biological Resources—Open Ocean)....4-42
4.1.2.3.3 Alternative 2 (Sea Turtles—Biological Resources—Open Ocean)....4-43
4.1.2.3.4 Alternative 3 (Sea Turtles—Biological Resources—Open Ocean)....4-44
4.1.2.4 Marine Mammals (Biological Resources—Open Ocean)....4-44
4.1.2.4.1 Potential Non-Acoustic Impacts....4-45
4.1.2.4.2 Potential Sonar and Explosive Impacts....4-49

4.1.2.4.3 Analytical Framework for Assessing Marine Mammal Response to Active Sonar ....4-50
4.1.2.4.4 Regulatory Framework....4-54
4.1.2.4.5 Integration of Regulatory and Biological Frameworks....4-55
4.1.2.4.6 Criteria and Thresholds for Physiological Effects....4-61
4.1.2.4.7 Other Physiological Effects Considered....4-70
4.1.2.4.8 Previous Criteria and Thresholds for Behavioral Effects....4-73
4.1.2.4.9 Summary of Existing Credible Scientific Evidence Relevant to Assessing Behavioral Effects....4-76
4.1.2.4.9.1 Background....4-76
4.1.2.4.9.2 Development of the Risk Function....4-77
4.1.2.4.9.3 Methodology for Applying Risk Function ....4-78
4.1.2.4.9.4 Data Sources Used for Risk Function....4-82
4.1.2.4.9.5 Limitations of the Risk Function Data Sources ....4-84
4.1.2.4.9.6 Input Parameters for the Feller-Adapted Risk Function ....4-85
4.1.2.4.9.7 Basic Application of the Risk Function and Relation to the Current Regulatory Scheme ....4-88
4.1.2.4.9.8 Navy Post Acoustic Modeling Analysis....4-91
4.1.2.4.10 Cetacean Stranding Events ....4-92
4.1.2.4.10.1 Causes of Strandings ....4-96
4.1.2.4.10.2 Stranding Events Associated with Navy Sonar....4-116
4.1.2.4.10.3 Other Global Stranding Discussions....4-123
4.1.2.4.11 Marine Mammal Mitigation Measures Related to Acoustic and Explosive Exposures ....4-134
4.1.2.4.11.1 Acoustic Exposure Mitigation Measures....4-134
4.1.2.4.11.2 Explosive Source Mitigation Measures....4-135
4.1.2.4.12 Sonar Marine Mammal Modeling ....4-137
4.1.2.4.12.1 Active Acoustic Devices....4-137
4.1.2.4.12.2 Sonar Modeling Methodology ....4-139
4.1.2.4.13 Explosive Source Marine Mammal Modeling....4-141
4.1.2.4.13.1 Explosive Source Exercises ....4-141
4.1.2.4.13.2 Explosive Source Modeling Criteria....4-144
4.1.2.5 Marine Mammals No-action Alternative (Biological Resources—Open Ocean)....4-151
4.1.2.5.1 No-action Alternative Summary of Exposures ....4-151
4.1.2.5.2 Estimated Effects on ESA Listed Species—No-action Alternative ....4-154
4.1.2.5.3 Estimated Exposures for Non-ESA Species—No-action Alternative ....4-161
4.1.2.5.4 Summary of Compliance with MMPA and ESA—No-action Alternative ....4-175
4.1.2.5.5 HRC Training—No-action Alternative ....4-176
4.1.2.5.6 HRC RDT&E Activities—No-action Alternative....4-178
4.1.2.5.7 Major Exercises—No-action Alternative ....4-178
4.1.2.6 Marine Mammals Alternative 1 (Biological Resources—Open Ocean)....4-181
4.1.2.6.1 Alternative 1 Summary of Exposures....4-181
4.1.2.6.2 Estimated Effects on ESA Listed Species—Alternative 1 ....4-184

4.1.2.6.3 Estimated Exposures for Non-ESA Species—Alternative 1 ..... 4-189
4.1.2.6.4 Summary of Compliance with MMPA and ESA—Alternative 1 ..... 4-203
4.1.2.6.5 Increased Tempo and Frequency of Training—Alternative 1 ..... 4-205
4.1.2.6.6 Enhanced and Future RDT&E Activities—Alternative 1 ..... 4-205
4.1.2.6.7 HRC Enhancements—Alternative 1 ..... 4-205
4.1.2.6.8 Major Exercises—Alternative 1 ..... 4-207
4.1.2.7 Marine Mammals Alternative 2 (Biological Resources—Open Ocean) ..... 4-210
4.1.2.7.1 Alternative 2 Summary of Exposures ..... 4-210
4.1.2.7.2 Estimated Effects on ESA Listed Species—Alternative 2 ..... 4-213
4.1.2.7.3 Estimated Exposures for Non-ESA Species—Alternative 2 ..... 4-219
4.1.2.7.4 Summary of Compliance with MMPA and ESA—Alternative 2 ..... 4-233
4.1.2.7.5 Increased Tempo and Frequency of Training—Alternative 2 ..... 4-236
4.1.2.7.6 Enhanced and Future RDT&E Activities—Alternative 2 ..... 4-236
4.1.2.7.7 HRC Enhancements—Alternative 2 ..... 4-236
4.1.2.7.8 Major Exercises—RIMPAC, USWEX, and Multiple Strike Group Training—Alternative 2 ..... 4-236
4.1.2.8 Marine Mammals Alternative 3 (Biological Resources—Open Ocean) ..... 4-237
4.1.2.8.1 Summary of Compliance with ESA and MMPA—Alternative 3 ..... 4-237
4.1.2.9 Marine Mammal Mortality Request ..... 4-239
4.1.3 Cultural Resources—Open Ocean ..... 4-241
4.1.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources Open Ocean) ..... 4-241
4.1.4 Hazardous Materials & Wastes—Open Ocean ..... 4-242
4.1.4.1 No-action Alternative (Hazardous materials and Wastes—Open Ocean) ..... 4-242
4.1.4.1.1 HRC Training—No-action Alternative ..... 4-242
4.1.4.1.2 HRC RDT&E Activities—No-action Alternative ..... 4-246
4.1.4.1.3 Major Exercises—No-action Alternative ..... 4-246
4.1.4.2 Alternative 1 (Hazardous Materials and Wastes—Open Ocean) ..... 4-246
4.1.4.2.1 Increased Tempo and Frequency of Training—Alternative 1 ..... 4-246
4.1.4.2.2 Enhanced RDT&E Activities—Alternative 1 ..... 4-247
4.1.4.2.3 HRC Enhancements—Alternative 1 ..... 4-247
4.1.4.2.4 Major Exercises—Alternative 1 ..... 4-247
4.1.4.3 Alternative 2 (Hazardous Materials and Wastes—Open Ocean) ..... 4-249
4.1.4.3.1 Increased Tempo and Frequency of Training—Alternative 2 ..... 4-249
4.1.4.3.2 Enhanced RDT&E Activities—Alternative 2 ..... 4-249

4.1.4.3.3 Additional Major Exercises—Multiple Strike Group Training—Alternative 2 ....4-251
4.1.4.4 Alternative 3 (Hazardous Materials and Wastes—Open Ocean) ....4-251
4.1.5 Health and Safety—Open Ocean ....4-252
4.1.5.1 No-action Alternative (Health and Safety—Open Ocean) ....4-252
4.1.5.1.1 HRC Training—No-action Alternative ....4-252
4.1.5.1.2 HRC RDT&E Activities—No-action Alternative ....4-254
4.1.5.1.3 Major Exercises—No-action Alternative ....4-255
4.1.5.2 Alternative 1 (Health and Safety—Open Ocean) ....4-255
4.1.5.2.1 Increased Tempo and Frequency of Training—Alternative 1 ....4-255
4.1.5.2.2 Enhanced RDT&E Activities—Alternative 1 ....4-256
4.1.5.2.3 HRC Enhancements and Major Exercises—Alternative 1 ....4-256
4.1.5.3 Alternative 2 (Health and Safety—Open Ocean) ....4-256
4.1.5.3.1 Increased Tempo and Frequency of Training—Alternative 2 ....4-256
4.1.5.3.2 Enhanced RDT&E Activities—Alternative 2 ....4-257
4.1.5.3.3 Future RDT&E Activities—Alternative 2 ....4-257
4.1.5.3.4 Additional Major Exercises—Multiple Strike Group Training—Alternative 2 ....4-258
4.1.5.4 Alternative 3 (Health and Safety—Open Ocean) ....4-258
4.1.6 Noise—Open Ocean ....4-259
4.1.6.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Noise—Open Ocean) ....4-259
4.1.7 Water Resources—Open Ocean ....4-259
4.1.7.1 No-action Alternative (Water Resources—Open Ocean) ....4-259
4.1.7.1.1 HRC Training—No-action Alternative ....4-259
4.1.7.1.2 HRC RDT&E Activities—No-action Alternative ....4-275
4.1.7.1.3 Major Exercises—No-action Alternative ....4-277
4.1.7.2 Alternative 1 (Water Resources—Open Ocean) ....4-277
4.1.7.2.1 Increased Tempo and Frequency of Training—Alternative 1 ....4-277
4.1.7.2.2 Enhanced and Future RDT&E Activities—Alternative 1 ....4-277
4.1.7.2.3 HRC Enhancement—Alternative 1 ....4-277
4.1.7.2.4 Major Exercises—Alternative 1 ....4-277
4.1.7.3 Alternative 2 (Water Resources—Open Ocean) ....4-277
4.1.7.3.1 Increased Tempo and Frequency of Training—Alternative 2 ....4-277
4.1.7.3.2 Enhanced and Future RDT&E Activities—Alternative 2 ....4-278
4.1.7.3.3 Additional Major Exercises—Multiple Strike Group Training—Alternative 2 ....4-278
4.1.7.4 Alternative 3 (Water Resources—Open Ocean) ....4-278
4.2 Northwestern Hawaiian Islands ....4-279
4.2.1 Northwestern Hawaiian Islands Offshore ....4-279
4.2.1.1 Biological Resources—Northwestern Hawaiian Islands—Offshore ....4-280
4.2.1.1.1 Nihoa—Biological Resources—Offshore ....4-280
4.2.1.1.1.1 No-action Alternative (Biological Resources—Nihoa—Offshore) ....4-280

4.2.1.1.1.2 Alternative 1 (Biological Resources—Nihoa—Offshore) ..... 4-282
4.2.1.1.1.3 Alternative 2 (Biological Resources—Nihoa—Offshore) ..... 4-283
4.2.1.1.1.4 Alternative 3 (Biological Resources—Nihoa—Offshore) ..... 4-283
4.2.1.1.2 Necker—Biological Resources—Offshore ..... 4-283
4.2.1.1.2.1 No-action Alternative (Biological Resources—Necker—Offshore) ..... 4-283
4.2.1.1.2.2 Alternative 1 (Biological Resources—Necker—Offshore) ..... 4-284
4.2.1.1.2.3 Alternative 2 (Biological Resources—Necker—Offshore) ..... 4-284
4.2.1.1.2.4 Alternative 3 (Biological Resources—Necker—Offshore) ..... 4-284
4.2.2 Northwestern Hawaiian Islands Onshore ..... 4-286
4.2.2.1 Biological Resources—Northwestern Hawaiian Islands ..... 4-286
4.2.2.1.1 Nihoa—Biological Resources ..... 4-286
4.2.2.1.1.1 No-action Alternative (Biological Resources—Nihoa) ..... 4-286
4.2.2.1.1.2 Alternative 1 (Biological Resources—Nihoa) ..... 4-287
4.2.2.1.1.3 Alternative 2 (Biological Resources—Nihoa) ..... 4-288
4.2.2.1.1.4 Alternative 3 (Biological Resources—Nihoa) ..... 4-288
4.2.2.1.2 Necker—Biological Resources ..... 4-289
4.2.2.1.2.1 No-action Alternative (Biological Resources—Necker) ..... 4-289
4.2.2.1.2.2 Alternative 1 (Biological Resources—Necker) ..... 4-289
4.2.2.1.2.3 Alternative 2 (Biological Resources—Necker) ..... 4-289
4.2.2.1.2.4 Alternative 3 (Biological Resources—Necker) ..... 4-290
4.2.2.2 Cultural Resources—Northwestern Hawaiian Islands ..... 4-290
4.2.2.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Northwestern Hawaiian Islands) ..... 4-290
4.3 Kauai ..... 4-291
4.3.1 Kauai Offshore ..... 4-291
4.3.1.1 PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 4-291
4.3.1.1.1 Biological Resources—PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 4-292
4.3.1.1.1.1 No-action Alternative (Biological Resources—PMRF Offshore ([BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-292
4.3.1.1.1.2 Alternative 1 (Biological Resources—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-299
4.3.1.1.1.3 Alternative 2 (Biological Resources—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-300
4.3.1.1.1.4 Alternative 3 (Biological Resources—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-301

4.3.1.1.2 Cultural Resources—PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 4-302
4.3.1.1.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) 4-302
4.3.1.1.3 Socioeconomics—PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 4-302
4.3.1.1.3.1 No-action Alternative (Socioeconomics—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) 4-302
4.3.1.1.3.2 Alternative 1 (Socioeconomics—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-303
4.3.1.1.3.3 Alternative 2 (Socioeconomics—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-303
4.3.1.1.3.4 Alternative 3 (Socioeconomics—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-304
4.3.1.1.4 Transportation—PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) ..... 4-305
4.3.1.1.4.1 No-action Alternative (Transportation—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) 4-305
4.3.1.1.4.2 Alternative 1 (Transportation—PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-305
4.3.1.1.4.3 Alternative 2 (Transportation —PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-306
4.3.1.1.4.4 Alternative 3 (Transportation —PMRF Offshore [BARSTUR, BSURE, SWTR, Kingfisher]) ..... 4-306
4.3.1.2 Niihau Offshore ..... 4-307
4.3.1.2.1 Biological Resources—Niihau Offshore ..... 4-307
4.3.1.2.1.1 No-action Alternative (Biological Resources—Niihau Offshore) ..... 4-307
4.3.1.2.1.2 Alternative 1 (Biological Resources—Niihau Offshore) ..... 4-308
4.3.1.2.1.3 Alternative 2 (Biological Resources—Niihau Offshore) ..... 4-309
4.3.1.2.1.4 Alternative 3 (Biological Resources—Niihau Offshore) ..... 4-310
4.3.1.3 Kaula Offshore ..... 4-311
4.3.1.3.1 Biological Resources—Kaula Offshore ..... 4-311
4.3.1.3.1.1 No-action Alternative (Biological Resources—Kaula Offshore) ..... 4-311
4.3.1.3.1.2 Alternative 1 (Biological Resources—Kaula Offshore) ..... 4-312
4.3.1.3.1.3 Alternative 2 (Biological Resources—Kaula Offshore) ..... 4-313
4.3.1.3.1.4 Alternative 3 (Biological Resources—Kaula Offshore) ..... 4-313
4.3.1.3.2 Cultural Resources—Kaula Offshore ..... 4-313
4.3.1.3.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Kaula Offshore) ..... 4-313
4.3.2 Kauai Onshore ..... 4-314
4.3.2.1 Pacific Missile Range Facility/Main Base ..... 4-314

4.3.2.1.1 Air Quality—PMRF/Main Base ..... 4-315
4.3.2.1.1.1 No-action Alternative (Air Quality—PMRF/Main Base) ..... 4-315
4.3.2.1.1.2 Alternative 1 (Air Quality—PMRF/Main Base) ..... 4-319
4.3.2.1.1.3 Alternative 2 (Air Quality—PMRF/Main Base) ..... 4-321
4.3.2.1.1.4 Alternative 3 (Air Quality—PMRF/Main Base) ..... 4-323
4.3.2.1.2 Airspace—PMRF/Main Base ..... 4-323
4.3.2.1.2.1 No-action Alternative (Airspace—PMRF/Main Base) ..... 4-323
4.3.2.1.2.2 Alternative 1 (Airspace—PMRF/Main Base) ..... 4-326
4.3.2.1.2.3 Alternative 2 (Airspace—PMRF/Main Base) ..... 4-328
4.3.2.1.2.4 Alternative 3 (Airspace—PMRF/Main Base) ..... 4-329
4.3.2.1.3 Biological Resources—PMRF/Main Base ..... 4-330
4.3.2.1.3.1 No-action Alternative (Biological Resources—PMRF/Main Base) ..... 4-330
4.3.2.1.3.2 Alternative 1 (Biological Resources—PMRF/Main Base) ..... 4-334
4.3.2.1.3.3 Alternative 2 (Biological Resources—PMRF/Main Base) ..... 4-338
4.3.2.1.3.4 Alternative 3 (Biological Resources—PMRF/Main Base) ..... 4-339
4.3.2.1.4 Cultural Resources—PMRF/Main Base ..... 4-339
4.3.2.1.4.1 No-action Alternative (Cultural Resources—PMRF/Main Base) ..... 4-339
4.3.2.1.4.2 Alternative 1 (Cultural Resources—PMRF/Main Base) ..... 4-341
4.3.2.1.4.3 Alternative 2 (Cultural Resources—PMRF/Main Base) ..... 4-342
4.3.2.1.4.4 Alternative 3 (Cultural Resources—PMRF/Main Base) ..... 4-343
4.3.2.1.5 Geology and Soils—PMRF/Main Base ..... 4-343
4.3.2.1.5.1 No-action Alternative (Geology and Soils—PMRF/Main Base) ..... 4-343
4.3.2.1.5.2 Alternatives 1, 2, and 3 (Geology and Soils—PMRF/Main Base) ..... 4-343
4.3.2.1.6 Hazardous Materials and Waste—PMRF/Main Base ..... 4-343
4.3.2.1.6.1 No-action Alternative (Hazardous Materials and Waste—PMRF/Main Base) ..... 4-343
4.3.2.1.6.2 Alternative 1 (Hazardous Materials and Waste—PMRF/Main Base) ..... 4-346
4.3.2.1.6.3 Alternative 2 (Hazardous Materials and Waste—PMRF/Main Base) ..... 4-348
4.3.2.1.6.4 Alternative 3 (Hazardous Materials and Waste—PMRF/Main Base) ..... 4-349
4.3.2.1.7 Health and Safety—PMRF/Main Base ..... 4-349
4.3.2.1.7.1 No-action Alternative (Health and Safety—PMRF/Main Base) ..... 4-349
4.3.2.1.7.2 Alternative 1 (Health and Safety—PMRF/Main Base) ..... 4-354
4.3.2.1.7.3 Alternative 2 (Health and Safety—PMRF/Main Base) ..... 4-355

4.3.2.1.7.4 Alternative 3 (Health and Safety—PMRF/Main Base) ..... 4-357
4.3.2.1.8 Land Use—PMRF/Main Base ..... 4-357
4.3.2.1.8.1 No-action Alternative (Land Use—PMRF/Main Base) ..... 4-357
4.3.2.1.8.2 Alternative 1 (Land Use—PMRF/Main Base) ..... 4-359
4.3.2.1.8.3 Alternative 2 (Land Use—PMRF/Main Base) ..... 4-361
4.3.2.1.8.4 Alternative 3 (Land Use—PMRF/Main Base) ..... 4-362
4.3.2.1.9 Noise—PMRF/Main Base ..... 4-363
4.3.2.1.9.1 No-action Alternative (Noise—PMRF/Main Base) ..... 4-363
4.3.2.1.9.2 Alternative 1 (Noise—PMRF/Main Base) ..... 4-369
4.3.2.1.9.3 Alternative 2 (Noise—PMRF/Main Base) ..... 4-372
4.3.2.1.9.4 Alternative 3 (Noise—PMRF/Main Base) ..... 4-373
4.3.2.1.10 Socioeconomics—PMRF/Main Base ..... 4-373
4.3.2.1.10.1 No-action Alternative (Socioeconomics—PMRF/Main Base) ..... 4-373
4.3.2.1.10.2 Alternative 1 (Socioeconomics—PMRF/Main Base) ..... 4-373
4.3.2.1.10.3 Alternative 2 (Socioeconomics—PMRF/Main Base) ..... 4-375
4.3.2.1.10.4 Alternative 3 (Socioeconomics—PMRF/Main Base) ..... 4-376
4.3.2.1.11 Transportation—PMRF/Main Base ..... 4-376
4.3.2.1.11.1 No-action Alternative (Transportation—PMRF/Main Base) ..... 4-377
4.3.2.1.11.2 Alternative 1 (Transportation—PMRF/Main Base) ..... 4-377
4.3.2.1.11.3 Alternative 2 (Transportation—PMRF/Main Base) ..... 4-378
4.3.2.1.11.4 Alternative 3 (Transportation—PMRF/Main Base) ..... 4-380
4.3.2.1.12 Utilities—PMRF/Main Base ..... 4-380
4.3.2.1.12.1 No-action Alternative (Utilities—PMRF/Main Base) ..... 4-380
4.3.2.1.12.2 Alternative 1 (Utilities—PMRF/Main Base) ..... 4-380
4.3.2.1.12.3 Alternative 2 (Utilities—PMRF/Main Base) ..... 4-383
4.3.2.1.12.4 Alternative 3 (Utilities—PMRF/Main Base) ..... 4-384
4.3.2.1.13 Water Resources—PMRF/Main Base ..... 4-384
4.3.2.1.13.1 No-action Alternative (Water Resources—PMRF/Main Base) ..... 4-384
4.3.2.1.13.2 Alternative 1 (Water Resources—PMRF/Main Base) ..... 4-386
4.3.2.1.13.3 Alternative 2 (Water Resources—PMRF/Main Base) ..... 4-386
4.3.2.1.13.4 Alternative 3 (Water Resources—PMRF/Main Base) ..... 4-387
4.3.2.2 Makaha Ridge ..... 4-388
4.3.2.2.1 Air Quality—Makaha Ridge ..... 4-388
4.3.2.2.1.1 No-action Alternative (Air Quality—Makaha Ridge) ..... 4-388
4.3.2.2.1.2 Alternative 1 (Air Quality—Makaha Ridge) ..... 4-389
4.3.2.2.1.3 Alternative 2 (Air Quality—Makaha Ridge) ..... 4-389
4.3.2.2.1.4 Alternative 3 (Air Quality—Makaha Ridge) ..... 4-389
4.3.2.2.2 Biological Resources—Makaha Ridge ..... 4-389
4.3.2.2.2.1 No-action Alternative (Biological Resources—Makaha Ridge) ..... 4-389

4.3.2.2.2.2 Alternative 1 (Biological Resources—Makaha Ridge) ..... 4-390
4.3.2.2.2.3 Alternative 2 (Biological Resources—Makaha Ridge) ..... 4-391
4.3.2.2.2.4 Alternative 3 (Biological Resources—Makaha Ridge) ..... 4-391
4.3.2.2.3 Cultural Resources—Makaha Ridge ..... 4-392
4.3.2.2.3.1 No-action Alternative (Cultural Resources—Makaha Ridge) ..... 4-392
4.3.2.2.3.2 Alternative 1 (Cultural Resources—Makaha Ridge) 4-392
4.3.2.2.3.3 Alternative 2 (Cultural Resources—Makaha Ridge) 4-392
4.3.2.2.3.4 Alternative 3 (Cultural Resources—Makaha Ridge) 4-393
4.3.2.2.4 Hazardous Materials and Waste—Makaha Ridge ..... 4-393
4.3.2.2.4.1 No-action Alternative (Hazardous Materials and Waste—Makaha Ridge) ..... 4-393
4.3.2.2.4.2 Alternative 1 (Hazardous Materials and Waste—Makaha Ridge) ..... 4-393
4.3.2.2.4.3 Alternative 2 (Hazardous Materials and Waste—Makaha Ridge) ..... 4-394
4.3.2.2.4.4 Alternative 3 (Hazardous Materials and Waste—Makaha Ridge) ..... 4-394
4.3.2.2.5 Health and Safety—Makaha Ridge ..... 4-394
4.3.2.2.5.1 No-action Alternative (Health and Safety—Makaha Ridge) ..... 4-394
4.3.2.2.5.2 Alternative 1 (Health and Safety—Makaha Ridge) . 4-394
4.3.2.2.5.3 Alternative 2 (Health and Safety—Makaha Ridge) . 4-395
4.3.2.2.5.4 Alternative 3 (Health and Safety—Makaha Ridge) . 4-395
4.3.2.3 Kokee ..... 4-396
4.3.2.3.1 Air Quality—Kokee ..... 4-396
4.3.2.3.1.1 No-action Alternative (Air Quality—Kokee) ..... 4-396
4.3.2.3.1.2 Alternative 1 (Air Quality—Kokee) ..... 4-397
4.3.2.3.1.3 Alternative 2 (Air Quality—Kokee) ..... 4-397
4.3.2.3.1.4 Alternative 3 (Air Quality—Kokee) ..... 4-397
4.3.2.3.2 Biological Resources—Kokee ..... 4-398
4.3.2.3.2.1 No-action Alternative (Biological Resources—Kokee) ..... 4-398
4.3.2.3.2.2 Alternative 1 (Biological Resources—Kokee) ..... 4-398
4.3.2.3.2.3 Alternative 2 (Biological Resources—Kokee) ..... 4-399
4.3.2.3.2.4 Alternative 3 (Biological Resources—Kokee) ..... 4-399
4.3.2.3.3 Hazardous Materials and Waste—Kokee ..... 4-400
4.3.2.3.3.1 No-action Alternative (Hazardous Materials and Waste—Kokee) ..... 4-400
4.3.2.3.3.2 Alternative 1 (Hazardous Materials and Waste—Kokee) ..... 4-400
4.3.2.3.3.3 Alternative 2 (Hazardous Materials and Waste—Kokee) ..... 4-400
4.3.2.3.3.4 Alternative 3 (Hazardous Materials and Waste—Kokee) ..... 4-401
4.3.2.3.4 Health and Safety—Kokee ..... 4-401
4.3.2.3.4.1 No-action Alternative (Health and Safety—Kokee). 4-401
4.3.2.3.4.2 Alternative 1 (Health and Safety—Kokee) ..... 4-401

4.3.2.3.4.3 Alternative 2 (Health and Safety—Kokee) ..... 4-402
4.3.2.3.4.4 Alternative 3 (Health and Safety—Kokee) ..... 4-402
4.3.2.4 Hawaii Air National Guard Kokee ..... 4-403
4.3.2.4.1 Biological Resources—Hawaii Air National Guard Kokee ..... 4-403
4.3.2.4.1.1 No-action Alternative (Biological Resources—Hawaii Air National Guard Kokee) ..... 4-403
4.3.2.4.1.2 Alternative 1 (Biological Resources—Hawaii Air National Guard Kokee) ..... 4-404
4.3.2.4.1.3 Alternative 2 (Biological Resources—Hawaii Air National Guard Kokee) ..... 4-404
4.3.2.4.1.4 Alternative 3 (Biological Resources—Hawaii Air National Guard Kokee) ..... 4-404
4.3.2.5 Kamokala Magazines ..... 4-405
4.3.2.5.1 Hazardous Materials and Waste—Kamokala Magazines ..... 4-405
4.3.2.5.1.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Kamokala Magazines) ..... 4-405
4.3.2.5.2 Health and Safety—Kamokala Magazines ..... 4-405
4.3.2.5.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Kamokala Magazines) ..... 4-405
4.3.2.6 Port Allen ..... 4-406
4.3.2.7 Kikiaola Small Boat Harbor ..... 4-408
4.3.2.8 Mt. Kahili ..... 4-409
4.3.2.9 Niihau ..... 4-410
4.3.2.9.1 Biological Resources—Niihau ..... 4-410
4.3.2.9.1.1 No-action Alternative (Biological Resources—Niihau) ..... 4-410
4.3.2.9.1.2 Alternative 1 (Biological Resources—Niihau) ..... 4-411
4.3.2.9.1.3 Alternative 2 (Biological Resources—Niihau) ..... 4-412
4.3.2.9.1.4 Alternative 3 (Biological Resources—Niihau) ..... 4-412
4.3.2.9.2 Hazardous Materials and Waste—Niihau ..... 4-412
4.3.2.9.2.1 No-action Alternative (Hazardous Materials and Waste—Niihau) ..... 4-412
4.3.2.9.2.2 Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Niihau) ..... 4-413
4.3.2.9.3 Health and Safety—Niihau ..... 4-414
4.3.2.9.3.1 No-action Alternative (Health and Safety—Niihau) ..... 4-414
4.3.2.9.3.2 Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Niihau) ..... 4-414
4.3.2.10 Kaula ..... 4-416
4.3.2.10.1 Airspace—Kaula ..... 4-416
4.3.2.10.1.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Airspace—Kaula) ..... 4-416
4.3.2.10.2 Biological Resources—Kaula ..... 4-417
4.3.2.10.2.1 No-action Alternative (Biological Resources—Kaula) ..... 4-417
4.3.2.10.2.2 Alternative 1 (Biological Resources—Kaula) ..... 4-418
4.3.2.10.2.3 Alternative 2 (Biological Resources—Kaula) ..... 4-418

4.3.2.10.2.4 Alternative 3 (Biological Resources—Kaula) ..... 4-418
4.3.2.10.3 Cultural Resources—Kaula ..... 4-419
4.3.2.10.3.1 No-action Alternative (Cultural Resources—Kaula) 4-419
4.3.2.10.3.2 Alternative 1 (Cultural Resources—Kaula) ..... 4-419
4.3.2.10.3.3 Alternative 2 (Cultural Resources—Kaula) ..... 4-419
4.3.2.10.3.4 Alternative 3 (Cultural Resources—Kaula) ..... 4-419
4.3.2.10.4 Geology and Soils—Kaula ..... 4-420
4.3.2.10.4.1 No-action Alternative (Geology and Soils—Kaula) . 4-420
4.3.2.10.4.2 Alternative 1 (Geology and Soils—Kaula) ..... 4-420
4.3.2.10.4.3 Alternative 2 (Geology and Soils—Kaula) ..... 4-420
4.3.2.10.4.4 Alternative 3 (Geology and Soils—Kaula) ..... 4-420
4.3.2.10.5 Health and Safety—Kaula ..... 4-421
4.3.2.10.5.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Kaula) ..... 4-421
4.3.2.10.6 Land Use—Kaula ..... 4-421
4.3.2.10.6.1 No-action Alternative (Land Use—Kaula) ..... 4-421
4.3.2.10.6.2 Alternative 1 (Land Use—Kaula) ..... 4-421
4.3.2.10.6.3 Alternative 2 (Land Use—Kaula) ..... 4-422
4.3.2.10.6.4 Alternative 3 (Land Use—Kaula) ..... 4-422
4.4 Oahu ..... 4-423
4.4.1 Oahu Offshore ..... 4-423
4.4.1.1 Puuloa Underwater Range—Offshore ..... 4-423
4.4.1.1.1 Biological Resources—Puuloa Underwater Range—Offshore ..... 4-423
4.4.1.1.1.1 No-action Alternative (Biological Resources—Puuloa Underwater Range—Offshore) ..... 4-423
4.4.1.1.1.2 Alternative 1 (Biological Resources—Puuloa Underwater Range—Offshore) ..... 4-425
4.4.1.1.1.3 Alternative 2 (Biological Resources—Puuloa Underwater Range—Offshore) ..... 4-426
4.4.1.1.1.4 Alternative 3 (Biological Resources—Puuloa Underwater Range—Offshore) ..... 4-426
4.4.1.1.2 Cultural Resources—Puuloa Underwater Training Range—Offshore ..... 4-426
4.4.1.1.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Puuloa Underwater Training Range—Offshore) ..... 4-426
4.4.1.1.3 Hazardous Materials and Waste—Puuloa Underwater Range—Offshore ..... 4-427
4.4.1.1.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Puuloa Underwater Range—Offshore) ..... 4-427
4.4.1.1.4 Health and Safety—Puuloa Underwater Range—Offshore ..... 4-428
4.4.1.1.4.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Puuloa Underwater Range—Offshore) ..... 4-428
4.4.1.2 Naval Defensive Sea Area—Offshore ..... 4-429
4.4.1.2.1 Biological Resources—Naval Defensive Sea Area—Offshore ..... 4-429

4.4.1.2.1.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Biological Resources—Naval Defensive Sea Area—Offshore) ..... 4-429
4.4.1.2.2 Cultural Resources—Naval Defensive Sea Area—Offshore ..... 4-430
4.4.1.2.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Naval Defensive Sea Area—Offshore) ..... 4-430
4.4.1.2.3 Health and Safety—Naval Defensive Sea Area—Offshore ..... 4-430
4.4.1.2.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Naval Defensive Sea Area—Offshore) ..... 4-430
4.4.1.3 Marine Corps Base Hawaii (MCBH)—Offshore ..... 4-432
4.4.1.3.1 Biological Resources—MCBH—Offshore ..... 4-432
4.4.1.3.1.1 No-action Alternative (Biological Resources—MCBH—Offshore) ..... 4-432
4.4.1.3.1.2 Alternative 1 (Biological Resources—MCBH—Offshore) ..... 4-434
4.4.1.3.1.3 Alternative 2 (Biological Resources—MCBH—Offshore) ..... 4-434
4.4.1.3.1.4 Alternative 3 (Biological Resources—MCBH—Offshore) ..... 4-435
4.4.1.3.2 Cultural Resources—MCBH—Offshore ..... 4-435
4.4.1.3.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—MCBH—Offshore) ..... 4-435
4.4.1.4 Marine Corps Training Area/Bellows (MCTAB)—Offshore ..... 4-436
4.4.1.4.1 Biological Resources—MCTAB—Offshore ..... 4-436
4.4.1.4.1.1 No-action Alternative (Biological Resources—MCTAB—Offshore) ..... 4-436
4.4.1.4.1.2 Alternative 1 (Biological Resources—MCTAB—Offshore) ..... 4-438
4.4.1.4.1.3 Alternative 2 (Biological Resources—MCTAB—Offshore) ..... 4-439
4.4.1.4.1.4 Alternative 3 (Biological Resources—MCTAB—Offshore) ..... 4-439
4.4.1.4.2 Cultural Resources—MCTAB—Offshore ..... 4-439
4.4.1.4.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—MCTAB—Offshore) ..... 4-439
4.4.1.5 Makua Military Reservation—Offshore ..... 4-440
4.4.1.5.1 Biological Resources—Makua Military Reserve—Offshore ..... 4-440
4.4.1.5.1.1 No-action Alternative (Biological Resources—Makua Military Reservation—Offshore) ..... 4-440
4.4.1.5.1.2 Alternative 1 (Biological Resources—Makua Military Reservation—Offshore) ..... 4-441
4.4.1.5.1.3 Alternative 2 (Biological Resources—Makua Military Reservation—Offshore) ..... 4-441

4.4.1.5.1.4 Alternative 3 (Biological Resources—Makua Military Reservation—Offshore)....4-442
4.4.1.5.2 Cultural Resources—Makua Military Reservation—Offshore....4-442
4.4.1.5.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Makua Military Reservation—Offshore)....4-442
4.4.1.6 Dillingham Military Reservation—Offshore....4-443
4.4.1.6.1 Biological Resources—Dillingham Military Reservation—Offshore....4-443
4.4.1.6.1.1 No-action Alternative (Biological Resources—Dillingham Military Reservation—Offshore)....4-443
4.4.1.6.1.2 Alternative 1 (Biological Resources—Dillingham Military Reservation—Offshore)....4-444
4.4.1.6.1.3 Alternative 2 (Biological Resources—Dillingham Military Reservation—Offshore)....4-444
4.4.1.6.1.4 Alternative 3 (Biological Resources—Dillingham Military Reservation—Offshore)....4-445
4.4.1.6.2 Cultural Resources—Dillingham Military Reservation—Offshore....4-445
4.4.1.6.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Dillingham Military Reservation—Offshore)....4-445
4.4.1.7 Ewa Training Minefield—Offshore....4-446
4.4.1.7.1 Biological Resources—Ewa Training Minefield—Offshore....4-446
4.4.1.7.1.1 No-action Alternative (Biological Resources—Ewa Training Minefield—Offshore)....4-446
4.4.1.7.1.2 Alternative 1 (Biological Resources—Ewa Training Minefield—Offshore)....4-447
4.4.1.7.1.3 Alternative 2 (Biological Resources—Ewa Training Minefield—Offshore)....4-447
4.4.1.7.1.4 Alternative 3 (Biological Resources—Ewa Training Minefield—Offshore)....4-447
4.4.1.7.2 Hazardous Materials and Waste—Ewa Training Minefield—Offshore....4-447
4.4.1.7.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Ewa Training Minefield—Offshore)....4-447
4.4.1.7.3 Health and Safety—Ewa Training Minefield—Offshore....4-448
4.4.1.7.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Ewa Training Minefield—Offshore)....4-448
4.4.1.8 Barbers Point Underwater Range—Offshore....4-449
4.4.1.8.1 Biological Resources—Barbers Point Underwater Range—Offshore....4-449
4.4.1.8.1.1 No-action Alternative (Biological Resources—Barbers Point Underwater Range—Offshore)....4-449
4.4.1.8.1.2 Alternative 1 (Biological Resources—Barbers Point Underwater Range—Offshore)....4-450

4.4.1.8.1.3 Alternative 2 (Biological Resources—Barbers Point Underwater Range—Offshore) ..... 4-450
4.4.1.8.1.4 Alternative 3 (Biological Resources—Barbers Point Underwater Range—Offshore) ..... 4-450
4.4.1.8.2 Hazardous Materials and Waste—Barbers Point Underwater Range—Offshore ..... 4-451
4.4.1.8.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Barbers Point Underwater Range—Offshore) ..... 4-451
4.4.1.8.3 Health and Safety—Barbers Point Underwater Range—Offshore ..... 4-451
4.4.1.8.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Barbers Point Underwater Range—Offshore) ..... 4-451
4.4.1.9 Naval Undersea Warfare Center (NUWC) Shipboard Electronic Systems Evaluation Facility (SESEF)—Offshore ..... 4-453
4.4.1.9.1 Biological Resources—SESEF—Offshore ..... 4-453
4.4.1.9.1.1 No-action Alternative (Biological Resources—SESEF—Offshore) ..... 4-453
4.4.1.9.1.2 Alternative 1 (Biological Resources—SESEF—Offshore) ..... 4-454
4.4.1.9.1.3 Alternative 2 (Biological Resources—SESEF—Offshore) ..... 4-454
4.4.1.9.1.4 Alternative 3 (Biological Resources—SESEF—Offshore) ..... 4-454
4.4.1.9.2 Health and Safety—SESEF—Offshore ..... 4-455
4.4.1.9.2.1 No-action Alternative (Health and Safety—SESEF—Offshore) ..... 4-455
4.4.1.9.2.2 Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—SESEF—Offshore) ..... 4-455
4.4.1.10 Naval Undersea Warfare Center (NUWC) Fleet Operational Readiness Accuracy Check Site (FORACS)—Offshore ..... 4-456
4.4.1.10.1 Biological Resources—FORACS—Offshore ..... 4-456
4.4.1.10.1.1 No-action Alternative (Biological Resources—FORACS—Offshore) ..... 4-456
4.4.1.10.1.2 Alternative 1 (Biological Resources—FORACS—Offshore) ..... 4-457
4.4.1.10.1.3 Alternative 2 (Biological Resources—FORACS—Offshore) ..... 4-457
4.4.1.10.1.4 Alternative 3 (Biological Resources—FORACS—Offshore) ..... 4-457
4.4.1.10.2 Health and Safety—FORACS—Offshore ..... 4-457
4.4.1.10.2.1 No-action Alternative (Health and Safety—FORACS—Offshore) ..... 4-457
4.4.1.10.2.2 Alternative 1 (Health and Safety—FORACS—Offshore) ..... 4-458
4.4.1.10.2.3 Alternative 2 (Health and Safety—FORACS—Offshore) ..... 4-458
4.4.1.10.2.4 Alternative 3 (Health and Safety—FORACS—Offshore) ..... 4-458

4.4.2 Oahu Onshore ..... 4-459
4.4.2.1 Naval Station Pearl Harbor ..... 4-459
4.4.2.1.1 Biological Resources—Naval Station Pearl Harbor ..... 4-459
4.4.2.1.1.1 No-action Alternative (Biological Resources—Naval Station Pearl Harbor) ..... 4-460
4.4.2.1.1.2 Alternative 1 (Biological Resources—Naval Station Pearl Harbor) ..... 4-462
4.4.2.1.1.3 Alternative 2 (Biological Resources—Naval Station Pearl Harbor) ..... 4-463
4.4.2.1.1.4 Alternative 3 (Biological Resources—Naval Station Pearl Harbor) ..... 4-463
4.4.2.1.2 Cultural Resources—Naval Station Pearl Harbor ..... 4-463
4.4.2.1.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Naval Station Pearl Harbor) ..... 4-463
4.4.2.1.3 Socioeconomics—Naval Station Pearl Harbor ..... 4-464
4.4.2.1.3.1 No-action Alternative (Socioeconomics—Naval Station Pearl Harbor) ..... 4-464
4.4.2.1.3.2 Alternative 1 (Socioeconomics—Naval Station Pearl Harbor) ..... 4-465
4.4.2.1.3.3 Alternative 2 (Socioeconomics—Naval Station Pearl Harbor) ..... 4-465
4.4.2.1.3.4 Alternative 3 (Socioeconomics—Naval Station Pearl Harbor) ..... 4-465
4.4.2.2 Ford Island ..... 4-467
4.4.2.2.1 Biological Resources—Ford Island ..... 4-467
4.4.2.2.1.1 No-action Alternative (Biological Resources—Ford Island) ..... 4-467
4.4.2.2.1.2 Alternative 1 (Biological Resources—Ford Island) ..... 4-467
4.4.2.2.1.3 Alternative 2 (Biological Resources—Ford Island) ..... 4-468
4.4.2.2.1.4 Alternative 3 (Biological Resources—Ford Island) ..... 4-468
4.4.2.2.2 Cultural Resources—Ford Island ..... 4-468
4.4.2.2.2.1 No-action Alternative (Cultural Resources—Ford Island) ..... 4-468
4.4.2.2.2.2 Alternative 1 (Cultural Resources—Ford Island) ..... 4-468
4.4.2.2.2.3 Alternative 2 (Cultural Resources—Ford Island) ..... 4-469
4.4.2.2.2.4 Alternative 3 (Cultural Resources—Ford Island) ..... 4-469
4.4.2.2.3 Water Resources—Ford Island ..... 4-469
4.4.2.2.3.1 No-action Alternative (Water Resources—Ford Island) ..... 4-469
4.4.2.2.3.2 Alternative 1 (Water Resources—Ford Island) ..... 4-469
4.4.2.2.3.3 Alternative 2 (Water Resources—Ford Island) ..... 4-469
4.4.2.2.3.4 Alternative 3 (Water Resources—Ford Island) ..... 4-470
4.4.2.3 Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 4-471
4.4.2.3.1 Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor ..... 4-471
4.4.2.3.1.1 No-action Alternative (Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor) ..... 4-471
4.4.2.3.1.2 Alternative 1 (Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor) ..... 4-472

4.4.2.3.1.3 Alternative 2 (Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor) 4-473
4.4.2.3.1.4 Alternative 3 (Biological Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor) 4-473
4.4.2.3.2 Hazardous Materials and Waste—Naval Inactive Ship Maintenance Facility, Pearl Harbor 4-473
4.4.2.3.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Naval Inactive Ship Maintenance Facility, Pearl Harbor) 4-473
4.4.2.3.3 Water Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor 4-474
4.4.2.3.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Water Resources—Naval Inactive Ship Maintenance Facility, Pearl Harbor) 4-474
4.4.2.4 Explosive Ordnance Disposal (EOD) Land Range–Naval Magazine (NAVMAG) Pearl Harbor West Loch 4-475
4.4.2.4.1 Biological Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch 4-475
4.4.2.4.1.1 No-action Alternative (Biological Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-475
4.4.2.4.1.2 Alternative 1 (Biological Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-476
4.4.2.4.1.3 Alternative 2 (Biological Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-476
4.4.2.4.1.4 Alternative 3 (Biological Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-476
4.4.2.4.2 Cultural Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-476
4.4.2.4.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-476
4.4.2.4.3 Geology and Soils—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-477
4.4.2.4.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Geology and Soils—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-477
4.4.2.4.4 Health and Safety—EOD Land Range–NAVMAG Pearl Harbor West Loch 4-478
4.4.2.4.4.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-478
4.4.2.4.5 Water Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch 4-479
4.4.2.4.5.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Water Resources—EOD Land Range–NAVMAG Pearl Harbor West Loch) 4-479
4.4.2.5 Lima Landing 4-481
4.4.2.5.1 Biological Resources—Lima Landing 4-481
4.4.2.5.1.1 No-action Alternative (Biological Resources—Lima Landing) 4-481

4.4.2.5.1.2 Alternative 1 (Biological Resources—Lima Landing)....4-482
4.4.2.5.1.3 Alternative 2 (Biological Resources—Lima Landing)....4-483
4.4.2.5.1.4 Alternative 3 (Biological Resources—Lima Landing)....4-483
4.4.2.5.2 Cultural Resources—Lima Landing....4-483
4.4.2.5.2.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Cultural Resources—Lima Landing)....4-483
4.4.2.5.3 Hazardous Materials and Waste—Lima Landing....4-484
4.4.2.5.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Hazardous Materials and Waste—Lima Landing)....4-484
4.4.2.5.4 Health and Safety—Lima Landing....4-484
4.4.2.5.4.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Health and Safety—Lima Landing)....4-484
4.4.2.6 U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport....4-486
4.4.2.6.1 Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport....4-486
4.4.2.6.1.1 No-action Alternative (Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)..4-486
4.4.2.6.1.2 Alternative 1 (Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)....4-487
4.4.2.6.1.3 Alternative 2 (Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)....4-487
4.4.2.6.1.4 Alternative 3 (Airspace—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)....4-488
4.4.2.6.2 Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport....4-488
4.4.2.6.2.1 No-action Alternative (Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)....4-488
4.4.2.6.2.2 Alternative 1 (Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)..4-489
4.4.2.6.2.3 Alternative 2 (Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)..4-490
4.4.2.6.2.4 Alternative 3 (Biological Resources—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)..4-490
4.4.2.6.3 Noise—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport....4-490
4.4.2.6.3.1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 (Noise—U.S. Coast Guard Air Station Barbers Point/Kalaeloa Airport)....4-490
4.4.2.7 Marine Corps Base Hawaii (MCBH)....4-491
4.4.2.7.1 Airspace—MCBH....4-491
4.4.2.7.1.1 No-action Alternative (Airspace—MCBH)....4-491
4.4.2.7.1.2 Alternative 1 (Airspace—MCBH)....4-492
4.4.2.7.1.3 Alternative 2 (Airspace—MCBH)....4-492
4.4.2.7.1.4 Alternative 3 (Airspace—MCBH)....4-493

4.4.2.7.2 Biological Resources—MCBH ..... 4-493
4.4.2.7.2.1 No-action Alternative (Biological Resources—MCBH) ..... 4-493
4.4.2.7.2.2 Alternative 1 (Biological Resources—MCBH) ..... 4-494
4.4.2.7.2.3 Alternative 2 (Biological Resources—MCBH) ..... 4-495
4.4.2.7.2.4 Alternative 3 (Biological Resources—MCBH) ..... 4-495
4.4.2.7.3 Cultural Resources—MCBH ..... 4-496
4.4.2.7.3.1 No-action Alternative (Cultural Resources—MCBH) ..... 4-496
4.4.2.7.3.2 Alternative 1 (Cultural Resources—MCBH) ..... 4-496
4.4.2.7.3.3 Alternative 2 (Cultural Resources—MCBH) ..... 4-496
4.4.2.7.3.4 Alternative 3 (Cultural Resources—MCBH) ..... 4-497
4.4.2.7.4 Noise—MCBH ..... 4-497
4.4.2.7.4.1 No-action Alternative (Noise—MCBH) ..... 4-497
4.4.2.7.4.2 Alternative 1 (Noise—MCBH) ..... 4-498
4.4.2.7.4.3 Alternative 2 (Noise—MCBH) ..... 4-499
4.4.2.7.4.4 Alternative 3 (Noise—MCBH) ..... 4-499
4.4.2.7.5 Socioeconomics—MCBH ..... 4-499
4.4.2.7.5.1 No-action Alternative (Socioeconomics—MCBH) ..... 4-499
4.4.2.7.5.2 Alternative 1 (Socioeconomics—MCBH) ..... 4-500
4.4.2.7.5.3 Alternative 2 (Socioeconomics—MCBH) ..... 4-501
4.4.2.7.5.4 Alternative 3 (Socioeconomics—MCBH) ..... 4-501
4.4.2.8 Marine Corps Training Area/Bellows (MCTAB) ..... 4-503
4.4.2.8.1 Biological Resources—MCTAB ..... 4-503
4.4.2.8.1.1 No-action Alternative (Biological Resources—MCTAB) ..... 4-503
4.4.2.8.1.2 Alternative 1 (Biological Resources—MCTAB) ..... 4-505
4.4.2.8.1.3 Alternative 2 (Biological Resources—MCTAB) ..... 4-505
4.4.2.8.1.4 Alternative 3 (Biological Resources—MCTAB) ..... 4-506
4.4.2.8.2 Cultural Resources—MCTAB ..... 4-506
4.4.2.8.2.1 No-action Alternative (Cultural Resources—MCTAB) ..... 4-506
4.4.2.8.2.2 Alternative 1 (Cultural Resources—MCTAB) ..... 4-507
4.4.2.8.2.3 Alternative 2 (Cultural Resources—MCTAB) ..... 4-507
4.4.2.8.2.4 Alternative 3 (Cultural Resources—MCTAB) ..... 4-507
4.4.2.9 Hickam Air Force Base (AFB) ..... 4-508
4.4.2.9.1 Airspace—Hickam AFB ..... 4-508
4.4.2.9.1.1 No-action Alternative (Airspace—Hickam AFB) ..... 4-508
4.4.2.9.1.2 Alternative 1 (Airspace—Hickam AFB) ..... 4-509
4.4.2.9.1.3 Alternative 2 (Airspace—Hickam AFB) ..... 4-509
4.4.2.9.1.4 Alternative 3 (Airspace—Hickam AFB) ..... 4-510
4.4.2.9.2 Biological Resources —Hickam AFB ..... 4-510
4.4.2.9.2.1 No-action Alternative (Biological Resources—Hickam AFB) ..... 4-510
4.4.2.9.2.2 Alternative 1 (Biological Resources—Hickam AFB) 4-511
4.4.2.9.2.3 Alternative 2 (Biological Resources—Hickam AFB) 4-511
4.4.2.9.2.4 Alternative 3 (Biological Resources—Hickam AFB) 4-512
4.4.2.10 Wheeler Army Airfield ..... 4-513
4.4.2.10.1 Airspace—Wheeler Army Airfield ..... 4-513
4.4.2.10.1.1 No-action Alternative (Airspace—Wheeler Army Airfield) ..... 4-513

4.4.2.10.1.2 Alternative 1 (Airspace—Wheeler Army Airfield) ....4-514
4.4.2.10.1.3 Alternative 2 (Airspace—Wheeler Army Airfield) ....4-514
4.4.2.10.1.4 Alternative 3 (Airspace—Wheeler Army Airfield) ....4-514
4.4.2.10.2 Biological Resources—Wheeler Army Airfield .....4-515
4.4.2.10.2.1 No-action Alternative (Biological Resources—Wheeler Army Airfield).....4-515
4.4.2.10.2.2 Alternative 1 (Biological Resources—Wheeler Army Airfield) .....4-515
4.4.2.10.2.3 Alternative 2 (Biological Resources—Wheeler Army Airfield) .....4-516
4.4.2.10.2.4 Alternative 3 (Biological Resources—Wheeler Army Airfield) .....4-516
4.4.2.11 Makua Military Reservation.....4-517
4.4.2.11.1 Biological Resources—Makua Military Reservation.....4-517
4.4.2.11.1.1 No-action Alternative (Biological Resources—Makua Military Reservation) .....4-517
4.4.2.11.1.2 Alternative 1 (Biological Resources—Makua Military Reservation).....4-519
4.4.2.11.1.3 Alternative 2 (Biological Resources—Makua Military Reservation).....4-519
4.4.2.11.1.4 Alternative 3 (Biological Resources—Makua Military Reservation).....4-520
4.4.2.11.2 Cultural Resources—Makua Military Reservation.....4-520
4.4.2.11.2.1 No-action Alternative (Cultural Resources—Makua Military Reservation).....4-520
4.4.2.11.2.2 Alternative 1 (Cultural Resources—Makua Military Reservation) .....4-521
4.4.2.11.2.3 Alternative 2 (Cultural Resources—Makua Military Reservation) .....4-521
4.4.2.11.2.4 Alternative 3 (Cultural Resources—Makua Military Reservation) .....4-521
4.4.2.11.3 Health and Safety—Makua Military Reservation.....4-521
4.4.2.11.3.1 No-action Alternative (Health and Safety—Makua Military Reservation .....4-521
4.4.2.11.3.2 Alternative 1 (Health and Safety—Makua Military Reservation.....4-522
4.4.2.11.3.3 Alternative 2 (Health and Safety—Makua Military Reservation) .....4-522
4.4.2.11.3.4 Alternative 3 (Health and Safety—Makua Military Reservation) .....4-522
4.4.2.11.4 Noise—Makua Military Reservation .....4-523
4.4.2.11.4.1 No-action Alternative (Noise—Makua Military Reservation) .....4-523
4.4.2.11.4.2 Alternative 1 (Noise—Makua Military Reservation) 4-523
4.4.2.11.4.3 Alternative 2 (Noise—Makua Military Reservation) 4-523
4.4.2.11.4.4 Alternative 3 (Noise—Makua Military Reservation) 4-524
4.4.2.12 Kahuku Training Area .....4-525
4.4.2.12.1 Biological Resources—Kahuku Training Area .....4-525
4.4.2.12.1.1 No-action Alternative (Biological Resources—Kahuku Training Area).....4-525

4.4.2.12.1.2 Alternative 1 (Biological Resources—Kahuku Training Area) ..... 4-526
4.4.2.12.1.3 Alternative 2 (Biological Resources—Kahuku Training Area) ..... 4-527
4.4.2.12.1.4 Alternative 3 (Biological Resources—Kahuku Training Area) ..... 4-527
4.4.2.12.2 Cultural Resources—Kahuku Training Area ..... 4-527
4.4.2.12.2.1 No-action Alternative (Cultural Resources—Kahuku Training Area) ..... 4-527
4.4.2.12.2.2 Alternative 1 (Cultural Resources—Kahuku Training Area) ..... 4-528
4.4.2.12.2.3 Alternative 2 (Cultural Resources—Kahuku Training Area) ..... 4-528
4.4.2.12.2.4 Alternative 3 (Cultural Resources—Kahuku Training Area) ..... 4-529
4.4.2.13 Dillingham Military Reservation ..... 4-530
4.4.2.13.1 Biological Resources—Dillingham Military Reservation ..... 4-530
4.4.2.13.1.1 No-action Alternative (Biological Resources—Dillingham Military Reservation) ..... 4-530
4.4.2.13.1.2 Alternative 1 (Biological Resources—Dillingham Military Reservation) ..... 4-531
4.4.2.13.1.3 Alternative 2 (Biological Resources—Dillingham Military Reservation) ..... 4-532
4.4.2.13.1.4 Alternative 3 (Biological Resources—Dillingham Military Reservation) ..... 4-532
4.4.2.13.2 Cultural Resources—Dillingham Military Reservation ..... 4-532
4.4.2.13.2.1 No-action Alternative (Cultural Resources—Dillingham Military Reservation) ..... 4-532
4.4.2.13.2.2 Alternative 1 (Cultural Resources—Dillingham Military Reservation) ..... 4-533
4.4.2.13.2.3 Alternative 2 (Cultural Resources—Dillingham Military Reservation) ..... 4-533
4.4.2.13.2.4 Alternative 3 (Cultural Resources—Dillingham Military Reservation) ..... 4-533
4.4.2.14 Keehi Lagoon ..... 4-534
4.4.2.15 Kaena Point ..... 4-535
4.4.2.16 Mt. Kaala ..... 4-536
4.4.2.17 Wheeler Network Segment Control/PMRF Communication Sites ..... 4-537
4.4.2.18 Mauna Kapu Communication Site ..... 4-538
4.4.2.19 Makua Radio/Repeater/Cable Head ..... 4-539
4.5 Maui ..... 4-541
4.5.1 Maui Offshore ..... 4-541
4.5.1.1 Maui Offshore ..... 4-542
4.5.1.1.1 Biological Resources—Maui Offshore ..... 4-542
4.5.1.1.1.1 No-action Alternative (Biological Resources—Maui Offshore) ..... 4-542
4.5.1.1.1.2 Alternative 1 (Biological Resources—Maui Offshore) ..... 4-543
4.5.1.1.1.3 Alternative 2 (Biological Resources—Maui Offshore) ..... 4-544

4.5.1.1.1.4 Alternative 3 (Biological Resources—Maui Offshore) ..... 4-544
4.5.1.2 Shallow-water Minefield Sonar Training Area Offshore ..... 4-545
4.5.2 Maui Onshore ..... 4-546
4.5.2.1 Maui Space Surveillance System ..... 4-546
4.5.2.2 Maui High Performance Computing Center ..... 4-547
4.5.2.3 Sandia Maui Haleakala Facility ..... 4-548
4.5.2.4 Molokai Mobile Transmitter Site ..... 4-549
4.6 Hawaii ..... 4-551
4.6.1 Hawaii Offshore ..... 4-551
4.6.1.1 Kawaihae Pier Offshore ..... 4-551
4.6.1.1.1 Biological Resources—Kawaihae Pier—Offshore ..... 4-551
4.6.1.1.1.1 No-action Alternative (Biological Resources—Kawaihae Pier—Offshore) ..... 4-551
4.6.1.1.1.2 Alternative 1 (Biological Resources—Kawaihae Pier—Offshore) ..... 4-553
4.6.1.1.1.3 Alternative 2 (Biological Resources—Kawaihae Pier—Offshore) ..... 4-553
4.6.1.1.1.4 Alternative 3 (Biological Resources—Kawaihae Pier—Offshore) ..... 4-553
4.6.2 Hawaii Onshore ..... 4-554
4.6.2.1 Pohakuloa Training Area ..... 4-554
4.6.2.1.1 Airspace—PTA ..... 4-555
4.6.2.1.1.1 No-action Alternative (Airspace—PTA) ..... 4-555
4.6.2.1.1.2 Alternative 1 (Airspace—PTA) ..... 4-555
4.6.2.1.1.3 Alternative 2 (Airspace—PTA) ..... 4-556
4.6.2.1.1.4 Alternative 3 (Airspace—PTA) ..... 4-557
4.6.2.1.2 Biological Resources—PTA ..... 4-557
4.6.2.1.2.1 No-action Alternative (Biological Resources—PTA) ..... 4-557
4.6.2.1.2.2 Alternative 1 (Biological Resources—PTA) ..... 4-559
4.6.2.1.2.3 Alternative 2 (Biological Resources—PTA) ..... 4-560
4.6.2.1.2.4 Alternative 3 (Biological Resources—PTA) ..... 4-560
4.6.2.1.3 Cultural Resources—PTA ..... 4-561
4.6.2.1.3.1 No-action Alternative (Cultural Resources—PTA) ..... 4-561
4.6.2.1.3.2 Alternative 1 (Cultural Resources—PTA) ..... 4-561
4.6.2.1.3.3 Alternative 2 (Cultural Resources—PTA) ..... 4-562
4.6.2.1.3.4 Alternative 3 (Cultural Resources—PTA) ..... 4-562
4.6.2.1.4 Health and Safety—PTA ..... 4-562
4.6.2.1.4.1 No-action Alternative (Health and Safety—PTA) ..... 4-562
4.6.2.1.4.2 Alternative 1 (Health and Safety—PTA) ..... 4-563
4.6.2.1.4.3 Alternative 2 (Health and Safety—PTA) ..... 4-564
4.6.2.1.4.4 Alternative 3 (Health and Safety—PTA) ..... 4-564
4.6.2.1.5 Noise—PTA ..... 4-564
4.6.2.1.5.1 No-action Alternative (Noise—PTA) ..... 4-564
4.6.2.1.5.2 Alternative 1 (Noise—PTA) ..... 4-565
4.6.2.1.5.3 Alternative 2 (Noise—PTA) ..... 4-565
4.6.2.1.5.4 Alternative 3 (Noise—PTA) ..... 4-565
4.6.2.2 Bradshaw Army Airfield ..... 4-567
4.6.2.2.1 Airspace—Bradshaw Army Airfield ..... 4-567

4.6.2.2.1.1 No-action Alternative (Airspace—Bradshaw Army Airfield)....4-567
4.6.2.2.1.2 Alternative 1 (Airspace—Bradshaw Army Airfield) .4-568
4.6.2.2.1.3 Alternative 2 (Airspace—Bradshaw Army Airfield) .4-568
4.6.2.2.1.4 Alternative 3 (Airspace—Bradshaw Army Airfield) .4-569
4.6.2.2.2 Biological Resources—Bradshaw Army Airfield....4-569
4.6.2.2.2.1 No-action Alternative (Biological Resources—Bradshaw Army Airfield) ....4-569
4.6.2.2.2.2 Alternative 1 (Biological Resources—Bradshaw Army Airfield) ....4-570
4.6.2.2.2.3 Alternative 2 (Biological Resources—Bradshaw Army Airfield ....4-570
4.6.2.2.2.4 Alternative 3 (Biological Resources—Bradshaw Army Airfield ....4-571
4.6.2.2.3 Cultural Resources—Bradshaw Army Airfield....4-571
4.6.2.2.3.1 No-action Alternative (Cultural Resources—Bradshaw Army Airfield) ....4-571
4.6.2.2.3.2 Alternative 1 (Cultural Resources—Bradshaw Army Airfield) ....4-571
4.6.2.2.3.3 Alternative 2 (Cultural Resources—Bradshaw Army Airfield) ....4-571
4.6.2.2.3.4 Alternative 3 (Cultural Resources—Bradshaw Army Airfield) ....4-572
4.6.2.3 Kawaihae Pier....4-573
4.6.2.3.1 Biological Resources—Kawaihae Pier....4-573
4.6.2.3.1.1 No-action Alternative (Biological Resources—Kawaihae Pier) ....4-573
4.6.2.3.1.2 Alternative 1 (Biological Resources—Kawaihae Pier) ....4-574
4.6.2.3.1.3 Alternative 2 (Biological Resources—Kawaihae Pier) ....4-574
4.6.2.3.1.4 Alternative 3 (Biological Resources—Kawaihae Pier) ....4-575
4.7 Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) ....4-576
4.7.1 Biological Resources—HIHWNMS....4-577
4.7.1.1 Kauai—Biological Resources—HIHWNMS ....4-577
4.7.1.2 Oahu—Biological Resources—HIHWNMS....4-578
4.7.1.3 Maui—Biological Resources—HIHWNMS....4-578
4.7.1.4 Hawaii—Biological Resources—HIHWNMS....4-578
4.8 Conflicts With Federal, State, and Local Land Use Plans, Policies, and Controls for the Area Concerned....4-579
4.9 Energy Requirements and Conservation Potential ....4-581
4.10 Irreversible or Irretrievable Commitment of Resources....4-581
4.11 Relationship Between Short-Term Use of The Human Environment and the Maintenance and Enhancement of Long-Term Productivity ....4-582
4.12 Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations (Executive Order 12898)....4-582
4.12.1 Air Quality ....4-584
4.12.2 Airspace....4-584
4.12.3 Biological Resources ....4-584
4.12.4 Cultural Resources ....4-585

4.12.5 Geology and Soils ....4-585
4.12.6 Hazardous Materials and Waste ....4-585
4.12.7 Health and Safety ....4-585
4.12.8 Land Use ....4-586
4.12.9 Noise ....4-587
4.12.10 Socioeconomics ....4-587
4.12.11 Transportation ....4-587
4.12.12 Utilities ....4-587
4.12.13 Water Resources ....4-588
4.13 Federal Actions To Address Protection of Children from Environmental Health Risks and Safety Risks (Executive Order 13045, as Amended by Executive Order 13229) ....4-588
4.14 Hawaii's Coastal Zone Management Program ....4-589

5.0 CUMULATIVE IMPACTS ....5-1
5.1 Requirement for Cumulative Impact Analysis ....5-1
5.2 Approach ....5-2
5.3 Geographic Boundaries for Cumulative Analysis ....5-2
5.4 Other Projects and Activities Analyzed for Cumulative Impacts ....5-3
5.4.1 Other Projects ....5-3
5.4.2 Other Activities ....5-18
5.4.2.1 Commercial Fishing ....5-18
5.4.2.2 Ship Strikes ....5-20
5.4.2.3 Anthropogenic Contributors to Ocean Noise Levels ....5-21
5.4.2.3.1 Commercial Shipping ....5-22
5.4.2.3.2 Vessel Mechanical Noise Sources ....5-22
5.4.2.3.3 Whale Watching ....5-23
5.4.2.3.4 Commercial and Military Sonar ....5-23
5.4.2.4 Environmental Contamination and Biotoxins ....5-28
5.4.2.5 Coastal Development Activities ....5-28
5.4.2.6 Scientific Research Permits ....5-29
5.4.2.7 Other considerations ....5-29
5.5 Cumulative Impact Analysis ....5-30
5.5.1 Air Quality ....5-30
5.5.2 Airspace ....5-31
5.5.3 Biological Resources ....5-31
5.5.3.1 Open Ocean and Offshore Biological Resources ....5-31
5.5.3.2 Onshore Biological Resources ....5-45
5.5.4 Cultural Resources ....5-46
5.5.5 Geology and Soils ....5-46
5.5.6 Hazardous Materials and Waste ....5-47
5.5.7 Health and Safety ....5-47
5.5.8 Land Use ....5-48
5.5.9 Noise ....5-48
5.5.10 Socioeconomics ....5-49
5.5.11 Transportation ....5-49
5.5.12 Utilities ....5-49
5.5.13 Water Resources ....5-50

6.0 MITIGATION MEASURES ....6-1
6.1 Current Mitigation Measures ....6-1

6.1.1 Personnel Training ....6-3
6.1.2 Lookout and Watchstander Responsibilities....6-3
6.1.3 Operating Procedures ....6-4
6.1.4 Current Mitigation Measures Associated with Events Using EER/IEER Sonobuoys....6-7
6.1.5 MFA/HFA Sonar Use Associated with Training Events in the Humpback Whale Cautionary Area ....6-8
6.1.5.1 Humpback Whale Cautionary Area....6-9
6.1.5.2 Cautionary Area Use, Authorization, and Reporting....6-9
6.1.6 Evaluation of Current Mitigation Measures....6-10
6.2 Alternative and/or Additional Mitigation Measures ....6-11
6.2.1 Evaluation of Alternative and/or Additional Mitigation Measures....6-12
6.2.1.1 After Action Reports and Assessment ....6-19
6.2.1.2 Coordination and Reporting....6-19
6.3 Conservation Measures ....6-20
6.4 Underwater Detonations....6-20
6.4.1 Demolition and Ship Mine Countermeasures Operations (up to 20 Pounds) ....6-20
6.4.1.1 Exclusion Zones ....6-20
6.4.1.2 Pre-Exercise Surveillance....6-20
6.4.1.3 Post-Exercise Surveillance ....6-21
6.4.1.4 Reporting ....6-21
6.4.2 Sinking Exercise, Gunnery Exercise, Missile Exercise and Bombing Exercise....6-21
6.4.3 Underwater Detonations Mitigation Procedures ....6-21
6.5 Aircraft Operations Involving Non-Explosive Devices ....6-23
6.6 Conditions Associated with the Biological Opinion....6-23
6.7 Review of Endangered Species Recovery Plans ....6-24
6.7.1 Recovery Plan for the Blue Whale (*Balaenoptera musculus*)—(1998).....6-25
6.7.2 Draft Recovery Plan for the Fin Whale (*Balaenoptera physalus*)—(2006) ....6-25
6.7.3 Final Recovery Plan for the Humpback Whale (*Megaptera novaeangliae*)—(1991) ....6-26
6.7.4 Draft Recovery Plan for the Sperm Whale (*Physeter macrocephalus*)—(2006) ....6-27
6.7.4.1 G.8 Military Operations (p.I-32)....6-27
6.7.5 Recovery Plan for the Hawaiian Monk Seal (*Monachus schauinslandi*)—(Draft revision 2005) ....6-28
6.7.6 Recovery Plan for the U.S. Pacific Populations of the Green Turtle (*Chelonia mydas*)—(1998) ....6-29
6.7.7 Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle (*Eretmochelys imbricata*)—(1998)....6-30
6.7.8 Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle (*Caretta caretta)*—(1998) ....6-30
6.7.9 Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle (*Lepidochelys olivacea*)—(1998) ....6-31
6.7.10 Recovery Plan for U.S. Populations of the Leatherback Turtle (*Dermochelys coriacea*)—(1998)....6-32
6.7.11 Additional Marine Mammal Research Sources ....6-32
6.8 Hawaii Range Complex Monitoring Plan....6-33
6.8.1 Integrated Comprehensive Monitoring Program....6-33

6.9 Navy-Funded Research ..... 6-34
6.10 Kauai ..... 6-35
6.10.1 Airspace ..... 6-35
6.10.2 Biological Resources ..... 6-36
6.10.3 Cultural Resources ..... 6-38
6.10.4 Geology and Soils ..... 6-39
6.10.5 Hazardous Materials and Waste ..... 6-39
6.10.6 Health and Safety ..... 6-39
6.10.7 Noise ..... 6-40
6.10.8 Kaula ..... 6-41
6.10.9 Niihau ..... 6-41
6.10.9.1 Biological Resources ..... 6-41
6.10.9.2 Hazardous Materials and Waste ..... 6-41
6.10.9.3 Health and Safety ..... 6-41
6.11 Oahu ..... 6-42
6.11.1 Puuloa Underwater Range ..... 6-42
6.11.1.1 Airspace ..... 6-42
6.11.1.2 Biological Resources ..... 6-42
6.11.1.3 Health and Safety ..... 6-42
6.11.2 Naval Defensive Sea Area ..... 6-44
6.11.2.1 Biological Resources ..... 6-44
6.11.2.2 Health and Safety ..... 6-44
6.11.3 Pearl Harbor ..... 6-44
6.11.4 Ford Island ..... 6-44
6.11.5 Explosive Ordnance Disposal Land Range ..... 6-44
6.11.6 Lima Landing ..... 6-44
6.11.6.1 Biological Resources ..... 6-44
6.11.6.2 Health and Safety ..... 6-45
6.11.7 Marine Corps Base Hawaii ..... 6-45
6.11.7.1 Airspace ..... 6-45
6.11.7.2 Biological Resources ..... 6-45
6.11.7.3 Cultural Resources ..... 6-45
6.11.8 Marine Corps Training Area/Bellows ..... 6-46
6.11.8.1 Biological Resources ..... 6-46
6.11.8.2 Cultural Resources ..... 6-46
6.11.9 Hickam Air Force Base ..... 6-46
6.11.9.1 Airspace ..... 6-46
6.11.9.2 Biological Resources ..... 6-46
6.11.10 Wheeler Army Airfield ..... 6-47
6.11.10.1 Airspace ..... 6-47
6.11.10.2 Biological: Resources ..... 6-47
6.11.11 Makua Military Reservation ..... 6-47
6.11.11.1 Biological Resources ..... 6-47
6.11.11.2 Cultural Resources ..... 6-47
6.11.11.3 Health and Safety ..... 6-47
6.11.12 Kahuku Training Area ..... 6-48
6.11.12.1 Biological Resources ..... 6-48
6.11.12.2 Cultural Resources ..... 6-48
6.11.13 Dillingham Military Reservation ..... 6-49
6.11.13.1 Biological Resources ..... 6-49
6.11.13.2 Cultural Resources ..... 6-49

6.12 Maui ..... 6-49
6.13 Hawaii ..... 6-50
6.13.1 Kawaihae Pier ..... 6-50
6.13.2 Pohakuloa Training Area ..... 6-50
6.13.2.1 Airspace ..... 6-50
6.13.2.2 Biological Resources ..... 6-51
6.13.2.3 Cultural Resources ..... 6-52
6.13.2.4 Health and Safety ..... 6-52
6.13.3 Bradshaw Army Airfield ..... 6-52
6.13.3.1 Airspace ..... 6-52
6.13.3.2 Biological Resources ..... 6-52
6.14 General Offshore Areas ..... 6-52

7.0 LIST OF PREPARERS ..... 7-1

8.0 GLOSSARY OF TERMS ..... 8-1

9.0 REFERENCES ..... 9-1

10.0 DISTRIBUTION LIST ..... 10-1

11.0 AGENCIES AND INDIVIDUALS CONTACTED ..... 11-1

# Volume 3

Page

12.0 CONSULTATION COMMENTS AND RESPONSES ..... 12-1

13.0 COMMENTS AND RESPONSES—DRAFT EIS/OEIS ..... 13-1
13.1 Public Involvement Process ..... 13-1
13.1.1 Public Scoping Process ..... 13-1
13.1.2 Public Review Process ..... 13-1
13.2 Summary of Comments ..... 13-5
13.3 Summary of Responses ..... 13-10
13.4 Summary Tables ..... 13-18
13.4.1 Written Public Comments ..... 13-21
13.4.2 Email Public Comments ..... 13-199
13.4.3 Public Hearing Comments ..... 13-565
13.4.4 Webmail Public Comments ..... 13-705

# Volume 4

Page

14.0 COMMENTS AND RESPONSES—SUPPLEMENT TO THE DRAFT EIS/OEIS ..... 14-1
14.1 Public Involvement Process ..... 14-1
14.2 Summary of Comments ..... 14-3
14.3 Summary of Responses ..... 14-7
14.4 Summary Tables ..... 14-16
14.4.1 Written Public Comments ..... 14-19
14.4.2 Email Public Comments ..... 14-65
14.4.3 Public Hearing Comments ..... 14-183
14.4.4 Webmail Public Comments ..... 14-239

# Volume 5

## APPENDICES


| | | Page |
|---|---|---|
| A | COOPERATING AGENCIES REQUEST AND ACCEPTANCE LETTERS | A-1 |
| B | FEDERAL REGISTER NOTICES | B-1 |
| C | RESOURCE DESCRIPTIONS INCLUDING LAWS AND REGULATIONS CONSIDERED | C-1 |
| D | HAWAII RANGE COMPLEX TRAINING | D-1 |
| E | WEAPON SYSTEMS | E-1 |
| F | MAJOR EXERCISE MONITORING REPORTS | F-1 |
| G | OVERVIEW OF AIRBORNE AND UNDERWATER ACOUSTICS | G-1 |
| H | CULTURAL RESOURCES | H-1 |
| I | LAND USE | I-1 |
| J | ACOUSTIC IMPACT MODELING | J-1 |
| K | MISSILE LAUNCH SAFETY AND EMERGENCY RESPONSE | K-1 |
| ACRONYMS AND ABBREVIATIONS | | AC-1 |

# FIGURES


| | | Page |
|---|---|---|
| 1.2-1 | Hawaii Range Complex Overview, Pacific Ocean | 1-3 |
| 1.2-2 | EIS/OEIS Study Area: Hawaii Range Complex Open Ocean, Offshore, and Land Areas, Hawaiian Islands | 1-4 |
| 1.2-3 | EIS/OEIS Study Area: Hawaii Range Complex Including the Hawaii Operating Area and Temporary Operating Area, Hawaiian Islands | 1-5 |
| 1.2-4 | Distance Relationship Between Major Hawaiian Islands | 1-7 |
| 2.1-1 | EIS/OEIS Study Area: Hawaii Range Complex Including the Temporary Operating Area, Hawaiian Islands | 2-3 |
| 2.1-2 | Hawaii Range Complex Study Area and Support Locations, Kauai, Niihau, and Kaula, Hawaii | 2-4 |
| 2.1-3 | Hawaii Range Complex Study Area and Support Locations, Oahu, Hawaii | 2-5 |
| 2.1-4 | Hawaii Range Complex Study Area and Support Locations, Maui, Molokai, and Lanai, Hawaii | 2-6 |
| 2.1-5 | Hawaii Range Complex Study Area and Support Locations, Island of Hawaii | 2-7 |
| 2.2.2.5.1-1 | Relative Missile Heights | 2-26 |
| 2.2.2.5.1-2 | Existing Pacific Missile Range Facility and Kauai Test Facility Launch Facilities, Kauai, Hawaii | 2-29 |
| 2.2.2.5.1-3 | Existing Missile Flight Corridors at Pacific Missile Range Facility, Open Ocean | 2-30 |
| 2.2.2.5.1-4 | Pacific Missile Range Facility Open Ocean Conceptual Intercept Scenarios—Sea, Hawaiian Islands | 2-31 |
| 2.2.2.5.1-5 | Pacific Missile Range Facility Open Ocean Conceptual Intercept Scenarios—Land, Hawaiian Islands | 2-33 |
| 2.2.2.5.2-1 | Naval Undersea Warfare Center Ranges, Oahu, Hawaii | 2-34 |
| 2.2.2.6-1 | Existing Exercise Area for Rim of the Pacific and Undersea Warfare Exercise, Hawaiian Islands | 2-38 |
| 2.2.3.5-1 | Proposed Target Flight Corridors into the Temporary Operating Area, Open Ocean | 2-43 |
| 2.2.3.6.1-1 | Explosive Ordnance Disposal Land Range at Pearl Harbor, Oahu, Hawaii | 2-48 |
| 2.2.3.6.2-1 | Ford Island, Oahu, Hawaii | 2-49 |
| 2.2.3.6.2-2 | Mobile Diving and Salvage Unit Training Areas Proposed Sites, Oahu, Hawaii | 2-50 |
| 2.2.3.6.3-1 | Portable Undersea Tracking Range Potential Area, Hawaiian Islands | 2-52 |
| 2.2.3.6.4-1 | Large Area Tracking Range Upgrade, Hawaiian Islands | 2-53 |
| 2.2.3.6.4-2 | Kingfisher Range, Hawaiian Islands | 2-55 |
| 2.2.3.6.4-3 | Proposed RDT&E Enhancements at Makaha Ridge, Kauai, Hawaii | 2-56 |
| 2.2.3.6.4-4 | Proposed RDT&E Enhancements at Kokee Park Radar Facility, Kauai, Hawaii | 2-57 |
| 2.2.3.6.4-5 | Proposed Consolidated Range Operations Complex, Kauai, Hawaii | 2-59 |
| 2.2.4.5-1 | Proposed Directed Energy Facilities at Pacific Missile Range Facility, Kauai, Hawaii | 2-63 |
| 3.1.1-1 | Airways and Special Use Airspace, Hawaiian Islands | 3-4 |

| | | |
|---|---|---|
| 3.1.1-2 | Airspace Managed by Oakland and Honolulu Air Route Traffic Control Centers, Pacific Ocean | 3-7 |
| 3.1.2.1-1 | Distribution of Deep-Sea Corals and Hydrothermal Vents, Hawaiian Islands | 3-10 |
| 3.1.2.2.3.1-1 | Hearing Curves (Audiograms) for Select Teleost Fishes | 3-18 |
| 3.1.3-1 | Shipwreck Locations Near Kauai and Niihau, Kauai and Niihau, Hawaii | 3-74 |
| 3.1.3-2 | Shipwreck Locations Near Oahu, Oahu, Hawaii | 3-75 |
| 3.1.3-3 | Shipwreck Locations Near Maui, Molokai, Lanai, and Kahoolawe, Maui, Molokai, Lanai, and Kahoolawe, Hawaii | 3-76 |
| 3.2-1 | Papahānaumokuākea (Northwestern Hawaiian Islands) Marine National Monument, Hawaiian Islands | 3-94 |
| 3.3.1.1.1-1 | Offshore Hardbottom Habitats of Pacific Missile Range Facility, Kauai, Hawaii | 3-109 |
| 3.3.1.1.1-2 | Hawaiian Islands Humpback Whale National Marine Sanctuary, Hawaiian Islands | 3-114 |
| 3.3.1.1.2-1 | Hawaiian Fishpond Locations in the Vicinity of Kauai and Niihau, Kauai and Niihau, Hawaii | 3-116 |
| 3.3.2.1.2–1 | Airspace Use Surrounding Pacific Missile Range Facility, Kauai, Niihau, and Kaula, Hawaii | 3-129 |
| 3.3.2.1.3-1 | Critical Habitat—Western Kauai, Hawaii, Kauai, Hawaii | 3-138 |
| 3.3.2.1.7-1 | Pacific Missile Range Facility Health and Safety Areas, Kauai, Hawaii | 3-149 |
| 3.3.2.1.8-1 | State Land Use—Western Kauai, Hawaii, Kauai, Hawaii | 3-154 |
| 3.3.2.1.8-2 | Agricultural Lands of Importance to the Hawaii/Department of Hawaiian Homelands, Kauai, Hawaii | 3-157 |
| 3.3.2.2.2-1 | Critical Habitat—Northwestern Kauai, Hawaii, Kauai, Hawaii | 3-175 |
| 3.3.2.9.1-1 | Critical Habitat—Niihau, Hawaii, Niihau, Hawaii | 3-193 |
| 3.4.1.1.1-1 | Offshore Hardbottom Habitats of the Pearl Harbor Area, Oahu, Hawaii | 3-203 |
| 3.4.1.3.1-1 | Offshore Hardbottom Habitats of Marine Corps Base, Hawaii and Marine Corps Training Area-Bellows, Oahu, Hawaii | 3-211 |
| 3.4.1.3.2-1 | Hawaiian Fishpond Locations in the Vicinity of Oahu, Oahu, Hawaii | 3-214 |
| 3.4.1.6.1-1 | Offshore Hardbottom Habitats of Dillingham Military Reservation, Makua Military Reservation, and Kaena Point, Oahu, Hawaii | 3-220 |
| 3.4.1.10.1-1 | Offshore Hardbottom Habitats Near Fleet Operational Readiness Accuracy Check Site, Oahu, Hawaii | 3-230 |
| 3.4.2.1.1-1 | Critical Habitat, Southern Oahu, Hawaii, Oahu, Hawaii | 3-236 |
| 3.4.2.6.1-1 | Airspace Use Surrounding Oahu, Hawaii, Oahu, Hawaii | 3-257 |
| 3.4.2.7.2-1 | Critical Habitat—Eastern Oahu, Hawaii, Oahu, Hawaii | 3-263 |
| 3.4.2.7.4-1 | Marine Corps Base Hawaii Noise Contours for 1999 Aircraft Operations, Oahu, Hawaii | 3-266 |
| 3.4.2.10.2-1 | Critical Habitat—Central Oahu, Hawaii, Oahu, Hawaii | 3-278 |
| 3.4.2.11.1-1 | Critical Habitat—Northwest Oahu, Hawaii, Oahu, Hawaii | 3-283 |
| 3.4.2.12.1-1 | Critical Habitat—Northern Oahu, Hawaii, Oahu, Hawaii | 3-290 |
| 3.6.1.1.1-1 | Offshore Hardbottom Habitats Near Kawaihae Pier, Island of Hawaii | 3-311 |
| 3.6.2.1.1-1 | Airspace Use Surrounding Pohakuloa Training Area, Island of Hawaii | 3-313 |
| 3.6.2.1.2-1 | Critical Habitat—Pohakuloa Training Area, Island of Hawaii | 3-318 |
| 3.6.2.1.5-1 | Existing Noise Levels at Pohakuloa Training Area | 3-323 |
| 4.1.2.4.3-1 | Conceptual Marine Mammal Protection Act Analytical Framework | 4-51 |
| 4.1.2.4.5-1 | Harassment Zones Extending from a Hypothetical, Directional Sound Source | 4-58 |
| 4.1.2.4.5-2 | Hypothetical Temporary and Permanent Threshold Shifts | 4-60 |
| 4.1.2.4.6-1 | Existing TTS Data for Cetaceans | 4-63 |

4.1.2.4.6-2 Growth of TTS Versus the Exposure EL (from Ward et al., 1958, 1959) .....4-65
4.1.2.4.9.3-1 Step Function Versus Risk Continuum Function .....4-79
4.1.2.4.9.6.3-1 Risk Function Curve for Odontocetes (Toothed Whales) and Pinnipeds .....4-86
4.1.2.4.9.6.3-2 Risk Function Curve for Mysticetes (Baleen Whales) .....4-87
4.1.2.4.9.7-1 The Percentage of Behavioral Harassments Resulting from the Risk Function for Every 5 dB of Received Level .....4-90
4.1.2.4.13.2-1 Proposed Marine Mammal Response Severity Scale Spectrum to Anthropogenic Sounds in Free Ranging Marine Mammals .....4-148
4.3.2.1.7.1-1 Pacific Missile Range Facility Flight Corridor Azimuth Limits, Kauai, Hawaii .....4-352
4.3.2.1.9.1-1 Typical Launch Noise Levels (dBA) for Kauai Test Facility Launch Area, Kauai, Hawaii .....4-365
4.3.2.1.9.1-2 Typical Launch Noise Levels (dBA) for Pacific Missile Range Facility Launch Area, Kauai, Hawaii .....4-366
4.3.2.1.9.1-3 Typical Launch Noise Levels (dBA) for Kokole Point Launch Area, Kauai, Hawaii .....4-367
4.3.2.1.9.2-1 Pacific Missile Range Facility Noise Contours for 2009 Prospective Flight Operations, Kauai, Hawaii .....4-370
5.4.2.1-1 Impacts from Fishing and Whaling Compared to Potential Impacts from Sonar Use .....5-20
5.5.3.1-1 Human Threats to World-wide Small Cetacean Populations .....5-36


## TABLES


Page

1.5.3.1-1 Meeting Locations, Dates, and Attendees–Scoping .....1-17
1.5.3.1-2 Number of Comments by Resource Area–Scoping .....1-18
1.5.3.2-1 Public Hearing Locations, Dates, and Attendees– HRC Draft EIS/OEIS .....1-18
1.5.3.2-2 Number of Comments by Resource Area– HRC Draft EIS/OEIS .....1-19
1.5.3.2-3 Public Informational Sessions Locations, Dates, and Attendees– HRC Supplement to the Draft EIS/OEIS .....1-20
1.5.3.2-4 Number of Comments by Resource Area HRC—Supplement to the Draft EIS/OEIS .....1-20
2.1-1 Onshore Locations Where Navy Training is Conducted .....2-8
2.2.2.1-1 Current Navy Training Events in the HRC .....2-13
2.2.2.3-1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 Proposed Navy Training .....2-18
2.2.2.4-1 Sonar Usage for the No-action Alternative .....2-22
2.2.2.5-1 No-action Alternative, Alternative 1, Alternative 2, and Alternative 3 Proposed RDT&E Activities .....2-23
2.2.2.6-1 Current Training Events Included in Major Exercises .....2-37
2.2.3.2-1 Sonar Usage for Alternative 1 .....2-40
2.2.4.2-1 Sonar Usage for Alternative 2 .....2-61
2.3-1 Sonar Usage for Alternative 3 .....2-65
3-1 Chapter 3.0 Locations and Resources .....3-2
3.1.1-1 Special Use Airspace in the Open Ocean Area Airspace Use Region of Influence .....3-5

3.1.2.2.2-1 Summary of Pelagic or Open Water Species and Depth Distribution ..... 3-15
3.1.2.2.3.2-1 Marine Fish Hearing Sensitivities ..... 3-22
3.1.2.4-1 Summary of Hawaiian Islands Stock or Population of Marine Mammals ..... 3-40
3.1.4-1 Hazardous Constituents of Training Materials ..... 3-78
3.1.4-2 Water Solubility and Degradation Products of Common Explosives ..... 3-80
3.1.4-3 Explosive Components of Munitions ..... 3-80
3.1.4-4 Chemical Byproducts of Underwater Detonations ..... 3-81
3.1.4-7 Sonobuoy Hazardous Constituents ..... 3-84
3.1.6-1 Sound Levels of Typical Airborne Noise Sources and Environments ..... 3-88
3.1.7-1 Threshold Marine Pollutant Concentrations ..... 3-91
3.2.1.1.1-1 Listed Species Known or Expected to Occur Offshore of Nihoa and Necker ..... 3-100
3.2.2.1.1-1 Listed Species Known or Expected to Occur on Nihoa and Necker ..... 3-102
3.3.1.1.1-1 Listed Species Known or Expected to Occur Offshore of PMRF/Main Base ..... 3-112
3.3.2.1.2-1 Special Use Airspace in the PMRF/Main Base Airspace Use Region of Influence ..... 3-131
3.3.2.1.3-1 Listed Species Known or Expected to Occur in the Vicinity of PMRF/Main Base ..... 3-134
3.3.2.1.9-1 Typical Range Operations Noise Levels ..... 3-160
3.3.2.1.9-2 Noise Levels Monitored for ZEST and Strategic Target System Launches ..... 3-160
3.3.2.1.10–1 Demographics of the Population of Kauai in 2000 ..... 3-162
3.3.2.1.10-2 Age Profile of Kauai County Residents in 2000 ..... 3-162
3.3.2.1.10-3 2006 Economic Impact of the Military in Hawaii ..... 3-163
3.3.2.1.10-4 Employment in Kauai and Hawaii ..... 3-164
3.3.2.1.10-5 Visitors to Kauai (2000–2006) ..... 3-165
3.3.2.1.13-1 Water Tank Perchlorate Sampling ..... 3-170
3.3.2.2.2-1 Listed Species Known or Expected to Occur in the Vicinity of Makaha Ridge ..... 3-173
3.3.2.3.2-1 Listed Species Known or Expected to Occur in the Vicinity of Kokee ..... 3-180
3.3.2.4.1-1 Listed Species Known or Expected to Occur in the Vicinity of Kokee Air Force Station ..... 3-184
3.3.2.9.1-1 Listed Species Known or Expected to Occur on Niihau ..... 3-191
3.3.2.10.2-1 Listed Species Known or Expected to Occur on Kaula ..... 3-196
3.4.1.1.1-1 Listed Species Known or Expected to Occur in the Vicinity of Puuloa Underwater Range ..... 3-205
3.4.1.3.1-1 Listed Species Known or Expected to Occur Offshore of Marine Corps Base Hawaii ..... 3-212
3.4.2.1.1-1 Listed Species Known or Expected to Occur at Naval Station Pearl Harbor ..... 3-234
3.4.2.1.3-1 Demographics of the Population of Oahu in 2006 ..... 3-238
3.4.2.1.3-2 Age Profile of Honolulu County Residents in 2006 ..... 3-238
3.4.2.1.3-3 Renter Occupied Housing Units ..... 3-239
3.4.2.1.3-4 Employment on Oahu and in Hawaii ..... 3-240
3.4.2.1.3-5 Visitors to Oahu (2000–2006) ..... 3-241
3.4.2.6.2-1 Listed Species Known or Expected to Occur in the Vicinity of ..... 3-259
3.4.2.7.2-1 Listed Species Known or Expected to Occur in the MCBH Region ..... 3-262

3.4.2.8.1-1 Listed Species Known or Expected to Occur at Marine Corps Training Area/Bellows....3-269
3.4.2.9.2-1 Listed Species Known or Expected to Occur in the Hickam AFB Region ...3-274
3.4.2.11.1-1 Listed Species Known or Expected to Occur at Makua Military Reservation ....3-280
3.4.2.12.1-1 Listed Species Known or Expected to Occur at Kahuku Training Area....3-288
3.4.2.13.1-1 Listed Species Known or Expected to Occur at Dillingham Military Reservation ....3-293
3.6.2.1.1-1 Special Use Airspace in the Island of Hawaii Region of Influence ....3-314
3.6.2.1.2-1 Listed Species Known or Expected to Occur in the Vicinity of the Proposed Action ....3-318
4-1 Chapter 4.0 Locations and Resources ....4-2
4.1-1 Training and RDT&E Activities in the Open Ocean Area ....4-3
4.1.2.2-1 Maximum Fish-Effects Ranges....4-31
4.1.2.3-1 Summary of Criteria and Acoustic Thresholds for Underwater Detonation Impacts on Sea Turtles and Marine Mammals....4-39
4.1.2.4.9.7-1 Harassments at Each Received Level Band ....4-90
4.1.2.4.9.8-1 Navy Protocols Providing for Accurate Modeling Quantification of Marine Mammal Exposures....4-91
4.1.2.4.10-1 Summary of the Number of Cetacean and Pinniped Strandings by Region from 2001-2005....4-96
4.1.2.4.10.1-1 Marine Mammal Unusual Mortality Events Attributed to or Suspected from Natural Causes 1978-2005 ....4-98
4.1.2.4.10.1-2 Summary of Marine Mammal Strandings by Cause for Each Region from 1999-2000 ....4-104
4.1.2.5.1-1 No-action Alternative Sonar Modeling Summary—Yearly Marine Mammal Exposures From all ASW (RIMPAC, USWEX, and Other ASW Training) ....4-152
4.1.2.5.1-2 No-action Alternative Explosives Modeling Summary—Yearly Marine Mammal Exposures From all Explosive Sources ....4-153
4.1.2.5.5-1 No-action Alternative Sonar Modeling Summary—Yearly Marine Mammal Exposures from Other HRC ASW Training....4-177
4.1.2.5.7-1 No-action Alternative Sonar Modeling Summary—Yearly Marine Mammal Exposures for RIMPAC (Conducted Every Other Year) ....4-179
4.1.2.5.7-2 No-action Alternative Sonar Modeling Summary - Yearly Marine Mammal Exposures from USWEX (5 per year)....4-180
4.1.2.6.1-1 Alternative 1 Sonar Modeling Summary—Yearly Marine Mammal Exposures from All ASW (RIMPAC, USWEX, and Other ASW Training) ...4-182
4.1.2.6.1-2 Alternative 1 Explosives Modeling Summary—Yearly Marine Mammal Exposures from All Explosive Sources....4-183
4.1.2.6.5-1 Alternative 1 Sonar Modeling Summary—Yearly Marine Mammal Exposures from Other HRC ASW Training ....4-206
4.1.2.6.8-1 Alternative 1 Sonar Modeling Summary—Yearly Marine Mammal Exposures for RIMPAC with 2 Strike Groups (Conducted Every Other Year)....4-208
4.1.2.6.8-2 Alternative 1 Sonar Modeling Summary—Yearly Marine Mammal Exposures from USWEX (6 per year)....4-209
4.1.2.7.1-1 Alternative 2 Sonar Modeling Summary—Yearly Marine Mammal Exposures from all ASW (RIMPAC, USWEX, Multiple Strike Group, and Other ASW Training) ....4-211

| | | |
|---|---|---|
| 4.1.2.7.1-2 | Alternative 2 Explosives Modeling Summary - Yearly Marine Mammal Exposures from all Explosive Sources | 4-212 |
| 4.1.2.7.5-1 | Alternative 2 Sonar Modeling Summary—Yearly Marine Mammal Exposures from Other HRC ASW Training | 4-235 |
| 4.1.4.1.1-1 | HRC Training with Hazardous Materials No-action Alternative—Open Ocean Areas | 4-243 |
| 4.1.4.1.1-2 | Sonobuoy Hazardous Materials, No-action Alternative (Based on Average Amounts of Constituents) | 4-245 |
| 4.1.4.2.1-1 | HRC Training with Hazardous Training Materials Alternative 1—Open Ocean Areas | 4-248 |
| 4.1.4.3.1-1 | HRC Training with Hazardous Training Materials Alternative 2—Open Ocean Areas | 4-250 |
| 4.1.4.3.1-2 | Sonobuoy Hazardous Materials, Alternative 2 (Based on Average Amounts of Constituents) | 4-251 |
| 4.1.7.1.1-1 | Ordnance Constituents of Concern | 4-261 |
| 4.1.7.1.1-2 | Missiles Typically Fired in Training Exercises | 4-264 |
| 4.1.7.1.1-3 | Hazardous Materials in Aerial Targets Typically Used in Navy Training | 4-265 |
| 4.1.7.1.1-4 | Concentration of Sonobuoy Battery Constituents and Criteria | 4-268 |
| 4.1.7.1.1-5 | Torpedoes Typically Used in Navy Training Activities | 4-270 |
| 4.1.7.1.1-6 | MK-46 Torpedo Constituents | 4-270 |
| 4.2-1 | RDT&E Activities Near the Northwestern Hawaiian Islands | 4-279 |
| 4.3.1.1-1 | Training and RDT&E Activities at PMRF Offshore (BARSTUR, BSURE, SWTR, Kingfisher) | 4-291 |
| 4.3.1.2-1 | Training and RDT&E Activities at Niihau Offshore | 4-307 |
| 4.3.1.3-1 | Training at Kaula Offshore | 4-311 |
| 4.3.2.1-1 | Training and RDT&E Activities at PMRF/Main Base | 4-314 |
| 4.3.2.1.1.1-1 | Air Emissions from Emergency Generators, PMRF/Main Base | 4-315 |
| 4.3.2.1.1.2-1 | Proposed Construction Air Emissions Summary (Tons per Year) | 4-321 |
| 4.3.2.2-1 | Training and RDT&E Activities at Makaha Ridge | 4-388 |
| 4.3.2.3-1 | RDT&E Activities at Kokee | 4-396 |
| 4.3.2.9-1 | Training and RDT&E Activities at Niihau | 4-410 |
| 4.3.2.10-1 | Training at Kaula | 4-416 |
| 4.4.1.1-1 | Training and RDT&E Activities at Puuloa Underwater Range—Offshore | 4-423 |
| 4.4.1.2-1 | Training and RDT&E Activities at Naval Defensive Sea Area—Offshore | 4-429 |
| 4.4.1.3-1 | Training at MCBH—Offshore | 4-432 |
| 4.4.1.4-1 | Training Offshore of MCTAB—Offshore | 4-436 |
| 4.4.1.5-1 | Training at Makua Military Reservation—Offshore | 4-440 |
| 4.4.1.6-1 | Training at Dillingham Military Reservation—Offshore | 4-443 |
| 4.4.1.7-1 | Training at Ewa Training Minefield—Offshore | 4-446 |
| 4.4.1.8-1 | Training at Barbers Point Underwater Range—Offshore | 4-449 |
| 4.4.1.9-1 | RDT&E Activities at SESEF—Offshore | 4-453 |
| 4.4.1.10-1 | RDT&E Activities at FORACS—Offshore | 4-456 |
| 4.4.2.1-1 | Training at Naval Station Pearl Harbor | 4-459 |
| 4.4.2.1.1.1-1 | Training Guidelines for Resource Protection— All Oahu Training Areas | 4-460 |
| 4.4.2.2-1 | RDT&E Activities at Ford Island | 4-467 |
| 4.4.2.3-1 | Training at Naval Inactive Ship Maintenance Facility, Pearl Harbor | 4-471 |
| 4.4.2.4-1 | Training at EOD Land Range- NAVMAG Pearl Harbor West Loch | 4-475 |
| 4.4.2.5-1 | Training at Lima Landing | 4-481 |
| 4.4.2.6-1 | Training at Coast Guard Air Station Barbers Point/Kalaeloa Airport | 4-486 |
| 4.4.2.7-1 | Training at Marine Corps Base Hawaii | 4-491 |
| 4.4.2.8-1 | Training at MCTAB | 4-503 |

| | | |
|---|---|---|
| 4.4.2.9-1 | Training and RDT&E Activities at Hickam AFB | 4-508 |
| 4.4.2.10-1 | Training at Wheeler Army Airfield | 4-513 |
| 4.4.2.11-1 | Training at Makua Military Reservation | 4-517 |
| 4.4.2.12-1 | Training at Kahuku Training Area | 4-525 |
| 4.4.2.13-1 | Training at Dillingham Military Reservation | 4-530 |
| 4.5.1-1 | Training and RDT&E Activities in the Maui Offshore | 4-541 |
| 4.6.1.1-1 | Training at Kawaihae Pier Offshore | 4-551 |
| 4.6.2.1-1 | Training and RDT&E Activities at PTA | 4-554 |
| 4.6.2.2-1 | Training at Bradshaw Army Airfield | 4-567 |
| 4.6.2.3-1 | Training at Kawaihae Pier | 4-573 |
| 4.8-1 | Summary of Environmental Compliance Requirements | 4-579 |
| 4.12-1 | Population and Ethnicity for the State of Hawaii | 4-583 |
| 5.3-1 | Geographic Areas for Cumulative Impacts Analysis | 5-3 |
| 5.4.1-1 | Cumulative Projects List | 5-4 |
| 5.5.3.1-1 | Sea Turtles Captured Incidentally in the Hawaii-Based Long Line Fishery 2003 - 2007 | 5-32 |
| 6.11-1 | Training Guidelines for Resource Protection—All Oahu Training Areas | 6-43 |
| 13.1.2-1 | Information Repositories with Copies of the Draft EIS/OEIS | 13-2 |
| 13.1.2-2 | Advertisements Published for the HRC EIS/OEIS Public Hearings and Comment Period | 13-3 |
| 13.1.2-3 | Public Hearing Locations, HRC EIS/OEIS | 13-3 |
| 13.2-1 | Number of Public Commenters—HRC Draft EIS/OEIS | 13-5 |
| 13.2-2 | Number of Comments Organized by Resource Area HRC Draft EIS/OEIS | 13-6 |
| 13.4.1-1 | Commenters on the HRC Draft EIS/OEIS (Written) | 13-21 |
| 13.4.1-2 | Responses to Written Comments – Draft EIS/OEIS | 13-157 |
| 13.4.2-1 | Commenters on the HRC Draft EIS/OEIS (Email) | 13-199 |
| 13.4.2-2 | Responses to Email Comments – Draft EIS/OEIS | 13-411 |
| 13.4.3-1 | Commenters on the HRC Draft EIS/OEIS (Public Hearings) | 13-565 |
| 13.4.3-2 | Responses to Public Hearing Comments – Draft EIS/OEIS | 13-679 |
| 13.4.4-1 | Commenters on the HRC Draft EIS/OEIS (Webmail) | 13-705 |
| 13.4.4-2 | Responses to Webmail Comments – Draft EIS/OEIS | 13-767 |
| 14.1-1 | Advertisements Published for the Supplement to the Draft EIS/OEIS Public Hearings and Comment Period | 14-2 |
| 14.1-2 | Public Hearing Locations, Supplement to the Draft EIS/OEIS | 14-2 |
| 14.2-1 | Number of Public Commenters—Supplement to the Draft EIS/OEIS | 14-3 |
| 14.2-2 | Number of Comments by Resource Area Supplement to the Draft EIS/OEIS | 14-4 |
| 14.4.1-1 | Commenters on the Supplement to the Draft EIS/OEIS (Written) | 14-19 |
| 14.4.1-2 | Responses to Written Comments – Supplement to the Draft EIS/OEIS | 14-49 |
| 14.4.2-1 | Commenters on the Supplement to the Draft EIS/OEIS (E-Mail) | 14-65 |
| 14.4.2-2 | Responses to Email Comments – Supplement to the Draft EIS/OEIS | 14-113 |
| 14.4.3-1 | Commenters on the Supplement to the Draft EIS/OEIS (Public Hearings) | 14-183 |
| 14.4.3-2 | Responses to Public Hearing Comments – Supplement to the Draft EIS/OEIS | 14-229 |
| 14.4.4-1 | Commenters on the HRC Supplement to the Draft EIS/OEIS (Webmail) | 14-239 |
| 14.4.4-2 | Responses to Webmail Comments – Supplement to the Draft EIS/OEIS | 14-255 |

# EXHIBITS


| | | Page |
|---|---|---|
| 12-1 | Consultation Comments and Responses | 12-2 |
| 13.4.1-1 | Copy of Written Documents – Draft EIS/OEIS | 13-25 |
| 13.4.2-1 | Copy of Email Documents – Draft EIS/OEIS | 13-207 |
| 13.4.3-1 | Copy of Public Hearing Documents – Draft EIS/OEIS | 13-567 |
| 13.4.4-1 | Copy of Webmail Documents – Draft EIS/OEIS | 13-707 |
| 14.4.1-1 | Copy of Written Documents – Supplement to the Draft EIS/OEIS | 14-21 |
| 14.4.2-1 | Copy of Email Documents – Supplement to the Draft EIS/OEIS | 14-69 |
| 14.4.3-1 | Copy of Public Hearing Documents – Supplement to the Draft EIS/OEIS | 14-185 |
| 14.4.4-1 | Copy of Webmail Documents – Supplement to the Draft EIS/OEIS | 14-241 |

**THIS PAGE INTENTIONALLY LEFT BLANK**

# 14.0 Comments and Responses—Supplement to the Draft EIS/OEIS

# 14.0 COMMENTS AND RESPONSES—SUPPLEMENT TO THE DRAFT EIS/OEIS

This chapter presents responses to comments received on the Draft Hawaii Range Complex (HRC) Supplement to the Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) (February 2008). The comments were expressed during the public comment period for the document. Section 14.1 provides an overview of the Public Involvement process, Section 14.2 is a summary of comments received; and Section 14.3 is a summary of responses. Section 14.4 includes data summary tables organized by the source of the comment: Written Public Comments, Email Public Comments, Public Hearing Comments, and Webmail Comments (Sections 14.4.1, 14.4.2, 14.4.3, and 14.4.4). See Chapter 13.0 for responses to comments received on the Draft HRC EIS/OEIS.

## 14.1 PUBLIC INVOLVEMENT PROCESS

Following publication of the Draft EIS/OEIS in July 2007, the Navy, in coordination with the National Marine Fisheries Service (NMFS), conducted a re-evaluation of the analysis in that document. This re-evaluation and subsequent identification of new information led the Navy to prepare a Supplement to the Draft document in February 2008. The purpose of the Supplement to the Draft EIS/OEIS was to address the following:

- Modifications to the analytical methodology used to evaluate the effects of mid-frequency active (MFA) sonar on marine mammals;
- Changes to the amount and types of sonar allocated to each of the alternatives; and,
- Development of a new alternative.

Notice of the Navy's intent to publish a Supplement to the Draft EIS/OEIS was published in the *Federal Register* on January 17, 2008. The Supplement was filed with U.S. Environmental Protection Agency for release to the public on February 22, 2008, and a Notice of Public Meeting was published in the *Federal Register* on February 26, 2008. The Supplement to the Draft EIS/OEIS was distributed to Federal, State, and local agencies; organizations; information repositories and libraries (see Table 13.2.1-1); and private citizens, with a request that all written comments be postmarked or received by April 7, 2008 (45 calendar days from release). The Navy also placed notices in the newspapers announcing the availability of the Supplement to the Draft EIS/OEIS and providing detailed information concerning locations and times for each of the public hearings (Table 14.1-1).

Four public hearings were held on March 13, 14, 17, and 18, 2008, on the islands of Kauai, Maui, Oahu, and Hawaii. The hearings were held in an open house format, presenting informational posters and written information and with Navy staff and project experts available to answer participants' questions. A court reporter recorded participants' oral comments and a tape recorder was provided for those participants wishing to provide additional comments. The interaction during the information sessions was productive and helpful to the Navy.

**Table 14.1-1. Advertisements Published for the Supplement to the Draft EIS/OEIS Public Hearings and Comment Period**

| Hawaii Newspapers | *The Garden Island* | *Hawaii-Tribune Herald* | *The Honolulu Advertiser* | *Honolulu-Star Bulletin* | *The Maui News* |
|---|---|---|---|---|---|
| Dates Published | 2/25/08 | 2/25/08 | 2/25/08 | 2/25/08 | 2/25/08 |
| | 3/4/08 | 3/9/08 | 3/9/08 | 3/11/08 | 3/5/08 |
| | 3/9/08 | 3/12/08 | | | 3/9/08 |

The purpose of the public hearings was to solicit public comments on the Supplement to the Draft EIS/OEIS. This chapter includes transcripts from the hearings and copies of written public comments received during the comment period.

Table 14.1-2 lists the locations where public hearings were held. During these public hearings, attendees were invited to ask questions and provide comments to the program representatives at each meeting. In addition, written comments were received from the public and regulatory agencies by letter, email, and through the HRC public website during the comment period. Comments have been considered and the analysis revised as appropriate into the Final EIS/OEIS. Comments received from the public concerning DoD policy and program issues outside the scope of analysis in the Supplement to the EIS/OEIS were not addressed in the Final EIS/OEIS.

**Table 14.1-2. Public Hearing Locations, Supplement to the Draft EIS/OEIS**

| City (Island) | Date | Location |
|---|---|---|
| Lihue (Kauai) | Thursday, March 13, 2008 | Kauai Community College |
| Kahului (Maui) | Friday, March 14, 2008 | Maui Waena Intermediate School |
| Honolulu (Oahu) | Monday, March 17, 2008 | Disabled American Veterans Memorial Hall |
| Hilo (Hawaii) | Tuesday, March 18, 2008 | Hilo Hawaiian Hotel |

At the public hearings, a Navy representative provided a clear and concise overview of the Supplement to the Draft EIS/OEIS. This was followed by individual testimony. A summary of attendance at the four public hearings is as follows:

Kauai: 40 individuals signed in
9 individuals provided verbal comments
7 individual provided written comments

Maui: 19 individuals signed in
6 individuals provided verbal comments
1 individual provided a tape recorded comment
2 individuals provided written comments

Oahu: 16 individuals signed in
1 individual provided verbal comments
1 individual provided written comments

Island of Hawaii: 24 individuals signed in
8 individuals provided verbal comments
3 individuals provided a tape recorded comment
3 individuals provided written comments (two written comments were provided by the same individual)

The Navy solicited additional comments from agencies and the public during the comment period that followed the public hearings for the Supplement to the Draft EIS/OEIS. The comment period ended on April 7, 2008.

# 14.2 SUMMARY OF COMMENTS

The Navy received 1,595 public comments on the Supplement to the Draft EIS/OEIS from 265 separate sources—251 were citizens, 8 represented organizations, and 6 represented government agencies. The majority of commenters were from Hawaii (199 of 265); however, the Navy also received comments from individuals residing in 20 other states and the District of Columbia. Table 14.2-1 shows the forums that the public used to submit their comments and the number of commenters for each forum.

**Table 14.2-1. Number of Public Commenters—Supplement to the Draft EIS/OEIS**

| Source | Number of Commenters |
|---|---|
| Written | 30 |
| Email | 198 |
| Transcript of Public Hearings | 28 |
| Website | 9 |
| **Total** | **265** |

The Navy received a total of 1,595 comments on the Supplement to the Draft EIS/OEIS. Table 14.2-2 presents a summary of the number of comments identified for each resource area and indicates the percentage of total comments that each resource area or issue received (rounded to the nearest tenth percent). Comments are organized by resource area. The text that follows gives an overview of comments received during the comment period. The first set of comments is organized alphabetically by resource area, concluding with Water Resources. The second set of comments covers non-resource specific issues or questions that were raised. Most resource areas are self-explanatory—"Biological Resources–Marine" includes all ocean and near shore comments, "Alternatives" includes all sonar comments. "Hazardous Materials and Waste" includes munitions debris issues. "Program" refers to concerns with the Proposed Action in general. "Policy/National Environmental Policy Act (NEPA) Process" refers to concerns with policies that lead to the Proposed Action.

**Table 14.2-2. Number of Comments by Resource Area Supplement to the Draft EIS/OEIS**

| Resource Area | Number of Comments | Percent of Total |
|---|---|---|
| Air Quality | 1 | 0.1% |
| Airspace | 0 | 0% |
| Biological Resources - Marine | 34 | 2.1% |
| Biological Resources - Terrestrial | 0 | 0% |
| Cultural Resources | 0 | 0% |
| Geology and Soils | 0 | 0% |
| Hazardous Materials and Waste | 15 | 0.9% |
| Health and Safety | 0 | 0% |
| Land Use | 1,135 | 71.2% |
| Noise | 0 | 0% |
| Socioeconomics | 1 | 0.1% |
| Transportation | 0 | 0% |
| Utilities | 0 | 0% |
| Water Resources | 8 | 0.5% |
| Environmental Justice | 1 | 0.1% |
| Alternatives | 163 | 10.2% |
| Program | 181 | 11.3% |
| Policy/NEPA Process | 17 | 1.1% |
| Mitigation Measures | 25 | 1.6% |
| Cumulative Impacts | 4 | 0.3% |
| Miscellaneous | 10 | 0.6% |
| **Total** | **1,595** | |

### Air Quality

There was one comment in this category, requesting that the Navy account for the cumulative effects of its actions on coral with rising sea levels caused by global warming.

### Biological Resources—Marine

This category includes comments on all marine resources, including fish, mammals, and marine sanctuaries. Many of the comments were focused on the perceived harmful effects of detonations and MFA sonar on whales, sea turtles, fish, and marine life. Some of the comments were concerned with international stranding events. Specifically, the public requested additional information or clarification regarding:

- The affects of detonations on fish
- The seasonal effects of training on various species
- The accuracy of marine mammal research undertaken by the Navy
- The presence of current toothed-whale research undertaken by Robin Baird

- The inclusion of information regarding the 2004 stranding of melon-headed whales in Hanalei Bay
- The need to discuss minke whales
- The number of times an individual within a species group might be exposed to MFA
- The inclusion of humpback whale research
- Utilization of the National Defense Exemption from the Marine Mammal Protection Act (MMPA)
- The use and protection of the Northwestern Hawaiian Islands during Navy activities

Additional comments on marine biological resources included a request to address the indirect effects on the continued survival of endangered and threatened marine species and the health and safety of the general public through the potential bioaccumulation of hazardous materials in benthic species and coral, which form the basis of the food chain; a request to account for the risk or consequences of direct strikes on corals around the Main Hawaiian Islands and within Papahānaumokuākea Marine National Monument.

**Hazardous Materials/Hazardous Waste**

Comments regarding hazardous materials and waste focused on the clean-up of former and currently contaminated sites unassociated with this EIS/OEIS; the effects of increased training debris, including chaff, chemical stimulants, fuel and oil, toxic substances potentially being released into the coastal zone and materials used during the construction of various HRC enhancements; and the cumulative effects of simultaneous major exercises. There were also comments regarding potential impacts on corals; the potential for training debris or live ordnance to strike a marine mammal; toxic chemicals released by sonobuoys and the use of San Clemente Island, California, data for that analysis; and the potential for detonations to disperse PCBs and heavy metals in Pearl Harbor.

**Land Use**

The Navy received 1,135 identical form letter comments from 162 individuals about potential violations of the Coastal Zone Management Act (CZMA) and protection of Hawaii's coastal regions.

**Socioeconomics**

One commenter asked about the potential socioeconomic effects from Navy activities on fisheries.

**Water Resources**

Comments on water resources focused on effects on the State of Hawaii's waters, the need for a Department of the Army permit for activities over or under navigable waters of the United States, and any potential need for a National Pollutant Discharge Elimination System (NPDES) permit for wastewater/stormwater discharges.

### Environmental Justice

One commenter noted that the Native Hawaiian community would be disproportionately affected if fish stocks were reduced as a result of Navy activities.

### Alternatives

The largest number of comments in this category related to the use of sonar for Navy training. Most commenters expressed opposition to the use of sonar, particularly during certain seasons of the year or above certain decibel levels. Many commenters requested additional research into the effects of sonar on marine life, and several commenters asked about alternative technologies for detecting submarines, and the use of simulators in lieu of active training. There were also several comments related to the possibility that marine mammals experience "bends." Some commenters requested the incorporation of specific research into the EIS/OEIS and suggested that the data sets, application of, and conclusions used during the risk function analysis were too narrow.

Additional comments regarding Alternatives were focused on the adequacy of the analysis, particularly in light of recent court decisions. There were also several comments regarding the use of data from the Sonar Positional Reporting System (SPORTS); a suggestion to add a new alternative in which no sonar would be used; the perception that the Navy does not prepare/release After Action Reports; and the perception that the addition of Alternative 3 in the Supplement to the Draft EIS/OEIS contains uncertainties and may result in underestimations of impacts.

### Policy/National Environmental Policy Act Process

Comments on Navy Policy and the NEPA process included a suggestion to pursue a policy that would make whales a cultural treasure and a suggestion to include more involvement/ collaboration from various research scientists and organizations. In addition, two commenters questioned the expertise of the individuals preparing the Supplement to the Draft EIS/OEIS.

One commenter asked if conclusions in the EIS/OEIS were based in part on classified information, and if so, how the conclusions would change if the classified information was not considered.

There was also a comment concerning the Navy's compliance with various Federal statutes, including the MMPA, the National Marine Sanctuaries Act, and the Coastal Zone Management Act.

### Program

The Navy received 162 form letters about the perceived establishment of a live fire training range encompassing the entire Hawaiian Archipelago. Commenters on the overall Program were concerned that analysis was based on information not readily available to the public and potential violations of several Federal laws (e.g., the MMPA and Coastal Zone Management Act). There were also comments about basic or potentially misleading information provided in the EIS/OEIS, including the quantification of training exercises, the amount of hazardous materials introduced into the marine environment, and the issue of live fire at Makua. There were also requests for additional research before using sonar for military training.

**Mitigation Measures**

Most of the comments in this category were focused on the mitigation measures associated with marine mammals. One commenter was in agreement with the mitigation measures presented in the Supplement to the Draft EIS/OEIS. Specific comments included:

- Navy training should be conducted in places and at times where marine mammals would not be affected
- The level of mitigation measures is insufficient
- Navy training should be conducted in seasons when marine mammals are in lesser numbers (e.g., when whales are not migrating)
- Adherence to the restrictions issued by various courts between 2006 and 2008
- Additional information about pre- and post-monitoring efforts
- Requests to use non-harmful sounds to scare animals away from the sonar areas
- Requests to follow protective measures used by other nations
- Discussion of the mitigation measures offered by the Marine Mammal Commission on the Draft EIS/OEIS

**Cumulative Impacts**

Comments in this category were focused on the cumulative effect of sonar use with other stressors (pollution, warming water, fishing, etc.).

**Miscellaneous**

Miscellaneous comments included a request to add a commenter's name and the University of Hawaii, Hamilton Library to the distribution list; a request to note in the reference list, which references are, or are not publicly available; and a comment that secondary references were used, when primary references should have been cited.

# 14.3 SUMMARY OF RESPONSES

Some of the comments received on the Supplement to the Draft EIS/OEIS were declarative statements not requiring a direct response, but which are noted in the context of overall public review. Examples of comments on non-related topics include a request for a copy of the NAS Barbers Point closure EIS, an inquiry from a local Hawaiian firm regarding the hiring of employees, and a request to identify atomic materials, which the commenter believes are affecting marine life.

Some comments were related to the perception that the Navy intends to establish a live fire range encompassing the entire Hawaiian Archipelago. This general program-related comment is considered to be outside the scope of this EIS/OEIS and therefore required no revision to the text.

Some comments questioned the methodologies, analyses, and conclusions for various environmental resource impacts and mitigations presented in the Supplement to the Draft EIS/OEIS. For each of these comments, a specific response was prepared. New information and analysis supporting or changing the conclusions of the Supplement to the Draft EIS/OEIS have been incorporated into the text of the Final EIS/OEIS.

The Navy received many substantive comments during the rigorous Supplement to the Draft EIS/OEIS process. The Navy considered all public input as part of the decision-making process prior to issuing the Final EIS/OEIS.

The primary intent of the Supplement to the Draft EIS/OEIS was to provide additional information regarding the analytical methodology used to evaluate the effects of MFA sonar on marine mammals; therefore some of the comments were outside the scope of the Supplement to the Draft EIS/OEIS. However, to the extent possible, the Navy addressed the public comments discussed in Section 14.2 in the following manner:

**Air Quality**

The comment regarding cumulative effects of Navy activities on coral with rising sea levels caused by global warming is noted, but is beyond the scope of the Supplement to the Draft EIS/OEIS. Assuming that global warming is occurring and that human activities are the cause, global warming involves the activity of billions of human beings on every continent on Earth. It also involves the consumption of fossil fuels to such a degree and intensity that the intermittent and infrequent training activities presented in this EIS/OEIS are insignificant when compared to the scale.

**Biological Resources—Marine**

The analysis of effects in the Supplement to the Draft EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended to reduce the possibility of serious injury and mortality. The Letter of Authorization (LOA) issued by NMFS will place limits on the number and types of allowable takes (e.g., harassments) for all activities conducted within the HRC. Navy training has been going on for the past 60 years, and there has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts to marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing, and the Navy believes that sonar has not significantly affected marine mammals in general.

The affects of detonations on fish—The Navy recognizes that individual fish may be injured or killed as the result of several of the training events; however, these incidents are localized, and would not have a population impact on any individual species. The effect on fish from a given amount of explosive depends on location (including proximity to the detonation), season, and many other factors. The Navy has completed an Essential Fish Habitat and Coral Reef Assessment for the EIS/OEIS and concludes that Proposed Actions would not affect managed species (i.e., Essential Fish Habitat).

Seasonal avoidance for training—Avoidance of the seasonal presence of migrating marine mammals fails to take into account the fact that the Navy's current mitigation measures apply to all detected marine mammals no matter the season. Advance planning to avoid the seasonal presence of migrating marine mammals is not possible given the start of any "season" is variable (dependent on largely unknown environmental factors). To the degree possible, however, the Navy already has taken a proactive step in this regard by specifically informing all naval vessels to increase vigilance when the first humpback whales have been sighted around the Hawaiian Islands. Otherwise, limiting training operations to the remaining 6 months of the year would not only concentrate all annual training and testing activities into a shorter 6-month time period, but would also not meet the readiness requirements of the Navy to deploy trained forces.

Accuracy of marine mammal research undertaken by the Navy—The Navy's assessment of potential impacts on marine mammals reflects the use of the best available and applicable science determined in consultation with NMFS. Information concerning the scientific data used is provided in EIS/OEIS Sections 4.1.2 and 6.0.

Research conducted by Robin Baird—Mr. Baird is cited in several sections of the EIS/OEIS, including, but not limited to Sections 4.1.2.4.7, 4.1.2.4.9.8, and 4.1.2.4.10.1. Numerous documents and reports prepared by Mr. Baird are cited in Section 9.0 (references).

2004 stranding of melon-headed whales in Hanalei Bay—Section 4.1.2.4.10.3 of the EIS/OEIS provides a comprehensive discussion of the stranding of melon-headed whales in Hanalei Bay in 2004. The text describes the relationship of the stranding to both Navy Anti-Submarine Warfare (ASW) activities occurring approximately 25 nautical miles (nm) away from the incident and the activities of people and boats that were in the water with the whales at the time of the stranding. The stranding is not known to be directly related to Navy activities.

Need for minke whale discussion—The presence of minke whales has been noted in Section 4.1.2.5.3; however, there is no density information available for minke whales in Hawaiian waters given that they have rarely been seen during surveys. The lack of available data and comparative species makes it unreliable to extrapolate estimates of exposure to Navy sonar.

The number of times an individual within a species group might be exposed to MFA—as noted by the commenter, it would be virtually impossible to determine how many individuals within a given population would experience one or more exposures.

Humpback Whale Research—Information regarding the humpback whale and the Hawaiian Islands Humpback Whale National Marine Sanctuary was provided in Chapters 3.3 and 4.1 and is expanded in the EIS/OEIS.

Utilization of the National Defense Exemption from the MMPA—Sections 4.1.2.4.3 and 4.1.2.4.4 provide the regulatory framework and history behind the development of the Navy's compliance efforts with various statutes, including the MMPA.

Use of the Northwestern Hawaiian Islands—Sections 3.2 and 4.2 of the EIS/OEIS reviewed the Papahānaumokuākea Marine National Monument. The Navy complies with the Presidential

Proclamation 8031 (71 FR 36443, June 26, 2006) which states that all "activities and exercises of the Armed Forces shall be carried out in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on monument resources and qualities." The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment.

**Hazardous Materials/Hazardous Waste**

There were multiple comments related to Hazardous Materials/Hazardous Waste sections of the Draft EIS/OEIS. These were beyond the scope of the Supplement to the Draft EIS/OEIS; however, the Navy responded as follows:

The Navy recognizes that past practices conducted decades ago resulted in contamination of certain sites, such as Kahoolawe. Since that time, Congress has created and funded programs to identify those sites in need of remediation and proceed with the available funds. The island of Kahoolawe is one site that received priority funding in excess of $400 million and its own special legislation which resulted in a 10-year cleanup conducted in consultation with the State of Hawaii.

As discussed in Sections 3.1.4, 3.1.7, 4.1.4, and 4.1.7 of the EIS/OEIS, the type of sonobuoy used for the analysis in this EIS/OEIS is now in general use by the Navy. San Clemente Island information is used because that is where the Navy's Sonobuoy Quality Assurance testing is done, and detailed information from that program is available. All sonobuoys of a given type are manufactured with the same quantities of constituents.

One commenter listed enhancements that are assumed to generate hazardous substances. As discussed in the EIS/OEIS, the Portable Undersea Tracking Range could be located anywhere within the area shown on Figure 2.2.3.6.3-1 and not necessarily consistently deployed in the same area. According to Section 2.2.3.6.3, the Navy proposes using the system for only 2 days per month. Development of the Acoustic Test Facility involves the addition of pinger equipment at Pier S291 on Ford Island, Beckoning Point piers, or on a mobile test site that could operate within the test area. As a result, there would be no disturbance of any contaminated sediments or soils containing PCBs. An environmental review of the proposed Range Operations Control Building construction was conducted that determined that the effects of the proposed construction on the environment are minimal and a categorical exclusion (CATEX) for the proposed project was approved on May 14, 2004. Hazardous waste discovered during construction will handled in compliance with applicable rules and regulations.

One commenter asked if there are any potential effects of 56,422 additional pieces of training debris. Navy training, RDT&E, and munitions debris are discussed in Sections 4.1.4 and 4.1.7. The majority of debris would be widely dispersed and accumulate in deep water far away from the coral reef. Therefore, there will be no quantifiable impact on habitat, any natural resource, including coral. The analysis presented in Section 4.1.7 assumed that hazardous constituents for each category of expended training material would be expended over only 20 percent of the training areas. But the probability that the materials would be expended in exactly the same location, given slight differences in the positions of Navy assets and lines of fire, and dispersal of expended materials by currents, is about zero. A total of about 654 tons of training material

are expended per year under the No-action Alternative (see Table 4.1.4.1.1-1). Assuming an ocean floor area of about 235,000 $nm^2$, and making a further conservative assumption that the training materials are concentrated within 20 percent of this area, this is about 5.6 pounds per $nm^2$ per year of training material.

Bioaccumulation of hazardous materials in benthic species and coral is not known to accrue as a result of the Proposed Action because: (a) leach rates are very low, (b) leached materials are widely dispersed, so they affect different populations, and (c) the estimated ambient concentrations are generally within the "natural" range of these materials so uptake of these constituents would be similar to natural rates.

Direct strikes on coral reefs, which could be either strikes of missile debris or ordnance on coral reefs is unlikely, as described in Section 4.2.1.1.1.1. The majority of debris would be widely dispersed and in open ocean, far away from the coral reef. Therefore, there will be no quantifiable impact on habitat, any natural resource, including coral**.**

**Land Use**

The Navy received 162 form letters stating that the Navy is not meeting its obligations under the Hawaii Coastal Zone Management Program (CZMP). Specifically, Navy is in compliance with Section 205A-2 (6) of the CZMP, which addresses the spread of coastal pollution. As discussed in Section 4.1.7 and 4.3.2.1.8 of the EIS/OEIS, no direct or indirect effects associated with coastal hazards, specifically pollution, would occur as a result of the Proposed Action.

The form letter requested that Hawaii CZMP require the Navy to acquire a State incidental permit for harm to State-listed species. While the EIS/OEIS does consider impact to State-listed species, the Navy is not subject to the State's permitting process. The letter also calls for consistency with the objectives of marine protection requirements or Hawaii's CZMP, specifically, strict limits on activities in the Papahānaumokuākea Marine National Monument. Navy is conducting their active sonar training in only a fraction of the Monument; however, with mitigation none of the resources of the Monument will be affected. Lastly, the form letter called for more public participation in coastal management. The Navy has provided full disclosure of its activities in this EIS/OEIS, and is a participant in many organizations whose mission is the protection of coastal Hawaii.

**Socioeconomics**

Reduced fish catch rates as a result of underwater detonations are not anticipated (see Section 5.5.3.1 of the EIS/OEIS).

**Water Resources**

Depending on the action or construction being undertaken, a variety of Federal and State approvals, comments, and permits may be required. In addition, all construction activities would follow Spill Prevention, Control, and Countermeasures Plans and transportation safety measures; therefore, potential effects on surface and groundwater resulting from accidental spills of hazardous materials would be minimized.

The EIS/OEIS provides an analysis in Section 4.1.7 of how current levels and future levels of hazardous training materials, chemical simulants, and debris entering the ocean does and will

comply with the State of Hawaii water quality standards and criteria and will not require an NPDES permit. The EIS/OEIS also evaluated the potential impacts of launch emissions, spills of toxic materials, and early flight termination on surface and groundwater. The analysis concluded that hydrogen chloride emissions would not significantly affect the chemical composition of surface or groundwater; that there would be no significant increase in aluminum oxide in surface waters due to launches; that sampling of surface waters in the vicinity of the launch site showed that hydrogen chloride, potentially deposited during past launches, has not affected surface water quality on the Pacific Missile Range Facility (PMRF) or adjacent areas; and that contamination from spills of toxic materials would be highly unlikely. An NPDES permit is not required for launch activity due to the lack of significant storm water runoff.

**Environmental Justice**

Reduced fish catch rates and any associated effects on the Native Hawaiian community are not anticipated.

**Alternatives**

The majority of the comments in this category were opposed to the use of sonar for Navy training. However, sonar is currently the best available technology for ASW. Although the Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. In addition, under NEPA, the choice of alternatives is bounded by some notion of feasibility. Agencies are not required to consider alternatives that are infeasible, ineffective, or inconsistent with its basic objectives.

Section 4.1.2.4.7 of the EIS/OEIS contains a discussion of the “bends-like” issue raised in several comments. It has not been demonstrated that sonar causes this effect.

The Navy’s assessment of potential impacts on marine mammals reflects the use of the best available and applicable science determined in consultation with NMFS and the requirements of the Navy to train. Information concerning the scientific data used is provided in EIS/OEIS Sections 4.1.2 and 6.0.

The discussion of the development of the risk function has been expanded from that in the Supplement to the Draft EIS/OEIS and is presented in Section 4.1.2. The methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals (see Section 4.1.2), the risk function curve extends to 120 decibels (dB) sound pressure level (SPL) specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters.

Analysis of ongoing litigation is not part of the Proposed Action and alternatives nor is it necessary for compliance with the applicable laws and regulations. Some mitigations discussed in Chapter 6.0 overlap with mitigations raised during litigation.

The original analysis of effects of mid-frequency sonar on marine mammals was based on data prepared as part of the program described in Section 1.3 of the EIS/OEIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only 18 months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in Sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes.

The Navy does prepare and release After Action Reports. An After Action Report prepared for the 2006 Rim of the Pacific (RIMPAC) exercises, providing an analysis detailing the reasons for adoption, modification, or rejection of mitigation measures, is provided in Appendix F of the EIS/OEIS.

**Policy/National Environmental Policy Act Process**

One commenter asked about establishing a policy to protect whales as cultural treasures. The Navy realizes that many marine mammals are significant to the cultural heritage of the Hawaiian people; however, establishing such a policy is outside the scope of this EIS/OEIS.

Two comments requested increased involvement by scientists and research institutions. NEPA requires an interdisciplinary approach to analysis. This EIS/OEIS used the experience of a wide range of subject matter experts. Although they may be currently residing in other areas of the United States, the professionals preparing this EIS/OEIS have either lived and worked as environmental scientists in Hawaii or have been conducting environmental projects in Hawaii for many years. The Navy solicited comments and encouraged input from all Agencies, organizations, and individuals in Hawaii throughout the environmental impact analysis process, as reported in this chapter (see also Section 1.7.1 and Chapter 13.0 of the EIS/OEIS).

**Program**

The Navy received 162 form letters stating that the Navy intends to establish a live fire training range encompassing the entire Hawaiian Archipelago. The Navy is not proposing to establish a live fire training range encompassing the entire Hawaiian Archipelago. Only a fraction of the Papahānaumokuākea Marine National Monument is within the Navy's Hawaiian Islands Operating Area (OPAREA) on its western boundary near the northern border. Current and proposed live fire training takes place in OPAREA; however, these activities will not affect resources in the Hawaiian Islands Marine Refuge, Papahānaumokuākea Marine National Monument, or the Hawaiian Islands Humpback Whale National Marine Sanctuary. The Navy understands and respects the value and importance of Hawaii's marine sanctuaries to many people. They also recognize that the primary philosophy of these sanctuaries is protection and preservation and we share that philosophy. The Navy takes precautions to minimize harm to these areas.

Classified information was used for some of the analysis in the EIS/OEIS. Accurate conclusions could not be made if this information was not considered.

The Navy is in compliance with all applicable environmental laws and is consulting with the Hawaii Coastal Zone Management Program in accordance with the Coastal Zone Management

Act. Also, see response to comment S-T-0001-1 (see EIS/OEIS Sections 4.1.2.4 and 4.1.2.5.4).

**Mitigation Measures**

Navy training should be conducted in places and at times where marine mammals would not be affected—It is critical for the Navy to be able to conduct training in a variety of environmental and bathymetric conditions, which may overlap with marine mammal areas. Mitigation measures proposed in Chapter 6.0 should ensure that marine mammals would not be injured by Navy training activities. As discussed in Section 4.1.2, the analytical methodology used was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals, the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions.

Perceived insufficiency of mitigation measures—The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality to zero. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g., harassments) for all activities conducted within the HRC.

Mitigate marine mammal impacts using seasonal avoidance during Navy training—As discussed in Chapter 6.0, avoidance of the seasonal presence of migrating marine mammals fails to take into account the fact that the Navy's current mitigation measures apply to all detected marine mammals no matter the season. Advance planning to avoid the seasonal presence of migrating marine mammals is not possible given the start of any "season" is variable (dependent on largely unknown environmental factors). To the degree possible, however, the Navy already has taken a proactive step in this regard by specifically informing all naval vessels to increase vigilance when the first humpback whales have been sighted around the Hawaiian Islands. Otherwise, limiting training operations to the remaining 6 months of the year would not only concentrate all annual training and testing activities into a shorter 6-month time period, but would also not meet the readiness requirements of the Navy to deploy trained forces.

Restrictions issued by various courts—As discussed in Section 6.0, avoiding active sonar use within 12 nm from shore or 15.5 miles from the 200-m isobaths was made part of the RIMPAC 2006 authorization by NMFS and was based on the assumption that avoidance of the North American continental shelf was a prudent mitigation measure given the presence of beaked whales in the Gulf of Mexico. NMFS modified the measure for Hawaii because they had received a public comment during rulemaking for a proposed action taking place elsewhere. This measure lacks any scientific basis when applied to conditions in Hawaii. There is no scientific basis for requiring this mitigation measure in the Pacific and no known basis for the specific metrics. During RIMPAC 2006, this mitigation measure precluded active ASW training in the littoral region, which significantly affected realism and training effectiveness. This procedure had no observable effect on the protection of marine mammals during RIMPAC 2006, and its value is unclear (there is a lengthy history of sonar use in the Hawaiian Islands without

any strandings or apparent effect on marine mammals). However, its effect on realistic training is significant.

Pre- and post-monitoring—As described in Chapter 6.0, the Navy is developing an Integrated Comprehensive Monitoring Plan (ICMP) to determine behavioral and population level changes to marine mammals within Navy ranges. This Plan will also continue or initiate studies of abundance, distribution, habitat utilization, etc. for sensitive species of concern using visual surveys, passive and acoustic monitoring, radar and data logging tags (satellite or radio linked to record data on acoustics, diving and foraging behavior, and movements). The Plan will include the evaluation of Navy lookouts that observe for all objects in or on the water including debris, periscopes, other vessels, and marine animals. As of this EIS/OEIS, the Navy and NMFS are developing an HRC-specific monitoring plan which may include third party monitoring efforts by qualified entities as a component of the ICMP for unit level exercises.

Use of non-harmful sound to scare animals from sonar event areas—Section 6.0 presents the range of Navy protective measures that would be implemented to protect marine mammals and federally listed species during training events. Among these is the use of passive detection capabilities to alert exercise participants to the presence of marine mammals in an event location.

Other Navies mitigation—Each nation has its own training needs based on that nation's forces, capabilities, missions, and environmental requirements. The Navy is a global environmental leader. As part of the Navy's commitment to sustainable use of resources and environmental stewardship, the Navy incorporates mitigation measures that are protective of the environment into all of its activities. The Navy's current mitigation measures reflect a balance between training requirements and Navy's important role in ensuring environmental protection. These measures have been the subject of extensive discussions between NMFS and the Navy, and evaluated for mission impacts, probable effectiveness, and the ability to implement. Mitigation measures are described in detail in Chapter 6.0.

Mitigation measures proposed by the Marine Mammal Commission—EIS/OEIS Chapter 6.0, Mitigation Measures, presents the Navy's protective measures, outlining steps that would be implemented to protect marine mammals and Federally listed species during training events. It should be noted that these protective measures have been standard operating procedures for unit-level ASW training since 2004. In addition, The Navy's current mitigation measures reflect the use of the best available and applicable science balanced with the NMFS precautionary approach and the requirements of the Navy to train.

**Cumulative Impacts**

The discussion of cumulative effect of sonar use with other stressors (pollution, warming water, fishing, etc.) has been expanded in Section 5.0 of the EIS/OEIS.

**Miscellaneous**

The request to add a commenter's name and the University of Hawaii, Hamilton Library to the distribution list was completed, and references were crosschecked. The reference list was not annotated with which are, or are not publicly available; however, those references that are

available, or a referral to a repository where the item is housed, will become part of the EIS/OEIS Administrative Record.

# 14.4 SUMMARY TABLES

Sections 14.4.1 through 14.4.4 of the EIS/OEIS provide reproductions of all the original letters, emails, and transcripts that were received during the public comment period for the Supplement to the Draft EIS/OEIS. Responses to issues included in those documents are also provided. As shown below, the organization of Sections 14.4.1 through 14.4.4 provides a separate comment/response section for each of the forums (email, written, etc.) that the public used to submit their comments:

- 144.1 Written Public Comments
  - Table 14.4.1-1 Written Commenters on the Supplement to the Draft HRC EIS/OEIS
  - Exhibit 14.4.1-1 Copy of Written Documents
  - Table 14.4.1-2 Responses to Written Comments
- 14.4.2 Email Public Comments
  - Table 14.4.2-1 Email Commenters on the Supplement to the Draft HRC EIS/OEIS
  - Exhibit 14.4.2-1 Copy of Email Documents
  - Table 14.2.4.2-2 Responses to Email Comments
- 14.4.3 Public Hearing Comments
  - Table 14.4.3-1 Public Hearing Commenters on the Supplement to the Draft HRC EIS/OEIS
  - Exhibit 14.4.3-1 Copy of Public Hearing Documents
  - Table 14.4.3-2 Responses to Public Hearing Comments
- 14.4.4 Webmail Comments
  - Table 14.4.4-1 Webmail Commenters on the Supplement to the Draft HRC EIS/OEIS
  - Exhibit 14.4.4-1 Copy of Webmail Documents
  - Table 14.4.4-2 Responses to Webmail Comments

The first table in each section provides an index of the names of the individuals who submitted comments on the Supplement to the Draft EIS/OEIS. Each individual has been assigned an identification number. The code in the middle of the identification number indicates the source of the comment as follows:

- W = Written comments
- E = Email comments
- T = Transcript comments from public hearing
- N = Comments received via the public HRC website

Comments that were received during the public review period for the Supplement to the Draft EIS/OEIS were treated equally regardless of the form or commenter. A commenter can be listed multiple times. Each comment was carefully documented, thoroughly read and evaluated, and categorized according to the environmental resource area (see Table 14.2-2). Each of the identified issues was numbered as shown in the exhibit in each section. For example, if the 10th speaker presented in a transcript from a public hearing document (S-T-0010) provided comments on seven separate topics, those comments were numbered S-T-0010-1 through S-T-0010-7. Finally, the Navy responded to each comment, as provided in the second table in each section.

To follow comments and responses for a specific individual, find their commenter number (e.g., S-W-0042, S-E-0003, S-T-0021, S-N-0030) in the appropriate Commenters table; locate their document within the Copy of Documents exhibit; and use the issue numbers to identify corresponding responses in the Response Table.

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 14.4.1 WRITTEN PUBLIC COMMENTS

Thirty commenters provided written comments on the Supplement to the Draft EIS/OEIS. Five of the 30 commenters were from governmental organizations.

Table 14.4.1-1 lists individuals who commented in writing, with their respective commenter identification number. This number can be used to find the written document that was submitted and to locate the corresponding table on which responses to each comment are provided.

Exhibit 14.4.1-1 presents reproductions of the written comment documents that were received in response to the Supplement to the Draft EIS/OEIS. Comment documents are identified by commenter ID number, and each statement or question that was categorized as addressing a separate environmental issue is designated with a sequential comment number (D-W-0082-1, D-W-0082-2, etc.).

Table 14.1-2 presents the responses to written comments on the Supplement to the Draft EIS/OEIS. Responses to specific comments can be found by locating the corresponding commenter ID number and sequential comment number identifiers.

**Table 14.4.1-1. Commenters on the Supplement to the Draft EIS/OEIS (Written)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Chris Bane | S-W-0001 | Clyde Namu'o on behalf of the State of Hawaii | S-W-0026 |
| Jan Bappe | S-W-0002 | Marilyn and Ed Pollock | S-W-0023 |
| Laurel Brier | S-W-0003 | Timothy Ragen on behalf of the Marine Mammal Commission | S-W-0024 |
| Peter Courture | S-W-0020 | Peter Rappa on behalf of University of Hawaii-Manoa | S-W-0030 |
| Claire D'Gala | S-W-0004 | Betty Rubble | S-W-0009 |
| Raydiance Gonare | S-W-0005 | Barbara Sinclair | S-W-0012 |
| Marsha Green on behalf of the North American Ocean Noise Coalition | S-W-0025 | V. Springs | S-W-0022 |
| Cory Harden on behalf of the Sierra Club | S-W-0011 | Katherine Stack | S-W-0013 |
| Linda Harmon | S-W-0006 | Kevin Sunada on behalf of the State of Hawaii | S-W-0027 |
| C, Harvel | S-W-0028 | Gabriela Taylor | S-W-0014 |
| Peggy LeDoux | S-W-0007 | Lee Tepley | S-W-0015 |
| Diane Ley on behalf of the County of Hawaii | S-W-0021 | Jason Turner | S-W-0016 |
| Kaitlyn McKee | S-W-0008 | Sonya Wolfe | S-W-0017 |
| Nina Monasevitch | S-W-0029 | Rulin Xiw | S-W-0018 |
| Mike Moran | S-W-0010 | Joann Yukimura on behalf of the Kauai County Council | S-W-0019 |

**THIS PAGE INTENTIONALLY LEFT BLANK**

SONAR

I am a tour boat captain here on Kauai and I have been performing sight seeing and whale watching tours for the last 18+ years here on Kauai.
While I understand the need for testing and training of SONAR, I feel that how it's done now and how it's been done for decades needs to change. While SONAR has been around since it was invented in 1912 it has become much more powerful since it's humble beginnings as an echo locator. Since the 1950's it has become ever more powerful and now is a good time to assess what kind of SONAR and how powerful we will allow in our waters.

Some things to consider:

- The International Whaling commission is against testing as it stands.
- European Union parliament has asked its members to reassess its SONAR use.
- Spain has taken steps to mitigate SONAR in its waters.
- Strandings caused by active sonar have occurred in Madeira (2000), Greece (1996), the U.S. Virgin Islands (1998, 1999), the Canary Islands (1985, 1988, 1989, 2002, 2004), the northwest coast of the United States (2003) and coastal waters off North Carolina (2005).
- And in July 2004 researchers uncovered an extraordinary concentration of whale strandings near Yokosuka, off of a major U.S. Navy base off the Pacific coast of Japan.
- There was a incident in Victoria BC where over a dozen porpoise died in the Juan de Fuca straight when the USS Shoup was using SONAR.
- I have witnessed several dozen Humpback whales off of Polihale beach Kauai during SONAR exercise leave the west side and head to the south side for more than 4 days. I've seen the reaction to this SONAR and I can only explain it the same when a herd of deer are startled by a gunshot. The closest Navy ship was well over 5 miles away.
- Ken Balcomb has led what is perhaps the longest running study on killer whales, or orcas has noticed very disturbing behavior from these animals when Navy ships are using SONAR (such as tight grouping and swimming close to shore) in the Puget sound.

These are just a few of the examples of the many hundreds of first hand expert accounts and known incidents of the affects of Navy SONAR.

The Navy's active sonar programs are in all likelihood responsible for many more whale strandings worldwide. The exact number is unknown as most of these animals will die in offshore waters and sink. Considering the remote location of Hawaii and vastness of the ocean surrounding it, it is not that much of a leap to assume many have died here and will die if SONAR is allowed to continue in its present level.

**In an article by John Cannon in ScienceNOW Daily News entitled "Why Do Whales Get the Bends?" [By John Cannon, ScienceNOW Daily News, 14 December 2007], he states:

*The Cuvier's beaked whale is a master of the ocean's crushing depths. It can dive as deep as 2 kilometers in search of prey, the deepest known for any mammal. So scientists have been at a loss to explain why, in response to naval sonar testing, this champion cetacean sometimes succumbs to the same decompression sickness that afflicts scuba divers. A new mathematical model suggests that, by replicating the sounds of a predator, sonar forces the whale to adopt a risky diving pattern.*

*Researchers have suspected a link between sonar testing and whale deaths for nearly 20 years. In 2000, the U.S. Navy said its sonar exercises led six beaked whales to fatally beach themselves in the Bahamas, and stranded whales have died near sonar-testing sites in at least five other cases since then. It hasn't been clear how the sonar disorients the animals and causes such strandings, but some marine biologists suspect that the intense sound waves force whales to shoot to the surface, and they've found evidence that tiny nitrogen bubbles expand in the whales'*

| COMMENT NUMBER |
|---|
| S-W-0001 |
| 1 |
| 2 |
| 3 |

*tissues and damage vital organs (ScienceNOW, 9 October 2003). The same thing happens when scuba divers surface too quickly--a condition known as the bends. But a whale holds its breath when diving, preventing nitrogen buildup, so the theory didn't seem to hold water. A group led by marine biologist Peter Tyack of Woods Hole Oceanographic Institution in Massachusetts suspected that whales alter their diving behavior in some other way.*

*Whales make repeated shallow dives when trying to evade predators. The team wondered whether such behavior could be risky, especially because naval sonar--which is similar in frequency to the calls of the beaked whale's most feared adversary, the killer whale--could be forcing the whales to adopt a similar diving pattern. So the researchers mathematically analyzed dive behavior in Cuvier's beaked whales and in dolphins to test whether nitrogen bubbles could expand in whale tissue during repeated shallow dives. The team incorporated known physiological data into a model that charts how the bubble size might increase in the circulatory system, brain, muscles, and fat tissues when a whale dives repeatedly to between 30 and 80 meters for as long as 3 hours.*

*During normal diving behavior, scientists believe, the lungs of marine mammals collapse when they plunge past 72 meters in depth. That "clever mechanism," Tyack says, prevents nitrogen from infiltrating the bloodstream. The team's model predicts that if the whales' lungs do not collapse during a long series of shallow dives, the increased pressure can cause nitrogen bubbles to diffuse into tissues, increasing the risk of bubble formation on ascent. Limiting the duration of sonar testing may prevent the animals from diving in these harmful patterns, the team concludes in the current issue of Marine Mammal Science.*

*Noting that diving behavior is extraordinarily difficult to study in live animals, marine biologist Terrie Williams of the University of California, Santa Cruz, calls the model "extremely useful." As new research shores up gaps in the model's assumptions--with actual observations to corroborate the avoidance behavior, for example--scientists can try to home in on a safe length and level of sonar exercises, clarifying the murky waters surrounding this debate. "Now it's a question of how quickly [decompression sickness] happens," she says.*

I understand the Navy's resistance to any restriction on their testing and training of SONAR, but we have to decide if we want to live in a world that is "safe" or in one where we randomly kill, harass and maim intelligent reasoning animals like our whales and dolphins that we have in Hawaii.

I have cataloged my sightings over the years crossing the Kaulakahi channel. These include: Stripped dolphins, Rough tooth dolphins, Risso dolphins, Spinner dolphins, Pilot whales, Melon-headed whales, Pygmy killer whales, False killer whales (who's numbers are estimated to be less than 250 in Hawaiian waters and are genetically unique), Orca (who spend most of their time in offshore waters between 50 and 100 nm from shore with occasional forays into our local waters), I also see the Blainville beaked whale and Cuvier beaked whales, Cuvier beaked whales sightings have become less frequent since I started to log them over 10 years ago. (more in summary)

I don't think that every change I see is the result of military exercises, but I have seen direct and adverse reactions caused by the Navy's use of SONAR in our waters. I have seen the reaction of reef fish at Lehua during these exercises, and while they aren't dying and floating belly up, they are reacting and showing a startle response. Lehua rock is right next to and in between Ni'ihau and the Navy's military range. The state has recently tried to get the waters around Ni'ihau to be a marine reserve. I don't see how allowing SONAR so close to such a sensitive area is conducive to this goal.

I would wonder how the state of federal governments would feel if I took a boom box that was as loud as a F16 fighter jet on take off and blasted it in ecologically sensitive areas. I'm pretty sure I

| COMMENT NUMBER |
|---|
| S-W-0001 (cont.) |
| 4 |
| 5 |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS**

would be arrested. I think the Navy should be held accountable, and should be required to take every possible measure to ensure the safety of our marine mammals, no matter how inconvenient it may be to the Navy and it's exercises. I have every confidence the Navy will learn how to deal with these inconveniences and still be able to train our military men and women.

I feel that the recent rulings by several federal judges such as the honorable Ezra are a good start, but not strict enough to ensure the future of our local marine life. I'm not some tree hugging left wing extremist hippy that thinks we "should just hug it out". I understand the need for a strong defense, I served honorably in the US Coast Guard, I also strongly believe with the vast consensus among scientists that much more can be done to keep our fragile marine life in tact while the Navy can maintain its goal of protecting me an my country.

The Navy needs to be accountable, I would strongly recommend all the restrictions judge Ezra has in place, I agree with the 12 nm no SONAR zone around ALL the Hawaiian islands, I agree with the slow increase in volume over a period of time to allow animals to vacate the area, I feel that there should be at least a two hour scan using passive SONAR to make sure that there are no marine mammals in the area (two hours as a recent study shows that Cuvier beaked whales can spend over an hour resting un-moving on the surface as they recover and prepare for another dive), I feel that the limit on how close to a marine mammal SONAR can be used should be dependent on the type and volume of the SONAR, I also feel that shutting down SONAR when a marine mammal enters the area is appropriate because some animals may be tracking fish or traveling on a path from one feeding ground to the next that just happens to be in a Navy SONAR testing area.

I ask that you make your recommendations based on the side of caution on the side of our marine mammals physical and mental health.

Mahalo for listening to me.

Chris Bane

COMMENT NUMBER
S-W-0001 (cont.)

6

# Hawaii Range Complex Supplement to the Draft EIS/OEIS Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: JAN BAPPE

Address:* HONOLULU HI

Comments: I have been concerned about the suffering caused by SONAR on ships. Our world has been given a wonderful gift with all the amazing creatures in our oceans. I feel we are responsible to protect them, basically from us. There is too much "unknown" from this SONAR. People say "there is already lots of noise in the ocean" but just as there are many noises that we live with, there are some that are unbearable. We don't know about the possibility of our ocean creatures actually suffering with pain in their brains. I think we must find a gentle way to find the enemy. thankyou.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0002

1

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

March 13, 2008

RE: Hawaii Range Complex SDEIS/OEIS

Over 70 percent of all marine-mammal research in the US as well as 50 percent of all research worldwide is sponsored by the Navy. This has a corrupting effect on the research as those being funded will be reluctant to criticize defense-related projects if they want to retain their funding. Universities have become dependent on research grant money so that it has become a factor in professors getting tenure and career success. The Navy's research has focused on hearing thresholds to determine how loud and how close to whales its sonar can be operated before it affects the animals' behavior or causes temporary or permanent hearing loss. Navy research grants are project driven where the questions you ask are going to determine the answers you get. If the researcher discovers things that are negative or not what the Navy wants to hear, then that information is not to go public. Natural Resource Defense Committee (NRDC) in 2002 discovered a series of emails from the navy's environmental manager for its low-frequency sonar system regarding a negative appraisal filed in a publicly accessible environmental-impact statement by a group of scientists. The navy reprimanded the researchers and told them they such be reporting directly to the Navy about their gripes and indicated that they could take their research money elsewhere. THERE NEEDS TO BE AN INDEPENDENT COUNCIL FOR MARINE MAMMAL RESEARCH. Navy sponsored or funded research is not reliable or credible. It's like trusting the tobacco industry to research the causes of lung cancer.

Laurel Brier

Anahola, HI

COMMENT NUMBER
S-W-0003

1

To Public Affairs Office 3/9/08
Pacific Missile Range Facility

I am in favor of absolutely
NO Sonar testing by the Navy or any+
all other unknown to the public govern-
ment peoples using Sonar in the Ocean,
all oceans.
STOP Sonar use.
STOP WAR GAMES.
STOP WAR.

Speaking + Writing for myself +
those sentient beings
(ocean animals) you don't
seem to be able to listen to,

Claire NGaia

Haiku Hi

COMMENT NUMBER
S-W-0004

1



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

HAWAII

## Hawaii Range Complex
## Supplement to the Draft EIS/OEIS
## Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: Raydiance Conace

Address:* Pahoa, HI

Comments: I am deeply concerned about the "stranding & subsequent deaths of whales starting in the Bahamas around the year 2000 up to 2006 all within specific range of Sonar testing being done in these different areas. I intuitively know how invasive "loud" unknown sounds can disturb me — I know that unrestrained use of "sonar" could be very dangerous & deadly to sensitive animals that we sound to communicate with each other. Until the Navy can 100% prove that Sonar is not effecting negatively any mammals in the ocean where it is being proposed to be used — it should in all others for concern of life-forms in the ocean be stopped. In Ecological Earnest,
Raydiance

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0005

1

## Hawaii Range Complex
## Supplement to the Draft EIS/OEIS
## Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: Linda Harmon

Address:* Hanapepe, Hi

Comments: The part of the ocean that would be sonared is suppost to be santuary for sea creates. Don't allow the Navy to devistate the area with loud sound frequencies.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0006

1

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

MAUI

## Hawaii Range Complex
## Supplement to the Draft EIS/OEIS
## Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

3-14-08

Name: Peggy LeDoux

Address:* [redacted], Hillsborough, CA

Comments:

Every year I come to Hawaii to see the glorious migration of the whales. It is a great joy in my life. I share this joy every year with friends and family. Our marine mammals are truly one of the great wonders of the world. I have discovered that throughout the world there has been damage to whales as a result of sonar testing. I also understand that the navy has invested tremendous money in staff and facilities here in Hawaii. I understand that. I do not understand why the navy cannot stop sonar testing during the whale migration season. We will always have international conflicts, but we may not always have our miraculous marine mammals. Please stop sonar testing during migration.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0007

1

Kauai

## Hawaii Range Complex
## Supplement to the Draft EIS/OEIS
## Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: Kaitlyn L. McKee

Address:* Kapaa HI

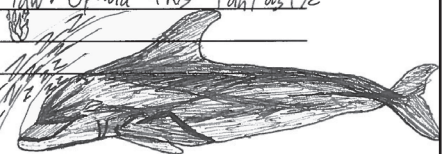
Comments: Aloha,

All I can say is from my heart and soul because my love, respect, and connection with the ocean and its inhabitants runs deep. When you make your decision don't let these innocent creatures suffer for mankinds war. Preserve and protect, this is all we have.

" The greatness of a nation and its moral progress can be judged by the way its animals are treated" Gandhi

The North western Hawaiian Islands is now protected from harm by law. Uphold this fantastic Monument ~~forever~~ forever.

P.S. shhhh.... we are sleeping



Hear no evil see no evil speak no evil.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0008

1



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

Kauai

# Hawaii Range Complex
# Supplement to the Draft EIS/OEIS
# Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: BETTY RUBBLE

Address:* _____

Comments: IF YOU REALLY CARE ABOUT YOUR PERSONNEL, YOU would STOP WASTING TIME, ENERGY, AND MONEY ON EXPANDING THE RANGE & EXERCISES. WE WILL KEEP MESSING WITH YOU, AND will KEEP SUPPORTING LAWYERS TO FIGHT YOU, UNTIL YOU LOWER NOISE, PICK UP YOUR TRASH, AND COMPLY WITH THE LAWS ON the BOOKS. WE HAVEN'T FORGOTTEN ABOUT 2004 AND NO MATTER HOW YOU SUGAR COAT IT, MELON WHALES DON'T COME INTO NEARSHORE WATERS UNLESS THERE IS A MAJOR PROBLEM. BACK OFF. [redacted] CHOKE POINTS ARE A RECIPE FOR DISASTER IN SUCH VIBRANT WATERS.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

| COMMENT NUMBER |
|---|
| S-W-0009 |
| 1 |
| 2 |

MM

Testimony Submitted on 3/14/08 in Kahului, Hi to U S Navy for Hawaii Range Complex SDEIS/OEIS comment session.

Aloha,

My name is Mike Moran from Kihei HI. Thanks for the opportunity to comment on this topic.

Once again, the Navy is failing to offer reasonable protection to our aquatic environment in Hawaii with this Draft EIS, nor offer reasonable explanation why these practice sessions must be held in near shore Hawaiian waters. In spite of overwhelming evidence of injury & death to whales & other marine mammals caused by mid frequency active sonar use, the Navy persists in doing so in the areas of HIHWNMS where mother whales are birthing on a regular recurring basis.

Unfortunately this Feb, 2008 version of the draft EIS in the exhausting 116 pages is an inadequate analysis by the Navy, as was the prior 2005 draft. The Navy insists on using selective science to form assumptions that neither do, nor apply in the real world marine environment, and chooses to ignore scientific evidences of injury & death to marine mammals, which occur in regions where active sonar use occurs. Further the Navy refuses to make available "after action reports" to the public, this hiding specifically where these sonar use occurs to make it impossible to verify cause/effect relationships between to sonar use & marine mammals injury & death, including, but not limited to strandings.

There are at numerous ways active sonar can injure or kill marine mammals: ear and other tissue damage caused by the sonic waves; induced panic from the sonic waves causing strandings on shore; induced panic on deep diving whales to ascend too quickly causing "the bends," and even naturally occurring fairly rapid ascent combined with the sonic wave also causing "the bends" or decompression sickness.

The Navy acknowledges that **QUOTE** "Sonar exposure has been identified as a contributing cause or factor in five specific mass strandings: Greece in 1996; the Bahamas in March 2000; Madeira Portugal in 2000; the Canary Islands in 2002, and Spain in 2006." This is you, the Navy stating this, but you then choose to ignore this problem! Also ignored, is Hawaii's own July 11, 2004 mass strandings of 200 melon headed whales in the Hanalei Bay area of Kauai during naval exercises in that area. Since again the Navy refuses to offer "after action reports" of sonar use relating to date, time or location, scientists are prohibited from being able to prove the likely cause/ effect relationship there.

As objective federal judges in courts in California and just 2/29/08 right here in Hawaii are issuing rulings calling for further mitigations by the Navy in use of active sonar, the Navy chooses to ignore the court rulings. Judge David Ezra ruled that the Navy cannot conduct exercises within12 nautical miles of Hawaii's shorelines, which is where marine mammals that are particularly sensitive to sonar are found. He also ruled that the Navy must look for marine mammals for one hour each day before using sonar, & employ three lookouts exclusively to spot the animals before sonar use. However, tt was just reported by the Associated Press on March 12 "The Navy says it will go ahead with the planned anti-submarine warfare exercises this month, and **then** determine

| COMMENT NUMBER |
|---|
| S-W-0010 |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

whether to seek additional clarifications and modifications from the judge." Let's just do it first, and then ask if this is what the ruling meant.
Mahalo,

Mike Moran

Kihei, HI

COMMENT NUMBER
S-W-0010 (cont.)

HA

COMMENTS ON FEBRUARY 2008 SUPPLEMENT TO DEIS/OEIS FOR
NAVY HAWAI'I RANGE COMPLEX
March 18, 2008 5 - 9 PM Hilo Hawaiian Hotel, Hilo
Cory Harden, Sierra Club, Moku Loa group

COMMENT NUMBER
S-W-0011

*Include and analyze relevant information from recent court decisions on sonar, such as the March 2008 decisions in Federal courts in California and Hawai'i.* 1

*Are conclusions based in part on classified information? If so, how would the conclusions change if the classified information was not considered?* 2

*Identify alternatives to sonar that will not affect marine life--existing alternatives, and those that could be developed in the next five years or so.* 3

*As new forms of life are discovered in the ocean, when and how will the effects of sonar on them be evaluated?* 4

*Evaluate cumulative effects of sonar on marine life, added to other stressors affecting the oceans. In close to half of the world's oceans, ecosystems are already severely compromised by stressors caused by humans--pollution, warming water, damage to the sea floor, fishing, and more. [Science, 2-15-08]* 5

*p. 3-8 to 3-9* "There are significant limitations and challenges to any risk function derived to estimate the probability of marine mammal behavioral responses; these are largely attributable to sparse data…The three data sets represent the responses of only four species… None… represent experiments designed for behavioral observations of animals exposed to MFA sonar…" *In addition, two of the three data sets fail to consider numerous variables, described on p. 3-9.*
*Given the "significant limitations" of the risk function method, conclusions based on this method appear to be unjustified.* 6

*p. 3-14 The old acoustic model yielded a larger-than-actual acoustic footprint when multiple ships were using sonar. The new model corrects this--but it should also correct for increased volume from multiple ships.* 7

*p. 3-15 Justify use of elephant seal data to analyze impacts to monk seals.* 8

*Table 3.3.1-1, p. 3-16 Lay-person language should be used--e.g. "harassment level" instead of "Risk Function 120-195 dB SPL"* 9



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

A Global Map of Human Impacts to Marine Ecosystems | NCEAS Page 1 of 2

HA

NCEAS from Cory Harden Sierra Club

also in Science 2-15-08

Home | About the Center | Research | Outreach/Training | News & Events | Contact Us

Home › Research ›

Home
Models
Impacts
Ecosystems
Contact Us

## A Global Map of Human Impacts to Marine Ecosystems

Home | Model | Impacts | Ecosystems | Contact Us

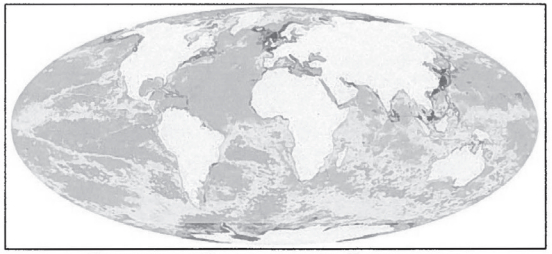
### Why map the human impact to the world's oceans?

What happens in the vast stretches of the world's oceans - both wondrous and worrisome - has too often been out of sight, out of mind.

The sea represents the last major scientific frontier on planet earth - a place where expeditions continue to discover not only new species, but even new phyla. The role of these species in the ecosystem, where they sit in the tree of life, and how they respond to environmental changes really do constitute mysteries of the deep. Despite technological advances that now allow people to access, exploit or affect nearly all parts of the ocean, we still understand very little of the ocean's biodiversity and how it is changing under our influence.

The goal of the research presented here is to estimate and visualize, for the first time, the global impact humans are having on the ocean's ecosystems.

Our analysis, published in *Science*, February 15, 2008 (no subscription required), shows that over 40% of the world's oceans are heavily affected by human activities and few if any areas remain untouched.



Very Low Impact (<1.4) | Medium Impact (4.95–8.47) | High Impact (12–15.52)
Low Impact (1.4–4.95) | Medium High Impact (8.47–12) | Very High Impact (>15.52)

Download the Marine Impacts KML to view the cumulative impact map in Google Earth.

### How did we create this map?

There were 4 steps to creating this composite map.

1. We gathered or created maps (with global coverage) of all types of human activities that directly or indirectly have an impact on the ecological communities in the ocean's ecosystems. In total, we used maps for 17 different activities in categories like fishing, climate change, and pollution. We also gathered maps for 14 distinct marine ecosystems and modeled the distribution of 6 others.

2. To estimate the ecological consequences of these activities, we created an approach to quantify the

http://www.nceas.ucsb.edu/GlobalMarine Ex. marine model KML 3/15/2008

**COMMENT NUMBER**
**S-W-0011 (cont.)**

March 15. 08

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128 Kekana, HI 96753

I would like to voice my concern for the whales birthing in Hawaiian waters.
Do the right thing!

1. Look for another location (to a big ocean out there.)
2. A new alternative way to test beside what is used now.
3. Revise time of year to test.

Sincerely,
Barbara Sinclair

Ms. Barbara M. Sinclair

a very concerned citizen

**COMMENT NUMBER**
**S-W-0012**

1

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

Dear Officer, March 17, '08

Please do not destroy the sealife with sonar use. Mankind needs to learn from the animals, not kill them. Enough is enough. Thank you for hearing my cry. Katherine Stack

| COMMENT NUMBER |
| --- |
| S-W-0013 |
| 1 |

Hawaii Range Complex EIS/OEIS
Pacific Missile Range Facility
PO box 128
Kekaha, Hawaii 96752

From: Gabriela Taylor
Kapaa, Hi

I am commenting on the Draft EIS for planned Sonar Activities in Hawaii. I want to register a strong "NO" sonar in Hawaii waters where it can harm whales and other creatures.

Under no conditions should the navy use sonar in the Hawaiian waters.

Sincerely, Gabriela Taylor

Gabriela Taylor

| COMMENT NUMBER |
| --- |
| S-W-0014 |
| 1 |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

## 3 minute presenation for March 18, 2008 sonar meeting in Hilo

My name is Lee Tepley and I have a PhD in Physics. Almost 10 years ago I got heavily involved in the protest movement against LFA sonar. I did a lot of research on both LFA and mid-frequency sonar and, in 1992, I even got invited to give a paper at a National Marine Fisheries meeting near Washington, D.C.

It turned out to be a very important meeting. I participated in an informal debate on different ways that sonar could harm deep diving whales –and especially beaked whales. The concept of whales getting decompression sickness (same as "the bends") from sonar had been proposed many years earlier but was advanced at this meeting by Dr. John Potter who is a brilliant scientist. He came up with a new approach that is now generally accepted.

In fact, the last section of the draft EIS contains 3 references to beaked whales getting the bends from Sonar. **But in the main part of the EIS, this fact is not even considered. I think this is the greatest single defect of the EIS**. There are many other defects.

However, in an earlier version of the draft EIS, it was stated that deep diving whales are more likely to be killed by sonar than other cetaceans and that the Navy was considering adding a 1% increase in mortality to its complex dose function in circumstances that might increase the probability of beaked whale stranding. **However, the earlier version of the draft DEIS did not mention the possibility that strandings could result from the bends.**

And in the current version of the EIS, the Navy changed it's mind and did not even mention the "1% increase in mortality" and, of course, it did not mention beaked whales dying from the bends. **The Navy seems to hate the fact that whales can get the bends**.

Realistically, if deep diving whales get the bends from sonar they will die almost every time. Cirumstances which lead to stranding will also lead to death. **Therefore, the 1% increase in mortality that the Navy initially considered should have been almost 100%.**

**And the Navy also ignored beaked whales getting the bends in an EIS on LFA sonar in 2006**. This was pointed out in comments by Joel Reynolds – an attorney for NRDC. LFA sonar and mid-frequency sonar are not that much different. So did the Navy listen to the comments by Joel Reynolds?? Of course not.

I discuss some of the above on my new sonar web page. I may add new material soon. If you want to check it out, pick up the directions to get there at the end of this meeting.

A few more quick comments: The complex 110 page draft EIS is based on data from sonar tests of a few Beluga whales and Bottlenose dolphins in a tank and on Right whales and Killer whales in the ocean. The results are extrapolated to all the whales and dolphins in Hawaiian waters. **But in the draft EIS the Navy admits that none of this data is reliable.** Still, the Navy says that it is the best available data – and it lead to this incredibly complex 110 page draft EIS. **Based on such unreliable data, the DEIS should not even have been written. The Navy should be made to start over.**

Thank you.

Lee Tepley
PhD, Physics

P.S. To get to my sonar web page, Go to my Superferry web site at

http://web.mac.com/leetepley/Site/Introduction.html

Then, near the top of the page you will see "Link to Sonar HRC DEIS page". Click on this link. This opens a page with another link. Click on it and you should be there.

| COMMENT NUMBER |
|---|
| S-W-0015 |
| 1 |
| 2 |
| 3 |
| 4 |



**Cory (Martha) Harden**

ASSISTANT PROFESSOR MARINE SCIENCE UH | HILO

**From:** "Jason P. turner" <jpturner@hawaii.edu>
**To:** "Cory (Martha) Harden"
**Sent:** Monday, March 17, 2008 11:50 PM
**Subject:** Re: sonar hearing Mar 18

Cory,
The more I look at my schedule tomorrow I do not think i will be able to attend. Just a few points that I see upon investigating this document.

1)There are projected to be an extremely large amount of marine mammals affected by these activities - in the tens of thousands across tens of species

2) Humpback whales and Hawaiian monk seals - both endangered species represent the largest % of cetacean and pinniped impacts, respectively

3) Robin Baird who has been conducting survey investigations throughout the Hawaiian Island for Odonotocetes (toothed whales) for the past 6 years is not even mentioned in the DEIS, although most of what we know about toothed whales in Hawaii comes from him (he was a co-author in one paper regarding impacts of sound).

4) I saw a lot of information regarding specific action levels depending upon different situations but I did not see anything about pre and post monitoring and subsequent safeguards regarding what will happen when/if take occurs. For example, what type of pre & post monitoring efforts (indep of the Navy) are in place to ensure that we try to capture the specific impacts upon animals. Further, at what level of take will the operations be temporarily halter, modified, or shut down permanently

5) The DEIS consultants appear to have placed a great amount of time and efforts into modeling the effects of sound upon different marine mammals; however, without any pre-post monitoring efforts these exercises are academic at best

6) I'm concerned with the expertise provided by the group that prepared the DEIS; one member was listed as a "marine mammal biologist" and is a former NOAA employee, now an environmental consultant - all others appear be professional consultants with limited experience with marine mammals; further, no leading experts from the field of Marine Mammal Biology appear to have been involved in the preparation.

I hope this helps. You may use my name and mention these comments. I'm sorry I cannot be there; let me know if I need to prepare a letter and I would be happy to.
Aloha,
Jason

Have studied marine mammals for past 14 years; 4 published works and over 12 presentations. Director of Hilo Marine Mammal Response Network.

3/18/20

| COMMENT NUMBER |
|---|
| S-W-0016 |
| 1 |
| 2 |
| 3 |
| 4 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

Page 2 o

Dr. Jason P. Turner
Assistant Professor
Department of Marine Science
Interim Director - KMEC
University of Hawai'i at Hilo

3/18/20

COMMENT NUMBER
S-W-0016 (cont.)

March 16, 2008

To whom it may concern,

This letter is in response to the news I recieved about the sonar testing that is happening off of Kauai waters...

I heard a story on the news today that made me cry
whales and dolphins their brains bursting and bleeding waiting slowly to die
Sonar testing, fear manifesting in the lives of those who live so free, sonar testing exploding and eroding into the sea
Sacred animals older than us here falling prey to our deep seeded fear
Protecting ourselves while hurting another
Slaughtering sacred gifts of the mother
Why? why do the plants and animals have to die?
Is it because our own material conviences are to hard to deny?
Do you ever stop to think about the actions of your actions?
Do you ever stop to think about the actions of your actions?

How would you feel if you were one of those whales? With all our new technology isn't there another way? there must be!

COMMENT NUMBER
S-W-0017

1



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

Thank you for Reading!

- Sonya Wolfe

COMMENT NUMBER
S-W-0017 (cont.)

# Hawaii Range Complex Supplement to the Draft EIS/OEIS Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: Rulin Xiu

Address:* Keaau HI

Comments: The impact of sonar on sea mammals' emotional & physical well-being is reported in many severe incidents. I think it is time for us to take notice and do everything we can to prevent it happen again.

~~If we could~~ I believe if our action impact the well-being of wild animals, it will impact our human's well-being in a more profound and powerful level.

~~Pls~~ let's all start to pay attention to and do sensible thing what will serve us not harm us or anything.

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

COMMENT NUMBER
S-W-0018

1

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

COUNTY COUNCIL
BILL "KAIPO" ASING, CHAIR
MEL RAPOZO, VICE CHAIR
TIM BYNUM
JAY FURFARO
SHAYLENE ISERI-CARVALHO
RONALD D. KOUCHI
JOANN A. YUKIMURA

4396 RICE STREET, ROOM 206
LIHU'E, KAUA'I, HAWAI'I 96766-1371
E-mail: cokcouncil@kauai.gov

OFFICE OF THE COUNTY CLERK
Council Services Division
Elections Division
Records Division
PETER A. NAKAMURA, County Clerk
ERNESTO G. PASION, Deputy County Clerk
Telephone: (808) 241-6371
Facsimile: (808) 241-6349

TESTIMONY

by

COUNCILMEMBER JOANN A. YUKIMURA

In Re: Supplement to the Draft EIS/Overseas EIS
Hawaii Range Complex (HRC)

Kaua`i Community College

March 13, 2008

Thank you for this opportunity to provide input.

I speak as an individual Kaua`i County Council member who is deeply concerned about the impacts of high frequency active (HFA) sonar and mid-frequency active (MFA) sonar in naval training exercises upon ocean mammals.

I acknowledge the Navy's need to conduct realistic training in sonar detection technology, but it should not be at the expense of ocean mammals. I acknowledge the Navy's attempt to mitigate its impacts upon ocean mammals through its preferred third alternative, but I do not believe those mitigation efforts are sufficient. Your executive summary states: "The Navy finds harassment resulting from the proposed use of MFA/HFA sonar may affect endangered blue whale, North Pacific right whale, fin whale, sei whale, humpback whale, sperm whale and Hawaiian monk seals." This is unacceptable.

At a minimum it would seems that the training exercises should be conducted in the summer months when whales are much less prevalent in Hawaiian waters. Secondly, there should be found another way to detect submarines without sonar which invades the main communication system of the ocean mammals and causes both psychological distress and physical injury to these mammals. Human ingenuity has shown itself to be unlimited; surely another method can be found to detect quiet submarines. The ocean is the kuleana of its inhabitants; humans who enter the ocean should do so without causing harm.

Mahalo for your consideration of this testimony.

AN EQUAL OPPORTUNITY EMPLOYER

| COMMENT NUMBER |
|---|
| S-W-0019 |
| 1 |
| 2 |
| 3 |
| 4 |

Peter Courture

Hanalei Hawaii

19th March 2008

Public Affairs Office
Pacific Missile Range Facility
P.O. Box 128
Kekaha Hawaii 96752-0128
Attn HRC EIS/OEIS
Fax 808 335-4520
Email : hrs@govsupport.us

Messrs. et Madames :

I am extremely distressed to learn that our government still intends to condone sonar testing in an area where whales and other sensitive marine life shelter. Due to the hazards such testing presents to these lives, I respectfully request that you move your testing to a location where such dangers are not presented and, in addition, ensure that such testing as is permitted is done only in seasons when the humpback whales are not present in large numbers. Moreover, as part of our governmental process, you owe those of us who can speak for the lives of those who cannot a clear explanation why you must conduct this testing in such a sensitive area. According to our system of government, your explanation should be made in a manner that affords us an opportunity to respond. Finally, no such testing should be conducted without at least the same mitigation measures which were adopted in 2006 after the Court challenges. It seems both wasteful and disrespectful to skirt voluntary compliance, forcing human citizens to intervene.

As you know, the Hawaiian Islands, and especially Kauai, are key ecological shelters for important life, including dolphins, whales and others. The Hawaiian waters are important winter breeding grounds for, among others, thousands of endangered humpback whales. Melon head and pilot whales also frequent these waters.

It is undisputed (and the Navy has no contrary evidence) that the sort of testing (and sonar emissions) proposed in the RIMPAC and USWEX exercises and especially mid-frequency active sonar present a clear and present danger to endangered and highly intelligent marine mammals. I have not fully outlined here the deficiencies such testing and the Navy's behavior present under the law, but believe that your present and proposed actions violate the Marine Mammal Protection Act, the National Marine Sanctuaries Act and the Coastal Zone Management Act, to name a few.

| COMMENT NUMBER |
|---|
| S-W-0020 |
| 1 |
| 2 |
| 3 |
| 4 |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

In the South Pacific, I have been eye to eye with humpbacks underwater and had the pleasure to spiral with them as they revelled in the oceans we share. I have heard their songs and seen them leaping off the Kauai coastline. I believe that no one who has experienced the gazes and songs of the humpbacks could ever condone endangering them. You must be aware of this, but persist. You should be ashamed of your behavior and I beseech you to take corrective action before it is too late. No environmental statement can bear the slightest resemblance to truth absent a recognition of this obligation.

Yours sincerely,

Peter Courture

COMMENT NUMBER
S-W-0020 (cont.)

Harry Kim
*Mayor*

Jane H. T
*Director*

Diane L.
*Deputy Dir*

# County of Hawaii

**DEPARTMENT OF RESEARCH AND DEVELOPMENT**

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8366 • Fax (808) 935-1205
E-mail: chresdev@co.hawaii.hi.us

March 31, 2008

Mr. Tom Clements
Public Affairs Officer
Pacific Missile Range Facility
P. O. Box 128
Kekaha, Hawai`i 96752-0128

RE: Hawaii Complex Range Draft Environmental Impact Statement/
Overseas Environmental Impact Statement

Dear Mr. Clements: Tom

Thank you for providing the County of Hawai`i's Department of Research and Development with an opportunity to review and provide comments on the Hawaii Complex Range Draft Environmental Impact Statement/Overseas Environmental Impact Statement. Our Department has no comments or concerns at this time.

Thank you also for making arrangements to meet with Mayor Harry Kim. I know, he appreciated having the opportunity to speak with you and Commanding Officer Cudnohufsky.

Sincerely,

Diane Ley
Deputy Director

Hawai`i County is an Equal Opportunity Provider and Employer

COMMENT NUMBER
S-W-0021

1

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

# Hawaii Range Complex
# Supplement to the Draft EIS/OEIS
# Written Comment Form

Please record your comments concerning the Hawaii Range Complex Supplement to the Draft EIS/OEIS on this form. Please include your name and address. You may submit this form by:

1) placing it in the comment box at tonight's meeting
2) mailing it to PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

**All comments must be received no later than Apr. 7, 2008 to be considered in the Final EIS/OEIS.**

Name: Valaria Sprenger

Address:* Lahaina, HI

Comments:

Sonar is being used as a Weapon of Mass Destruction to fellow intelligent Species and not intelligent Species.

I Stand in opposition to this form of Cruel & Inhumane treatment

* If you provide your mailing address, we will add you to our mailing list to receive future notices about this EIS/OEIS.

| COMMENT NUMBER |
|---|
| S-W-0022 |
| 1 |

March 24, 2008
Hawaii Range Complex EIS/OEIS
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Hawaii 96752-0128

RE: Navy war games and endangered sea mammals

Once again we are writing to strongly object to the Navy plans for war games and resulting marine mammal kill in the "protected" National Monument, the Northwestern Hawaiian Islands. It was mandated that this fish nursery and marine habitat be set aside to protect the endangered Monk Seal and threatened mammals as well as protecting one of the last remaining intact coral reefs.

We have lived a great number of years on the sea in a 50' sailing boat. We have traveled great distances and have learned to love and cherish and appreciate the mysteries of the oceans and its residents. On many occasions we could listen to the songs of the whales through the hull of our boat; each song was unique, a language still unknown, still being studied. We have visited countries that protect and celebrate their natural resources and strive to protect them! It takes a mindset, it takes experiences, and it takes appreciation of God's gifts to understand the importance of each of Natures creatures.

Unfortunately, the U.S.Navy seems hell bent on destroying ocean life and ignoring any protection of the animal residents of the Northwestern Islands. Why is this? Why do we have to go through this exercise every few years, writing and demanding that you work with us not against us in protecting the seas. The Navy has acknowledged that sonar activities will result in marine death. There is still time for you to stop. It is our hope that your decision will favor ceasing war games in and around the Northwestern Hawaiian Islands.

Marilyn & Ed Pollock
Hanalei Hawaii

Marilyn Pollock Ed Pollock

Hanalei, HI

| COMMENT NUMBER |
|---|
| S-W-0023 |
| 1 |
| 2 |
| 1 |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

MARINE MAMMAL COMMISSION
4340 EAST-WEST HIGHWAY, ROOM 700
BETHESDA, MD 20814-4447

7 April 2008

Public Affairs Officer
Pacific Missile Range Facility
PO Box 128
Kekaha, HI 96752-0128

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the supplement to the Draft Environmental Impact Statement/ Overseas Environmental Impact Statement (hereafter referred to as the SEIS) provided by the Department of the Navy to evaluate its planned Navy Pacific Fleet training and defense-related research on the Hawaii Range Complex (HRC). The SEIS specifically addresses three amendments to the original draft environmental impact statement (DEIS). These are (1) modification of the response function and procedure for estimating takes by Level B harassment, (2) a change in the amount and allocation of sonar use over the course of a typical year of training and exercises, and (3) introduction of a new preferred alternative, Alternative 3, which includes the increased level of activity of DEIS Alternative 2 except for sonar use, which would stay at the current level (the Navy's "No Action" alternative). All other aspects of the HRC environmental impact statement remain as written in the original DEIS, published in July 2007. The Marine Mammal Commission offers the following comments and recommendations.

## RECOMMENDATIONS

The Marine Mammal Commission has identified three elements of the SEIS in need of further consideration and revision: estimation of risk, mitigation of risk, and—perhaps most important—evaluation of action alternatives. To address these concerns, the Marine Mammal Commission recommends that the Navy—

- rename its "No Action" alternative corresponding to the current level of action and incorporate a true "No Action" alternative in which active sonar would not be used;
- explain how the original analysis led to such a large error in estimated sonar use and provide some means of verifying and validating the numbers derived from the SPORTS database; and
- more fully explain the analytical procedures used with the new risk function and correct existing errors or sources of confusion to enable the reader to readily follow the process of risk estimation to its conclusion.

## RATIONALE

Recommended revisions to the SEIS are as follows.

***The No-Action Alternative:*** Environmental impact statements are required to include a "No-Action" alternative. The term "No-Action" has been used to designate the alternative in which the proposed action is not taken. As such, the no-action alternative provides a baseline for



PHONE: (301) 504-0
FAX: (301) 504-0

| COMMENT NUMBER |
|---|
| S-W-0024 |
| 1 |
| 2 |
| 3 |





comparing the potential environmental effects of different alternatives. The Navy's continued use of the term "No-Action" to indicate an alternative of continued action at the current level may, therefore, lead to confusion and misunderstanding in two ways. First, as used by Navy, the no-action alternative may be the alternative of greatest environmental consequence, which is counterintuitive and may lead to confusion among decision-makers. Second, and perhaps more important, the use of the term "No-Action" to mean the current level of effort may effectively shift the baseline for comparison among alternatives. The key consideration here is that consequences of any course of action be fully explained. Even if the Navy persists in using the no-action alternative to mean continued action at the current level, it must ensure that the full environmental effects of all alternatives are described, not just those incremental effects arising from changes to the current action. To avoid these sources of confusion, the Marine Mammal Commission recommends that the Navy rename its "No Action" alternative corresponding to the current level of action and incorporate a true "No Action" alternative in which active sonar would not be used. The Commission concurs with the Navy that a true no-action alternative is not likely to be preferred, but the requirement for such an alternative cannot simply be dismissed, particularly when it forms a baseline for informed decision-making.

***Selection of the Preferred Alternative:*** In changing its preference from Alternative 2 in the DEIS to a new Alternative 3 in the SEIS, the Navy has introduced new considerations without sufficient explanation. In the DEIS, the Navy went to great lengths to explain the requirements for realistic readiness training and to justify why none of that level of effort could be sacrificed without tangible, and unacceptable, losses to war-fighting capability and the associated risk to ships and sailors. In Alternative 3, the Navy proposes that it can field the additional vessels and associated aircraft, sailors, weapons, and sensor systems described in Alternative 2 of the original DEIS without a corresponding increase in sonar training. The discrepancy suggests that either the existing level of sonar training is more than necessary to protect existing assets or that the new assets will not require the same level of sonar-based protection. To resolve this apparent inconsistency, the Marine Mammal Commission recommends that the Navy more completely explain how it will achieve the desired level of anti-submarine warfare readiness without increasing the level of sonar use above current levels and, if so, why these same economies of sonar use cannot be applied to the other alternatives.

The Navy also introduces significantly modified estimates of sonar use in the SEIS (e.g., see page ES-3, Table ES-1). The overall result is a reduction of some 63 percent, or about one-third of the original estimate (from 3,495 hours of 53C equivalent usage to 1,284 hours in the case of the alternative for continuing at current levels). The magnitude of this change raises concerns about how such an error could have been made in the original DEIS and whether the newly introduced data from the Sonar Positional Reporting System (SPORTS) database, which has been in use for less than two years, accurately reflect "typical" use. The Marine Mammal Commission recommends that the Navy explain how its original analysis led to such a large error in estimated sonar use and provide some means of verifying and validating the numbers derived from the SPORTS database, either in an appropriately classified independent review or in a redacted, unclassified format that would allow some form of verification of either past or future SPORTS accuracy as a way of confirming the estimated level of risk described in the SEIS.

| COMMENT NUMBER |
|---|
| S-W-0024 (cont.) |
| 1 |
| 2 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

Navy Pacific Missile Range Facility
7 April 2008
Page 3

***New Risk Function:*** In the DEIS, the Navy translated a sinusoidal dose-response curve into a deterministic step-function threshold for ease of analysis (see Table J-3 and associated text). No similar translation of the new risk function is contained in the SEIS (also a sinusoidal curve but with a different slope and bounding parameters), leaving the reader uncertain as to whether the Navy used a different process for calculating risk from exposure surfaces or treated the new risk function curve in the same way, with the 3- or 4-sigma deviation from the 50 percent crossing point being used as a step threshold to conservatively interpret an otherwise continuous function. The uncertainty associated this new risk function, the novel changes to the amount and distribution of sonar use, the introduction of a 24-hour "refresh" rate for accumulating supra-threshold events, the elimination of land areas from the risk estimation surfaces, the elimination of overlapping footprints when multiple sonars are in use (pages 1–2), and other minor problems noted below all undermine confidence in the derived risk estimates and the protocol used to generate them. The Marine Mammal Commission recommends that the analytical procedures used with the new risk function be more fully explained and that errors or sources of confusion be corrected to enable the reader to readily follow the process of risk estimation to its conclusion.

Detailed Comments

The following detailed comments either reinforce our previously made points with reference to specific parts of the HRC SEIS or note additional areas of strength or weakness within the SEIS that merit consideration by the Navy.

- The estimated risks of exposure to sound above the level expected to result in a permanent threshold shift (PTS; see Executive Summary, Table ES-4) are provided to the neared tenth, whereas the corresponding risk estimates by species in Chapter 3 (Table 3.3.1.-1 on page 3-16 and Table 3.3.6-1) are all rounded to the nearest whole number, which is always zero. It is therefore impossible to reconcile the original values with the derived values used in the comparison of alternatives where a cumulative risk to humpback whales above 0.5 is rounded to 1 Level A take (pages ES-4–5).
- The SEIS is not clear as to whether the Level B "takes by sensory impairment" (page 3-5, lines 14–17) are added to the risk function estimate of Level B takes or whether they are treated separately for purposes of estimating overall Level B harassment.
- Table J-51 on page J-29 of the DEIS states that the transmission loss models used 5.5 kHz as the center frequency for the 53C sonars. If this is correct, then the SEIS should explain why this value was used instead of the typical nominal center frequency of 3.5 kHz.
- Efforts to scale certain factors and variables create several problems. First, the size of the grid cells for accumulating energy from multiple pings (e.g., on page J-28) is not clear, nor is it clear how these are reconciled to the $R_{max}$ calculation described on pages J-30–31. On pages J-32–33, the calculation of impact volume is based on a mismatch between the boundaries of the bins used to calculate the various depths of the animals in a population based on dive data and the boundaries used to calculate received sound level (RL) with depth. In such cases, the SEIS seems to indicate that the portion of the population in a given depth bin, say 14 percent at 100–200 meters, is not distributed in some way over the

| COMMENT NUMBER |
|---|
| S-W-0024 (cont.) |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |



Navy Pacific Missile Range Facility
7 April 2008
Page 4

multiple RL depth bins within the 100–200 meter bin (as many as 50 RL bins if 2-meter resolution is used), but rather the entire 14 percent is assigned to each RL depth bin. If our interpretation is correct, this approach could assume the equivalent of more than 100 percent of the estimated animal density for the entire water column within a single dive-depth bin and significantly overestimate the risk value for that grid cell (see section J.1.5.3, page J-46). The cumulative impact of this error would be considerable if in fact it represents a calculation error rather than a misunderstanding of the explanation of the risk estimation process.

- Page J-41, line 39, contains what appears to be a typographical error in which the depth distribution of Bryde's whale distribution is split into depth bins of 0–50 meters, 50–225 meters and <225 meters (which would seem to include the previous two bins).

Finally, to improve subsequent drafts of this EIS, we note that—

- secondary references are used when original references should be cited (p.3-1, lines 23–24); and
- the species accounts beginning on pages 3-18 all state that there will be ### individuals of the named species exposed, when the more correct probabilistic expression is then used in the remainder of the paragraph, namely that there will be ### exposures, but it is impossible to determine how many individuals within the population will experience one or more exposures, although we know that the exposures will not be evenly distributed throughout the members of the population.

****

We hope that the Commission's comments on this SEIS, along with previously provided comments on the DEIS, are useful to the Navy as it develops the final EIS and associated request for a letter of authorization under the Marine Mammal Protection Act. Please contact me if you have any questions or wish to discuss our recommendations and comments.

Sincerely,

Timothy J. Ragen

Timothy J. Ragen, Ph.D.
Executive Director

Cc: CAPT Larry Rice, CNO N45
Hon. Donald Schregardus, DASN E
Craig Johnson, NOAA/NMFS OPR

| COMMENT NUMBER |
|---|
| S-W-0024 (cont.) |
| 10 |
| 8 |
| 9 |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

**International Ocean Noise Coalition**

www.oceannoisecoalition.org

April 6, 2008

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128, Kekaha, Kauai,
Hawaii 96752-0128

ATTN: HRC EIS/OEIS

Re: Supplement to the Draft Environmental Impact Statement/Overseas Environmental Impact Statement (DEIS/OEIS)
Federal Register Notice January 17, 2008 (Volume 73, Number 12) Pages 3242-3243

On behalf of the International Ocean Noise Coalition and its affiliate the Hawaii Ocean Noise Coalition, we submit the following comments on the Supplement to the Draft Environmental impact Statement/Overseas Environmental Impact Statement (Supplement) for the Hawaii Range Complex (HRC). These comments are in addition to our previous comments dated September 17, 2007.

The Supplement introduces modifications to the analytical methodology used to evaluate the effects of mid-frequency active sonar on marine mammals with regard to behavioral impacts and the use of a proposed risk function methodology; changes to the amount and types of sonar allocated to each of the alternatives; and development of a new alternative.

**Risk Function Methodology**

Wild animals display wide variety in terms of the five senses, including their capacity to hear. Just like humans, different individuals for the same species can display different reactions to a stimulus. Hearing capabilities among different individuals of different sexes or varying ages in the same species can differ considerably. Among different species the hearing capability may be even more pronounced. The Navy acknowledges these differences in the Supplement, and is therefore looking towards developing a dose-response or risk continuum function to determine the potential behavioral impacts of MFA sonar on marine mammals.

However the data set used in the Navy's dose-response function as described in the Supplement is very small – a few studies on a few captive toothed whales, one survey on wild baleen whales and one modeled prediction of the levels of MFA sonar received by a pod of orcas in the USS Shoup incident of 2003. Apart from being not representative of all marine mammals in the wild, the captive animals were accustomed to noise and responding to it, and the wild animals likely also had some degree of habituation, the North Atlantic right whales living in the congested Eastern Seaboard of the U.S. and the orcas of North West Washington State being accustomed to ship and whale-watching boat noise.

| COMMENT NUMBER |
|---|
| S-W-0025 |
| 1 |



The Navy and NMFS acknowledge this limitation and thus the risk functions are described as an "interim approach." As in our letter of September 17, 2007, we again point out the United States' obligations under Principle 15 of the United Nations Rio Declaration of 1992 to which the U.S. is a signatory that states "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

The Navy should not be using a lack of data as reason to press ahead with its preferred noise levels justifying it as the "best available science." Precaution should prevail, especially given the vastness of the Hawaii Range Complex, the uniqueness of the marine biodiversity in the area and the planned almost 2,000 hours of active sonar use (plus the dipping sonar, sonar buoys and MK-48 runs).

Apart from the limited data set, the risk continuum function approach does not account for non-auditory noise impacts, the impacts of masking or cumulative and synergistic effects of several noise sources. It does not account for long-term impacts on marine mammals. It also does not take into account impacts to individual animals, but populations of animals. This is troublesome given that in any population there could be key individuals which, if negatively impacted by MFA sonar exposure, could result in the population being adversely affected, for example, by following the key individual into a hazardous situation.

Given the limitations of the dose response methodology, once applied the Navy predicts that 50% of marine mammals will be behaviorally impacted at received levels of 165 dB re: 1µPa rms with the other 50% being behaviorally impacted at levels from 120 to 195 dB re: 1µPa rms.

We still maintain, as stated in our September 17, 2007 letter, that the whales in the Bahamas stranding died when exposed to levels of MFA sonar between 150 and 160 dB – which is still much lower than the levels at which the Supplement says 50% of animals will behaviorally respond.

The fact that the Navy predicts *any* animals being behaviorally impacted at 120 dB re: 1µPa rms, again should bring in application of a precautionary approach since those animals could be critical to the survival of a marine mammal population.

**Reduced Modeled Number of MFA Sonar Hours and the New Alternative**

In the Supplement, the Navy has reduced the predicted number of events or hours of active sonar use for the different alternatives presented in the DEIS/OEIS and introduced a new alternative which includes the maximum actions of alternative two, but results in the same number of events or hours of active sonar use as the 'no action alternative'.[1]

[1] The 'No action alternative' is a misnomer because it does not mean that the navy will not use MFA sonar or other noise generating sources, but that it will not increase its noise producing activities.

| COMMENT NUMBER |
|---|
| S-W-0025 (cont.) |
| 2 |
| 3 |
| 4 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

While we are pleased that the Navy's planned active sonar usage is decreased overall, we maintain that the number of hours of active sonar use is still too high and the levels of sonar too intense.

We appreciate the opportunity to submit these comments and look forward to them being addressed in full.

Sincerely,

Marsha Green
North American Representative

Marti Townsend
Hawaiian Ocean Noise Coalition

**COMMENT NUMBER**
**S-W-0025 (cont.)**

PHONE (808) 594-1888 FAX (808) 594-1865

**STATE OF HAWAI'I**
**OFFICE OF HAWAIIAN AFFAIRS**
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD07/3146C

April 4, 2008

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kaua'i 96752-0128
ATTN: HRC EIS/OEIS

**RE: Draft Environmental Assessment and Overseas Environmental Impact Statement Supplement for Proposed Upgrades and Modernization in the Hawai'i Range Complex.**

To Whom It May Concern:

The Office of Hawaiian Affairs (OHA) is in receipt of your request for written comments regarding the Draft Environmental Assessment (DEA) and Overseas Environmental Impact Statement (OEIS) Supplement for Proposed Upgrades and Modernization in the Hawai'i Range Complex. This State has a constitutional mandate, statutory requirements and a history of caselaw that forces it not to simply consider Native Hawaiians and their culture and traditions, but to preserve and protect Native Hawaiian culture and traditions. Therefore, the people of the State of Hawaii and the United States of America established a public trust which includes among other responsibilities, betterment of conditions for native Hawaiians. The people of the State of Hawaii reaffirmed their solemn trust obligation and responsibility to native Hawaiians and furthermore declared in the state constitution that there be an office of Hawaiian affairs to address the needs of the aboriginal class of people of Hawaii.[1]

OHA's Mission Statement is:

> To mālama Hawai'i's people and environmental resources, and OHA'a assets, toward ensuring the perpetuation of the culture, the enhancement of the lifestyle and the protection of entitlements of Native Hawaiians, while

[1] See Hawaii Revised Statutes (HRS) § 10-3(1).

**COMMENT NUMBER**
**S-W-0026**



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

enabling the building of a strong and healthy Hawaiian people and nation, recognized nationally and internationally.

It is our duty to "[a]ssess[] the policies and practices of other agencies impacting on native Hawaiians and Hawaiians, and conduct[] advocacy efforts for native Hawaiians and Hawaiians."[2] In this capacity, we offer comments on this proposed project.

The introductory paragraph of the July 27, 2007 version of the DEA/OEIS states in section 4.1.2.4.9 that, "These exposure analyses assume that MFA sonar poses no risk to marine mammals if they are not exposed to sound pressure levels from the mid-frequency active sonar above some critical value." (emphasis added). OHA objects to this assumption and points to the very next sentence in the DEA/OEIS which states:

> Though, active sonar could have various indirect, adverse effects on marine mammals by disrupting food chains, a species' predators or a species' competitors; however, the Navy and NMFS (National Marine Fisheries Service) did not identify situations where this concern might apply to marine mammals under the National Marine Fisheries Service's jurisdiction.

OHA also points out that the DEA on page 4-17 states that, "A small number of fish are expected to be injured by detonation of explosive, and some fish located in proximity of the initial detonations can be expected to die." This is a direct contradiction. Further, OHA stresses that potential adverse effects to what a species' eats, for example is a direct adverse effect to the species' itself. Therefore, OHA urges that the sonar analysis take these admitted potential effects into account.

OHA cannot support a proposed undertaking with the potential for severe harm that supports itself with an assumption and with an applicant that has been working "over the past several years" on developing an "original metric" based on that assumption.[3]

While it is clear that the Navy is using SPL rather than SEL and dose function analysis as the metric for behavioral disturbance, it is not clear why. The National Environmental Policy Act requires that actual analysis be provided for decision-makers so that an informed decision can be made. OHA realizes that SEL and acoustic threshold models create a bright line and a hard and fast point where the applicant is not allowed to go beyond when using sonar. The new effort to define a mathematically representative curve and applicable model input parameters is by its very definition in the supplement vague.[4] It creates a range where the harm may be evaluated and, therefore, inherently

[2] HRS § 10-3(4).
[3] DEA/OEIS section 4.1.2.4.9.
[4] Supplement, page es-2.

| COMMENT NUMBER |
|---|
| S-W-0026 (cont.) |
| 1 |
| 2 |
| 5 |
| 3 |
| 4 |



contains more flexibility when calculating harm to species and Endangered Species Act take permits. OHA objects to this.

The DEIS on page 4-57 states,

> Using both of these methods (the confusing hybrid of acoustic dose-functions and acoustic thresholds) to predict the number of marine mammals that might be "taken" by mid-frequency active sonar during training exercises will over-estimate the number of mammals by between approximately 5 and 10 percent.

While this may sound good and serve to ensure that the Navy has applied for enough take permits, it is not what the law requires. Both the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) require a specific number for a limited number of permits. OHA stresses that an over-estimate is not acceptable and asks for a specific data set.

Additionally, the Navy themselves state in section 4.1.2.4.9.3 that "sound exposure level may be a better metric for estimating the potential effects of sonar exposures on an animal's hearing because it represents an accumulation of energy and the sensitivity of the mammalian ear degrades as energy accumulates." (emphasis added). Therefore, OHA was surprised to learn the Navy's reason for using their untried and original approach now is because, "using SPL rather than SEL makes more data available."[5] Further, the Navy states it will have to "interpret" acoustic dose-functions "to compensate for the biases and uncertainties that are inherent in the data used to produce them."[6]

OHA is concerned that the Navy proposes to use SPL based on an assumption (without analysis) that sonar poses no risk to marine mammals (despite the adverse effect to what they eat) if they are not exposed to SPL above some critical value. This is also in contradiction to what the Navy stated that other metrics are better for estimating harm and that their proposed method contains inherent biases and uncertainties. Therefore, OHA requests that more analysis be presented as to why the Navy is changing from one metric to another and further, to present clearly why the one they choose to use is the best method.

OHA also seeks clarification regarding the statements made in the DEIS/OEIS that it will "continue to use acoustic thresholds to estimate the probability of temporary or permanent threshold shifts and for behavioral responses to explosives."[7] Then, on the

[5] Section 4.1.2.4.9.3a, page 4-63.
[6] Section 4.1.2.4.9.4a, page 4-63b.
[7] Section 4.1.2.4.9, page 4-55.

| COMMENT NUMBER |
|---|
| S-W-0026 (cont.) |
| 6 |
| 7 |
| 8 |

very next page (4-56), the Navy states that it will "continue to use acoustic thresholds to estimate the number of marine mammals that might be 'taken' through sensory impairment" for mammals exposed to mid-frequency sonar and that the Navy will use "acoustic dose functions to estimate the number of marine mammals that might be 'taken' by behavioral harassment" due to exposure to mid-frequency sonar.

OHA is unsure of what method the Navy is proposing to use in specific instances. Our confusion was only deepened when we read on page es-2 in the Supplement that, "Following publication of the DEIS/OEIS, the Navy continued working with the National Marine Fisheries Service to define a mathematically representative curve and applicable model input parameters that would be more appropriate than that used in the DEIS/OEIS." The DEIS/OEIS was published in July of 2007. Therefore, OHA asks if this new model is complete or is still being developed.[8] OHA also asks why the Navy did not just wait eight months to publish the DEIS/OEIS to incorporate what the Navy believes is a more appropriate model into the original draft. Additionally, it is OHA's understanding that while the Navy and NMFS are working together, NMFS has not approved or accepted the Navy's "original approach" towards acoustic modeling. OHA seeks clarification on this point from the Navy.

OHA is also concerned with the Sonar Positional Reporting System (SPORTS). OHA understands that SPORTS is a database tool that determines the geographic locations of sonar use. Further, we note that all commands employing mid frequency active (MFA) sonar and sonobuoys have been required to populate the SPORTS database by reporting MFA sonar use on a daily basis. OHA inquires as to when SPORTS became functional in estimating sonar usage geographically and to determine potential effects to marine mammals.

OHA points out that the Navy in their DEIS/OEIS states that, "Existing studies of behavioral effects of man-made sounds in marine environments remain inconclusive."[9] Therefore the Navy has to rely on "observations of various animals, including humans" to base the relationship represented by acoustic dose-function and behavioral response.[10] We appreciate that the Navy is trying to gather more data by using their original approach SEL model and that the Navy is making better use of its resources (SPORTS) to estimate effects to marine mammals. However, we do ask why SPORTS was not utilized earlier for this purpose and also inquire as to the accuracy, therefore, of previous data and

[8] The DEIS/OEIS on page 4-58 states, "Over time, as the amount of data available to generate acoustic dose-functions increases,the Navy and NMFS expect to develop a suite of dose-functions [...]". OHA asks how much data was gathered in the eight months since the July DEIS/OEIS was published and notes that this indicates that this model is still in progress.
[9] Section 4.1.2.4.9, page 4-53.
[10] Section 4.1.2.4.9, page 4-56.

| COMMENT NUMBER |
|---|
| S-W-0026 (cont.) |
| 9 |
| 10 |



statements the Navy made regarding potential adverse effects of sonar to marine resources.

The purpose of the DEA is to weigh the environmental effects of various alternatives to the proposed project. OHA stresses that this cannot be done when the applicant creates original approaches for analysis in some cases, yet relies on the older approach in other cases, and then indicates that their preferred method is not only flawed, but still being developed. It seems clear that even the applicant acknowledges that in this case, in regard to the effects of mid frequency sonar on marine mammals, that both a lack of information exists and that there will be an adverse effect. For example, the Navy's new preferred alternative states on page es-4 of the Supplement that, "This alternative would allow the Navy to meet its future non-antisubmarine training and RDT&E mission objectives and avoid increases in potential effects to marine mammals above historic levels of antisubmarine warfare (ASW) training in the HRC. (emphasis added)

This is a clear admission that training in the HRC (Hawaii Range Complex) does have effects to marine mammals that must be adverse or negative if they are to be avoided. This statement directly counters other Navy statements made in the past. For example, the statement made in section 2.2 of the October 2007 Environmental Assessment (EA) for Undersea Warfare Exercise within the HRC which reads, "The use of mid-frequency active tactical sonar in ASW (anti-submarine warfare) training has been occurring in the Hawaiian Islands for over 60 years with no direct evidence of harm to marine mammals." That EA also states that, "based on the analysis presented herein, the U.S. Navy concludes that the proposed USWEX activities would result in no effect to blue whales, North Pacific right whales, Hawaiian monk seals, or endangered sea turtles."[11]

This contradiction once again raises concerns for OHA regarding the accuracy of the data that the Navy is using, the method that they choose to use to analyze adverse effects to marine resources and the validity of their past assurances that their actions caused no harm to marine mammals despite evidence to the contrary.[12] Therefore, OHA recommends adopting a precautionary approach towards this proposed action.[13] ,

[11] EA, 7.0 Conclusions and Recommendations, page 7-1.
[12] For example, the events in 1996 when an unusual stranding event took place involving 12 Cuvier's beaked whales in the Mediterranean Sea near Greece coinciding with sonar "sound detecting system trials," the nine Cuvier's beaked whales found dead on 24–25 September 2002 on the Canary Islands of Fuerteventura and Lanzarote in conjunction with the Neo Tapopn exercises, and the March 2000 occurrence, when whales of four different species, including Cuvier's beaked whales, two minke whales, and a dolphin stranded in the Bahamas as a result of tactical mid-frequency sonar transmitted from U.S. Navy vessels. Most notably, the subsequent Joint Interim Report for the Bahamas Marine Mammal Stranding Event of 15-16 March 2000, prepared by the Navy and NMFS, concluded that the Navy's mid-frequency sonar was the "most plausible source of this acoustic or impulse trauma."
[13] This principle has become a binding norm of customary international law. (1) Principle adopted by the UN Conference on the Environment and Development (1992) that in order to protect the environment, a

| COMMENT NUMBER |
|---|
| S-W-0026 (cont.) |
| 11 |
| 12 |

Hawaiian waters are home to 27 species of marine mammals including five endangered whale species.[14] Further, OHA recognizes that the Hawaiian Monk seal is in crisis because the population is now declining at a rate of about 4 percent yearly.[15] Biologists estimate the current population at about 1,200 individuals.[16] Biologists' models predict the species' population will fall below 1,000 animals within the next three to four years, which places the Hawaiian Monk seal among the world's most endangered species.[17] All of this prompted the National Oceanic and Atmospheric Agency to sign a new Hawaiian Monk seal recovery plan in August 2007 which stated, "the Hawaiian monk seal is headed to extinction if urgent action is not taken."[18]

This is particularly important because most of the current Hawaiian Monk seal population is found in the HRC in the Northwestern Hawaiian Islands and the Papahānaumokuakea Marine National Monument. The DEIS/OEIS states on page 6-18, section 6.4.5 that, "No specific threats to monk seals from activities associated with the HRC were identified in the Plan." This statement contradicts all the prior evidence and the Navy's now preferred alternative as the Navy is now seeking to avoid increases in potential effects to marine mammals above historic levels of antisubmarine warfare (ASW) training in the HRC.

Our concerns are amplified when we read in the example illustrated in figure 4.1.2.4.9-2 of the DEIS/OEIS using the "particular acoustic dose-functions the Navy and NMFS (National Marine Fisheries Service) developed for this EIS", it states that "about 50 % of the marine mammals exposed to mid-frequency active sonar at a received level of 180dB would be expected to exhibit behavioral responses that NMFS would classify as harassment for the purposes of the MMPA." This apparently means that while there are 668 dose-function exposures to monk seals, this could actually only reflect those animals that "exhibit behavioral responses" to the exposure. Many more will be exposed, however, to a sound that could qualify as harassment under the MMPA and also a take under the ESA. Figure 4.1.2.4.9-2 uses a 50% ratio, which would mean that the entire population of monk seals in the entire State would be exposed. This needs to be

precautionary approach should be widely applied, meaning that where there are threats of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation. (2) The precautionary principle permits a lower level of proof of harm to be used in policy-making whenever the consequences of waiting for higher levels of proof may be very costly and/or irreversible. See, for example, Ocean Policy Statement by the President, March 10, 1983, accompanying Proclamation No. 5030, 48 Fed. Reg. 10,605 (1983), the 1995 Migratory and Straddling Stocks Agreement and the 2000 Honolulu Convention, and it has also been recognized in regional and national decisions.

[14] They are the sperm, sei, fin, northern right, and blue whales.
[15] Honolulu Advertiser, August 21, 2007.
[16] Ibid.
[17] Ibid.
[18] Recovery Plan, page V.

COMMENT NUMBER
S-W-0026 (cont.)

13



clarified. A precautionary approach should be adopted and a specific percentage or figure needs to be drawn for effected species and ESA take permits.

OHA appreciates being brought in to this consultation and looks forward to further commenting on this project as it develops. Thank you for the opportunity to comment. If you have any further questions or concerns please contact Grant Arnold at (808) 594-0263 or granta@oha.org.

Sincerely,

Clyde W. Nāmu'o
Administrator

C: Irene Ka'ahanui, Community Resources Coordinator
Office of Hawaiian Affairs, Moloka'i Office
P.O. Box 1717
Kaunakakai, HI 96748

C: Community Resources Coordinator
Office of Hawaiian Affairs, Kaua'i Office
3-3100 Kuhio Hwy. Suite C4
Līhu'e, Hawai'i 96766-1153

C: Thelma Shimaoka, Community Resource Coordinator
Office of Hawaiian Affairs, Maui Office
140 Ho'ohana St., Ste. 206
Kahului, Hawai'i 96732

C: Lukela Ruddle, Community Resources Coordinator
Office of Hawaiian Affairs, Hilo Office
162 A Baker Avenue
Hilo, Hawai'i 96720-4869

COMMENT NUMBER
S-W-0026 (cont.)

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

C: Ruby McDonald, Community Resources Coordinator
Office of Hawaiian Affairs, Kona Office
75-5706 Hanama Place Suite 107
Kailua-Kona, Hawai'i 96740

C: Pearl Ah Ho
Community Resources Coordinator
Office of Hawaiian Affairs, Lana'i Office
P.O. Box 631413 Lana'i City, 96763

C: James L. Connaughton, Chairman
Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

C: Chris Yates, Branch Chief.
National Marine Fisheries Service, Pacific Islands Region
1601 Kapi'olani Blvd., Suite 1110
Honolulu, Hawai'i 96814

C: Aulani Wilhelm, Superintendent
Papahānaumokuākea Marine National Monument, NOAA/NOS
6600 Kalaniana'ole Hwy, Suite 300,
Honolulu, Hawai'i 96825

C: Laura Thielen, Interim Director
State of Hawai'i Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

C: Susan White, Superintendent, Papahānaumokuākea Marine National Monument
U.S. Fish and Wildlife Service
300 Ala Moana Blvd. ,Box 50167
Honolulu, Hawai'i 96850–5000

COMMENT NUMBER
S-W-0026 (cont.)



C: Mike Tosatto, Deputy Administrator
National Marine Fisheries Service, Pacific Islands Regional Office
1601 Kapi'olani Blvd., Ste 1110,
Honolulu, Hawai'i 96814

C: Patrick Leonard, Field Supervisor
U.S. Fish and Wildlife Service, Ecological Services
300 Ala Moana Blvd, Rm 5-231
Honolulu, Hawai'i 96850

COMMENT NUMBER
S-W-0026 (cont.)



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
EPO-08-032

April 3,2008

Mr. J. P. Rios, Captain
Department of the Navy
Commander
United States Pacific Fleet
250 Makalapa Drive
Pearl Harbor, Hawaii 96860-3131

Dear Mr. Rios:

SUBJECT: Draft Environmental Impact Statement (DEIS) I Overseas Environmental Impact Statement (OEIS) for the Hawaii Range Complex

Thank you for allowing us to review and comment on the subject application. The document was routed to the various branches of the Department of Health (DOH) Environmental Health Administration. We have the following Clean Water Branch, Waste Water Branch and General comments.

Clean Water Branch

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

| COMMENT NUMBER |
|---|
| S-W-0027 |
| 1 |



2. Please call the Army Corps of Engineers at (808) 438-9258 to see if this project requires a Department of the Army (DA) permit. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.

3. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

   a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

   b. Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land a e a includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a lag er common plan of development or sale. An NPDES permit is required before the start of the construction activities.

   c. Hydrotesting water.

   d. Construction dewatering effluent.

   You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

4. For types of wastewater not listed in Item 3 above or wastewater discharging into Class 1 or Class AA waters, you may need an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

5. You must also submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating

| COMMENT NUMBER |
|---|
| S-W-0027 (cont.) |
| 2 |
| 3 |
| 4 |
| 5 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.

6. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at http://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at 586-4309.

Waste Water Branch

The document states that the proposed action is to support and conduct current and emerging training and RDT&E operations in the HRC and upgrade or modernize range complex capabilities to enhance and sustain Navy training and testing.

As wastewater generation and treatment and disposal are not a primary concern, we have no objections to the proposed action for the Hawaii Range Facility.

Should there be domestic wastewater generated, we advise the developer that it be treated and disposed of according to our rules.

All wastewater plans must meet Department's Rules, HAR Chapter 11-62, "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. If you have any questions, please contact the Planning & Design Section of the Wastewater Branch at 586-4294.

General

We strongly recommend that you review all of the Standard Comments on our website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

| COMMENT NUMBER |
|---|
| S-W-0027 (cont.) |
| 6 |
| 7 |
| 8 |



If there are any questions about these comments please contact Jiacai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

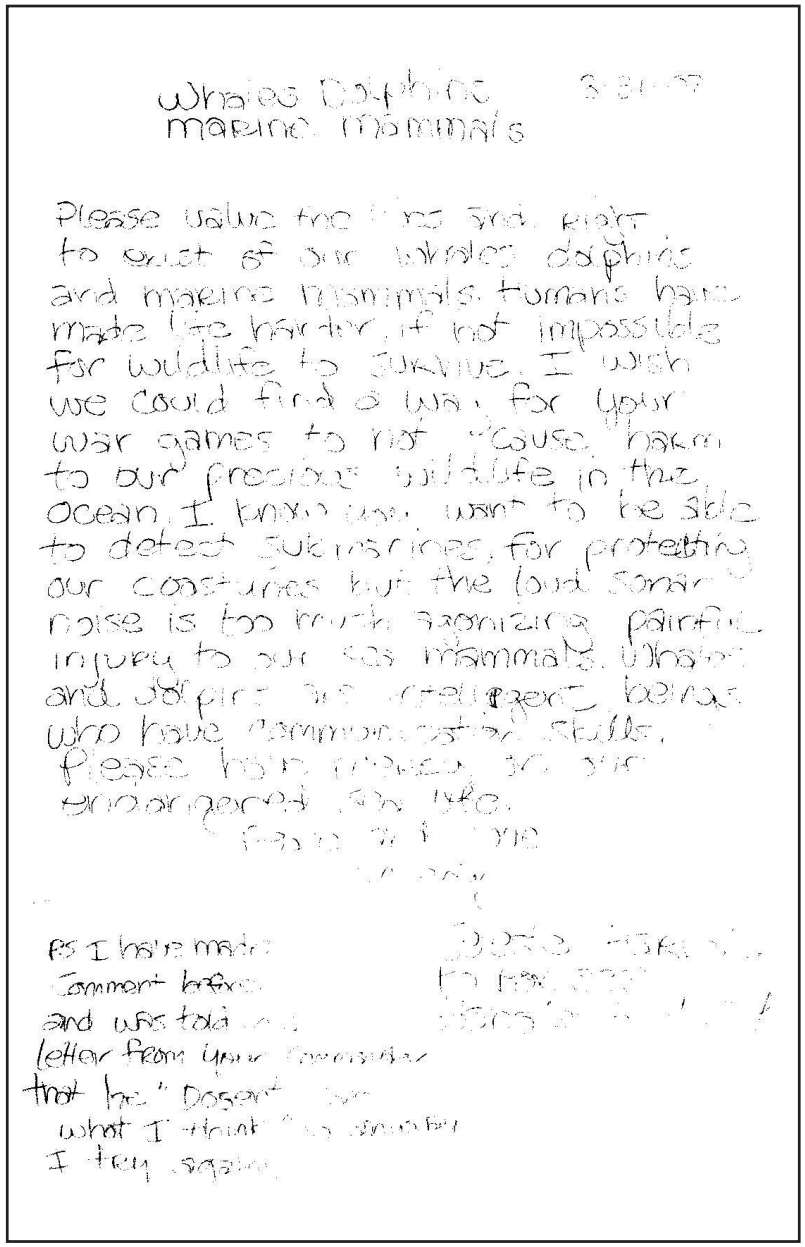
KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB
WWB

| COMMENT NUMBER |
|---|
| S-W-0027 (cont.) |



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**



Whales Dolphins 3-31-08
marine mammals

Please value the lives and right to exist of our whales dolphins and marine mammals. Humans have made life harder, if not impossible for wildlife to survive. I wish we could find a way for your war games to not cause harm to our precious wildlife in the ocean. I know you want to be able to detect submarines, for protecting our coastlines but the loud sonar noise is too much agonizing painful injury to our sea mammals. Whales and dolphins are intelligent beings who have communication skills. Please have mercy on our endangered sea life.

[illegible]

PS I have made comment before and was told in a letter from your commander that he "Dosent" [illegible] what I think [illegible] I try again.

| COMMENT NUMBER |
|---|
| S-W-0028 |
| 1 |

Nina Monasevitch

Lihue, HI

PMRF Public Affairs Officer
P.O. Box 128
Kekaha, HI 96752

April 4, 2008

Re: HRC Supplement to Draft EIS/OEIS

To J.P. Rios and PMRF Public Affairs Officer.

I have read the HRC supplement to Draft EIS/OEIS and am very concerned at the inadequacy and incompleteness of the analysis and methodology. This supplement focuses on direct hearing damage and behavioral changes in marine mammals caused by sonar. It makes critical omissions involving stranding and death of deep diving whales caused by sonar. These include: 1

1) Sonar caused panic reactions leading to strandings followed by death
2) Sonar caused decompression sickness (the bends) followed by death
3) The bends caused by sonar even in the absence of panic

On pages 3.1 and 3.2 of HRC draft document the Navy admits that "Sonar exposure has been identified as a contributing cause or factor in five specific mass stranding events: Greece in 1996; the Bahamas in March 2000; Maderis, Portugal in 2000; the Canary Islands in 2002, and Spain in 2006". 2

All of these mass strandings were likely caused by the above three factors; panic, bubble formation and/or decompression sickness. Why are these items not included in your mathematical analysis? I find this blatantly inadequate, especially since you are failing to take into account published research on bubble growth in marine mammals, which indicates the potential for injury and death at levels far lower than the Navy proposes. The DSEIS also grossly mischaracterizes the support that the bubble growth theory has received in the scientific literature.

In addition, the DEIS omits the best available scientific evidence on exposure levels in sonar – related to mass strandings, particularly that the whales beached in the Bahamas stranding were exposed to no more than 160-65 dB of mid frequency sonar for 30 seconds.

The following scientific literature needs to be included in the EIS analysis, and it needs to be research and published by non-Navy scientists and contractors:

D.S. Houser, R. Howard and S. Ridgway, 'Can Diving-Induced Tissue Nitrogen Supersaturation Increase the Chance of Acoustically Driven Bubble Growth in Marine Mammals?' 213 Journal of Theoretical Biology 183, 190 (2001).

1

| COMMENT NUMBER |
|---|
| S-W-0029 |
| 1 |
| 2 |

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

L.A. Crum, M.R. Bailey, J. Guan, P.R. Hilmo, S.G. Kargl, T.J. Matula, and O.A. Sapozhnikov, 'Monitoring Bubble Growth in Supersaturated Blood and Tissue ex vivo and the Relevance to Marine Mammal Bioeffects.' 6(3) Acoustics Research Letters Online 214 (2005).

J. R. Potter, 'A Possible Mechanism for Acoustic Triggering of Decompression Sickness Symptoms in Deep-Diving Marine Mammals' Paper presented at the IEEE International Symposium on Underwater Technology 2004, Taipei Taiwan, April 2004.

With Hawaii being the mating and nursing grounds to majority of the population of the endangered North Pacific Humpback whale and the only home to critically endangered endemic Hawaiian Monk seal, I find it unconscionable that any type of sonar is allowed in Hawaiian waters. The Hawaiian Monk seal population is declining at 4% a year with current numbers at below 1,200. Monk seals are also deep divers, documented at depths of over 1700 feet. The commerce from Humpback whale watching industry is in the millions annually. In addition, there are 21 other species of cetaceans found in Hawaiian waters that will be adversely affected by sonar. A healthy marine ecosystem, including marine mammals, is critical to Hawaii, not just for tourist dollars, but also for the future survival of our entire planet.

Also, high intensity sonar's impact not only marine mammals but also have been shown to affect fish, giant squid and snow crabs. In a study by the British Defense Research Agency, exposure to sonar signals caused auditory damage, internal injuries, eye hemorrhaging and mortality in commercially caught fish. This presents the possibility that increasing production of intense underwater noise can significantly and adversely impact food supply, employment and the economies of maritime countries.

So, again I state your "science" in the DEIS is severely flawed and inadequate! I request this DEIS be re-done by non-Navy professionals.

I ask you to ask yourself the following, if the earth losses it's ability to sustain life due to destruction of the ecosystem (caused by sonar killing marine species and destroying marine ecosystem, which is the major factor in global health and climate stability) what purpose is your defense system? It's time to look at the big picture. And as we all know, what we take with us when we die is our soul, and the seeds of our actions. Please listen deeply to the truth of your soul.
Mahalo for your attention to this extremely important matter.

Aloha and Peace,

Nina Monasevitch

cc: L. Lingle, D. Akaka, D. Inouye, M. Hirano, N. Abercrombie, B. Baptise, G. Hooser, M. Morita, S. Sagum, B. Asing, M. Rapozo, T. Bynum, J. Fufaro, S. Iseri-Carvalho, R. Kouchi, J. Yukimura



COMMENT NUMBER
S-W-0029 (cont.)



Water Resources Research Center
Environmental Center

UNIVERSITY of HAWAI'I' MĀNOA

April 7, 2008
RE:0776

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Hawaii 96752-0128

Dear Sir/Madam:

NEPA Draft Supplemental Environmental Impact Statement
Hawaii Range Complex

This Supplement to the Draft Environmental Impact Statement/Overseas Environmental Impact Statement (DEIS/OEIS) for the Hawaii Range Complex (HRC) examines a newly proposed option to the alternatives proposed in the original DEIS/OEIS for the HRC prepared in July 2007. This newly proposed alternative includes all training and research, development, test and evaluation (RDT&E) activities described in Alternative 2 with reduced mid-frequency and high frequency active (MFA/HFA) sonar hours. These MFA/HFA sonar hours are at the same level as proposed in the No Action Alternative. Alternative 3 is now the Navy's preferred alternative.

This review was conducted with the assistance of Ryan Riddle, UH Environmental Center.

**General Comments**

We found the Supplemental DEIS/OEIS to be overly technical and very difficult to follow. Part 1502.8 of the CEQ Regulations requires that "[E]nvironmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them." The analysis in this supplement is on par with technical reports which usually accompany draft and final EISs and are aimed at subject specialists. We found it difficult to follow the data presented in this Supplement DEIS/OEIS and suspect most reviewers without training in acoustical engineering will also find it difficult to evaluate. We suggest that Section Three be rewritten and resubmitted for review.

The Supplemental DEIS/OEIS fails to provide a map of where the training that will utilize the MFA/HFA sonar will take place. We understand that the actual training areas were shown in the DEIS/OEIS but it should be shown again in the Supplement. Part of the training

2500 Dole Street, Krauss Annex 19 Honolulu, Hawai'i 96822
Telephone: (808) 956-7361 Fax: (808) 956-3980
An Equal Opportunity/Affirmative Action Institution

COMMENT NUMBER
S-W-0030

1

2



**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

was planned to take place in the Papahānaumokuākea Marine National Monument. We believe that the training should not take place in the waters within the boundary of the National Monument. This would be comparable to conducting infantry maneuvers near the Rainbow Bridge National Monument in Arizona or practicing marine landings on Liberty and Ellis Islands National Monument in New York Harbor.

**Methodology for Applying Risk Function** (pp. 3-3 – 3-6)

Does the "dose increase" referred to in the second paragraph of page 3-4, line 23 refer to the length of the dose or to its intensity? In other words, does dose increase in this context mean that the sonar is used for a longer period of time or is the sonar signal louder? 3

**Summary of Compliance with ESA and MMPA Alternative** 3 (p. 3-47)

In the section on ESA, there should be a comma between "fin whale and Hawaiian monk seal instead of a period in line 21. 4

In the section on MMPA, the Navy is requesting authorization from the National Marine Fisheries Service for 40,457 MMPA Level B harassment takes. This number seems very large. Can the Navy put the number into some kind of perspective? What do other training areas request? 5

Thank you for the opportunity to review this Draft EIS.

Sincerely,

Peter Rappa
Environmental Review Coordinator

cc: OEQC
James Moncur
Ryan Riddle

COMMENT NUMBER

S-W-0030 (cont.)

COMMENT NUMBER

**Exhibit 14.4.1-1. Copy of Written Documents - Supplement to the Draft EIS/OEIS (Continued)**

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Chris Bane | S-W-0001-1 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| | S-W-0001-2 | Biological Resources - Marine | | Thank you for your comment. |
| | S-W-0001-3 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0001-4 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0001-5 | Biological Resources - Marine | | Thank you for your comment. |
| | S-W-0001-6 | Mitigation Measures | 1.0, 2.0, 6.0 | The Supplement to the DEIS was not written to address these alternatives, does not propose to change the Fleet Response Training Plan (FRTP), and was not prepared to assess mitigation. To the extent that a response is required, the Navy considered the DEIS public comments in the preparation of the Supplement to the DEIS, where applicable. As discussed in Chapters 1.0 and 2.0 of the EIS/OEIS, Navy considers but rejects a reduction in training; does not consider alternate locations because this analysis would not be consistent with the purpose and need of this EIS/OEIS. Although Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. Navy's current mitigation measures and their use of the best available science balanced with the requirements of the Navy to train, results in Navy meeting its mission while being protective of the environment. Discussion of Mitigation measures has been revised in Chapter 6.0. |
| Jan Bappe | S-W-0002-1 | Alternatives | | Thank you for your comment. |
| Laurel Brier | S-W-0003-1 | Biological Resources - Marine | 4.1.2.4, 6.1.2 | See response to comment S-T-0001-1. In addition, there is not a scientific basis for defining the parameters of "seasonal avoidance" (e.g., training only in the summer). As discussed in Section 6.1.2, seasonal avoidance, as a mitigation measure, is based on speculative findings from other areas of the world that do not have direct application to the unique environment present in Hawaii. Lacking any scientific basis for seasonal avoidance in Hawaii and lacking any evidence in Hawaii that there has ever been an impact resulting from the lack of these measures, there is no evidence that this mitigation measure would increase the protection of marine mammals. Because year-round deployment is critical for Navy operations, implementation of seasonal avoidance would, however, unacceptably impact the effectiveness of the training. |
| Claire D'Gaia | S-W-0004-1 | Alternatives | | Thank you for your comment. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Raydiance Gonare | S-W-0005-1 | Biological Resources - Marine | | Thank you for your comment. |
| Linda Harmon | S-W-0006-1 | Biological Resources - Marine | | Thank you for your comment. |
| Peggy LeDoux | S-W-0007-1 | Mitigation Measures | 6.2.1 | As discussed in Section 6.2.1, avoidance of the seasonal presence of migrating marine mammals fails to take into account the fact that the Navy's current mitigation measures apply to all detected marine mammals no matter the season. Advance planning to avoid the seasonal presence of migrating marine mammals is not possible given the start of any "season" is variable (dependent on largely unknown environmental factors). To the degree possible, however, Navy already has taken a proactive step in this regard by specifically informing all naval vessels to increase vigilance when the first humpback whales have been sighted around the Hawaiian Islands. Otherwise, limiting training operations to the remaining six months of the year would not only concentrate all annual training and testing activities into a shorter six-month time period, but would also not meet the readiness requirements of the Navy to deploy trained forces. |
| Kaitlyn McKee | S-W-0008-1 | Biological Resources - Marine | 3.2, 4.2 | See response to Comment S-T-0006-1 |
| Betty Rubble | S-W-0009-1 | Alternatives | | Thank you for your comment. |
| | S-W-0009-2 | Biological Resources - Marine | | Thank you for your comment. |
| Mike Moran | S-W-0010-1 | Mitigation Measures | 1.3.2, 4.1.2, 6.0 | It is critical for the Navy to be able to conduct training in a variety of environmental and bathymetric conditions, which may overlap with marine mammal areas. Mitigation measures proposed in Chapter 6.0 should ensure that marine mammals would not be injured by Navy training activities.<br><br>As discussed in 4.1.2, the analytical methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals, the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions. |
| | S-W-0010-2 | Alternatives | 4.2.1, 6.0 | See response to Comment S-T-0005-2 |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Mike Moran | S-W-0010-3 | Alternatives | Appendix F | The Navy does prepare and release After Action Reports. An After Action Report prepared for the 2006 RIMPAC exercises, providing an analysis detailing the reasons for adoption, modification, or rejection of mitigation measures, is provided in Appendix F of the EIS/OEIS. |
| | S-W-0010-4 | Biological Resources - Marine | 4.1.2.4.10.3 | Section 4.1.2.4.10.3 of the EIS/OEIS provides a comprehensive discussion of the stranding of melon-headed whales in Hanalei Bay in 2004. The text describes the relationship of the stranding to both Navy ASW activities occurring approximately 25 nm away from the incident and the activities of people and boats that were in the water with the whales at the time of the stranding. |
| | S-W-0010-5 | Mitigation Measures | 6.0 | As discussed in Section 6.0, avoiding active sonar use within 12 nm from shore or 15.5 mi from the 200-m isobaths was made part of the RIMPAC 2006 authorization by NMFS and was based on the assumption that avoidance of the North American continental shelf was a prudent mitigation measure given the presence of beaked whales in the Gulf of Mexico. NMFS modified the measure for Hawaii because they had received a public comment during rulemaking for a proposed action taking place elsewhere. This measure lacks any scientific basis when applied to conditions in Hawaii. There is no scientific basis for requiring this mitigation measure in the Pacific and no known basis for the specific metrics. During RIMPAC 2006, this mitigation measure precluded active ASW training in the littoral region, which significantly impacted realism and training effectiveness. This procedure had no observable effect on the protection of marine mammals during RIMPAC 2006 and its value is unclear (there is a lengthy history of sonar use in the Hawaiian Islands without any strandings or apparent effect on marine mammals). However, its effect on realistic training is significant |
| Cory Harden Sierra Club | S-W-0011-1 | Alternatives | 6 | Analysis of ongoing litigation is not part of the Proposed Action and alternatives nor is it necessary for compliance with the applicable laws and regulations. Some mitigations discussed in Chapter 6.0 overlap with mitigations raised during litigation. |
| | S-W-0011-2 | Program | 4.1.2.4.12.1, 4.1.2.4.12.2 | As noted in Sections 4.1.2.4.12.1, 4.1.2.4.12.2, classified information is used for some of the analysis in the EIS/OEIS. Accurate conclusions could not be made if this information was not considered. |
| | S-W-0011-3 | Alternatives | | Sonar is currently the best available technology for ASW. Predictions about the future of sonar technology would be speculative and beyond the scope of the Supplement to the Draft EIS/OEIS and the EIS/OEIS. |
| | S-W-0011-4 | Biological Resources - Marine | | Predictions about the future of new ocean life forms and how they will be affected by sonar is beyond the scope of the Supplement to the Draft EIS/OEIS and the EIS/OEIS. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Cory Harden<br>Sierra Club | S-W-0011-5 | Cumulative Impacts | 5 | The primary purpose of the Supplement to the Draft EIS/OEIS was to provide additional information regarding the analytical methodology used to evaluate the effects of MFA sonar on marine mammals. Cumulative effects of activities within the HRC are described within Section 5.0 of the Final HRC EIS/OEIS. |
| | S-W-0011-6 | Alternatives | 4.1.2.4.9.4 | The risk function presented in EIS/OEIS Section 4.1.2.4.9.4 is based on three data sets that NMFS and Navy have determined are the best available and applicable science at this time. Until additional data are available, NMFS and the Navy have determined that these datasets are the most applicable for the direct use in the development of risk function parameters to describe what portion of a population exposed to specific levels of MFA sonar will respond in a manner that NMFS would classify as harassment. |
| | S-W-0011-7 | Alternatives | 4.1.2, Appendix J | Exactly right. Previously, the Navy treated two ships operating together as creating twice the volume as that from a single ship. Upon closer analysis, and due to the maximum SPL metric and the overlapping sound fields created by the ships, Navy found that the impact by two ships operating cooperatively for an hour was less than one ship operating independently for two hours and more than one ship operating independently for one hour. In Hawaii, 2 ships operating cooperatively create 194% of the volume of one ship, so it's almost double, but not quite. The results have been adjusted accordingly. |
| | S-W-0011-8 | Alternatives | 4.1.2.4.6 | Navy used the northern elephant seal threshold because taxonomically, the elephant seal is more closely related to the Hawaiian monk seal than any other seal. A northern elephant seal and the Hawaiian monk seal are in the same sub-family. In addition, the audiogram of the northern elephant seal more closely approximates that of the Hawaiian monk seal. |
| | S-W-0011-9 | Alternatives | | Thank you for your comment. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Barbara Sinclair | S-W-0012-1 | Alternatives | 1.0 | As discussed in Chapter 1.0 of the EIS/OEIS, Navy does not consider alternate locations because this analysis would not be consistent with the purpose and need of this EIS/OEIS. Although Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. Navy training in the HRC has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. Navy's current mitigation measures and their use of the best available science balanced with the requirements of the Navy to train, results in Navy meeting its mission while being protective of the environment. |
| Katherine Stack | S-W-0013-1 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| Gabriela Taylor | S-W-0014-1 | Alternatives | | Thank you for your comment. |
| Lee Tepley | S-W-0015-1 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0015-2 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0015-3 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0015-4 | Alternatives | | Thank you for your comment. |
| Jason Turner Department of Marine Science | S-W-0016-1 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| | S-W-0016-2 | Biological Resources - Marine | 4.1.2.4.7, 4.1.2.4.9.8, 4.1.2.4.10.1, 9.0 | Robin Baird is cited in several sections of the EIS/OEIS, including, but not limited to Sections 4.1.2.4.7, 4.1.2.4.9.8, and 4.1.2.4.10.1. Numerous documents and reports prepared by Mr. Baird are cited in Section 9.0 (references). |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Jason Turner<br>Department of Marine Science | S-W-0016-3 | Mitigation Measures | 6.0 | As described in Section 6.0, the Navy is developing an Integrated Comprehensive Monitoring Plan (ICMP) to determine behavioral and population level changes to marine mammals within Navy ranges. This Plan will also continue or initiate studies of abundance, distribution, habitat utilization, etc. for sensitive species of concern using visual surveys, passive and acoustic monitoring, radar and data logging tags (satellite or radio linked to record data on acoustics, diving and foraging behavior, and movements). The Plan will include the evaluation of Navy lookouts that observe for all objects in or on the water including debris, periscopes, other vessels, and marine animals. As of this EIS/OEIS, the Navy and NMFS are developing an HRC-specific monitoring plan which may include third party monitoring efforts by qualified entities as a component of the ICMP for unit level exercises. Observations of marine mammals and sea turtles during unit-level training exercises will also be recorded to add to a larger database. |
| | S-W-0016-4 | Biological Resources - Marine | '1.7.1, 13,0, 14.0 | See response to Comment S-T-0013-4. |
| Sonya Wolfe | S-W-0017-1 | Alternatives | 4.1.2.4 | Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |
| Rulin Xiw | S-W-0018-1 | Cumulative Impacts | | Thank you for your comment. |
| Joann Yukimura<br>Kauai County Council | S-W-0019-1 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| | S-W-0019-2 | Mitigation Measures | 4.1.2.4, 6.0 | See response to comment S-T-0001-2. |
| | S-W-0019-3 | Mitigation Measures | 6.2.1 | See response to comment S-T-0001-3. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Joann Yukimura<br>Kauai County Council | S-W-0019-4 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| Peter Courture | S-W-0020-1 | Mitigation Measures | 6.2.1 | See response to Comment S-T-0001-1. As discussed in Section 6.2.1, avoidance of the seasonal presence of migrating marine mammals fails to take into account the fact that the Navy's current mitigation measures apply to all detected marine mammals no matter the season. Advance planning to avoid the seasonal presence of migrating marine mammals is not possible given the start of any "season" is variable (dependent on largely unknown environmental factors). To the degree possible, however, Navy already has taken a proactive step in this regard by specifically informing all naval vessels to increase vigilance when the first humpback whales have been sighted around the Hawaiian Islands. Otherwise, limiting training operations to the remaining six months of the year would not only concentrate all annual training and testing activities into a shorter six-month time period, but would also not meet the readiness requirements of the Navy to deploy trained forces. |
| | S-W-0020-2 | Mitigation Measures | 6.0 | EIS/OEIS Chapter 6.0, Mitigation Measures, presents the U.S. Navy's protective measures, outlining steps that would be implemented to protect marine mammals and Federally listed species during training events. It should be noted that these protective measures have been standard operating procedures for unit-level antisubmarine warfare training since 2004. In addition, The Navy's current mitigation measures reflect the use of the best available science balanced with the National Marine Fisheries Service (NMFS) approach and the requirements of the Navy to train. |
| | S-W-0020-3 | Alternatives | 4.1.2 | One of the express purposes of the analysis in the EIS/OEIS is to evaluate the potential impacts of Navy MFA/HFA sonar on marine mammals. As acknowledged by the National Resource Council, very little is known about the nature of the effects of sonar on marine mammals. |
| | S-W-0020-4 | Program | 4.1.2.4, 4.1.2.5.4 | The Navy is in compliance with all applicable environmental laws and is consulting with the Hawaii Coastal Zone Management Program in accordance with the Coastal Zone Management Act. Also, see response to comment S-T-0001-1. (see EIS/OEIS Sections 4.1.2.4 and 4.1.2.5.4). |
| Diane Ley<br>County of Hawaii | S-W-0021-1 | Miscellaneous | | Thank you for your comment. |
| V. Springs | S-W-0022-1 | Policy/NEPA Process | | Thank you for your comment. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Marilyn & Ed Pollock | S-W-0023-1 | Biological Resources - Marine | 3.2, 4.2 | Sections 3.2 and 4.2 of the EIS/OEIS analyzed the effects of proposed Navy training on that portion of the NWHI Marine National Monument that is affected by their activities and that analysis concludes that the Proposed Action will not result in injury or mortalities of marine mammals. |
| | S-W-0023-2 | Mitigation Measures | 6.0 | Each nation has its own training needs based on that nation's forces, capabilities, missions, and environmental requirements. The Navy is a global environmental leader. As part of the Navy's commitment to sustainable use of resources and environmental stewardship, the Navy incorporates mitigation measures that are protective of the environment into all of its activities. The Navy's current mitigation measures reflect a balance between training requirements and Navy's important role in ensuring environmental protection. These measures have been the subject of extensive discussions between NMFS and the Navy, and evaluated for mission impacts, probable effectiveness, and the ability to implement. Mitigation measures are described in detail in Chapter 6.0. |
| Timothy Ragen Marine Mammal Commission | S-W-0024-1 | Alternatives | 2.2.1.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the No-Action alternative is the continuation of current training practices. The "No-action" alternative continues with the present course of action until that action is changed. In requiring consideration of a No-action Alternative, the Navy compares the potential impacts of the proposed major Federal action to the known impacts of maintaining the status quo. This provides the public a range of potential effects based on a range of activity. |
| | S-W-0024-2 | Alternatives | 2.2.2.4, 4.1.2 | The original analysis was based on data prepared as part of the program described in Section 1.3 of the final EIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only eighteen months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes. |
| | S-W-0024-3 | Alternatives | Appendix J | Appendix J has been revised to assist the reader to readily follow the process of risk estimation to its conclusion. |
| | S-W-0024-4 | Alternatives | ES, 4.0 | The calculations in the Executive Summary of the EIS/OEIS, show to the nearest tenth because the values are all below 1.0 and because Navy policy states that the ESA's "may affect" threshold is triggered with a value of 0.05. The table in Chapter 4.0, (SDEIS, 3.3.1-1) values are rounded to whole numbers. In this specific example, the fractional numbers in the ES table are all Humpback Whale exposures, the sum of which equals 0.5. This is rounded to 1 as shown in the Table in Chapter 4.0. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Timothy Ragen Marine Mammal Commission | S-W-0024-5 | Alternatives | 4.1.2 | The risk function plus the TTS equals the total level B harassment. Explained in Section 4.1.2. |
| | S-W-0024-6 | Alternatives | Appendix J | Appendix J has been revised to assist the reader to readily follow the process of risk estimation to its conclusion. |
| | S-W-0024-7 | Alternatives | 4.1.2, Appendix J | There is a difference between 'animals' and 'densities.' Indeed, in the sperm whale example, the density of whales (animals/cubic km) in the first depth interval is a greater number than the number of animals in the water column, but that is because they are different units. A higher density doesn't mean a large number of animals; it just means there are more of them in less space.<br><br>The number of RL bins does not depend on the width of the depth intervals. Even with a very narrow depth interval, there could be sound received at all levels (even though the lower received levels may only be received in that interval a long distance from the source). Since the risk function weighs the risk of harassment all the way down to 120 dB, the RL bins must measure that low in every depth interval. As explained above, it is appropriate to multiply the animal densities by the expected ensonified volumes in each RL bin. |
| | S-W-0024-8 | Miscellaneous | | The two noted references are primary resources, which utilize raw data from other sources. |
| | S-W-0024-9 | Biological Resources - Marine | 4.1.2 | Correct. It would be impossible to determine how many individuals within a given population would experience one or more exposures. The model does provide an estimate of the number of potential exposures to the species (based on densities of each species). |
| | S-W-0024-10 | Alternatives | J.1.5.2.1 | The value has been corrected to read >225 meters. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Marsha Green<br>North American Ocean Noise Coalition | S-W-0025-1 | Alternatives | 4.1.2.4.13.2 | Based on the analysis presented in the EIS/OEIS (see Section 4.1.2.4.13.2), the Navy and NMFS do not believe there will be any serious or irreversible damage to the environment or biological resources from continuation of Navy activities, including sonar use. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals, NMFS and the Navy closely coordinated the development of the risk function to make use of the best available and applicable science. The cutoff for the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas and during some parts of the year in Hawaiian waters. Conversely, the Rio Declaration, Principle 15 does not apply because it addresses actions where there are threats of serious or irreversible damage indicating a “lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”<br><br>While the risk function is applied to exposed populations, the results address impacts on individual animals in that behavioral harassment occurs at the level of the individual. While data supporting quantitative analysis specific to key individuals are not available, the risk function allows us to account for variance in response between individuals within a population. The EIS/OEIS also accounts for non-auditory effects, long-term effects, and synergistic effects. |
| | S-W-0025-2 | Alternatives | 5.0 | While the risk function is applied to exposed populations, the results address impacts on individual animals in that behavioral harassment occurs at the level of the individual. While data supporting quantitative analysis specific to key individuals are not available, the risk function allows us to account for variance in response between individuals within a population. The EIS/OEIS also accounts for non-auditory effects, long-term effects, and synergistic effects (refer to Chapter 5.0). |
| | S-W-0025-3 | Alternatives | 4.1.2 | The Navy does predict that 50% of animals exposed to 165 dB will respond in a manner that NMFS classifies as Level B harassment; however, it is not correct to state that the other 50% are being behaviorally impacted at levels from 120 to 195 dB re: 1µPa rms. Please see Section 4.1.2, Figure 4.1.2.4.9.7-1. Navy and NMFS have used a science-based approach using the best available and most applicable science in assessing exposure effects. Regarding the commenter's concern for the application of the approach, see response to comment S-W-0025-1. |
| | S-W-0025-4 | Alternatives | | Thank you for your comment. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Clyde Namu'o<br>State of Hawaii | S-W-0026-1 | Alternatives | 4.1.2 | The Navy and NMFS, in the role as regulator and as a cooperating agency, developed the risk function for analysis of impacts using the best available and applicable science. As described in Southall et al (2004) and as discussed in Section 4.1.2, there is paucity of data upon which to base threshold criteria; however, the Navy is following the recommendations of NMFS and using the criteria established by NMFS through a process of scientific review and recommendation. |
| | S-W-0026-2 | Biological Resources - Marine | 4.1.2.2.1 | The effects of underwater detonations on fish is described in Section 4.1.2.2.1. The effects on fish from a given amount of explosive depends on location (including proximity to the detonation), season, and many other factors. |
| | S-W-0026-3 | Alternatives | | Thank you for your comment. |
| | S-W-0026-4 | Alternatives | | Thank you for your comment. |
| | S-W-0026-5 | Alternatives | | There should be no effects on the prey species of any protected species that could have impact on individuals of populations. |
| | S-W-0026-6 | Alternatives | 4.1.2 | The Navy and NMFS, in the role as regulator and as a cooperating agency, developed the risk function for analysis of impacts using the best available and applicable science. As described in Southall et al (2004) and as discussed in Section 4.1.2, there is paucity of data upon which to base threshold criteria; however, the Navy is following the recommendations of NMFS and using the criteria established by NMFS through a process of scientific review and recommendation. |
| | S-W-0026-7 | Alternatives | 4.1.2 | The Navy and NMFS, in the role as regulator and as a cooperating agency, developed the risk function for analysis of impacts using the best available and applicable science. As described in Southall et al (2004) and as discussed in Section 4.1.2, there is paucity of data upon which to base threshold criteria; however, the Navy is following the recommendations of NMFS and using the criteria established by NMFS through a process of scientific review and recommendation. |
| | S-W-0026-8 | Alternatives | 4.1.2 | The discussion in 4.1.2 has been expanded to better describe the methodology. The development of this modeling is discussed in detail. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Clyde Namu'o<br>State of Hawaii | S-W-0026-9 | Alternatives | 2.2.2.4, 4.1.2 | The original analysis was based on data prepared as part of the program described in Section 1.3 of the final EIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only eighteen months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes. |
| | S-W-0026-10 | Alternatives | 2.2.2.4, 4.1.2 | The original analysis was based on data prepared as part of the program described in Section 1.3 of the final EIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only eighteen months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes. |
| | S-W-0026-11 | Alternatives | 4.1.2 | See 4.1.2 for details of the sonar modeling. |
| | S-W-0026-12 | Alternatives | 4.1.2 | In the past, The Navy has used different thresholds for effects on marine mammals. For example, 2006 RIMPAC EA used 173 dB as a threshold for behavioral effects under the MMPA. For the EIS/OEIS, NMFS has required a different risk function approach be used to determine harassment effects on marine mammals. This is reflected in the risk function curve found in Section 4.1.2. The Navy believes based on 60 years of sonar usage in Hawaii there have been no known harmful or long term effects on marine mammal populations or species. |
| | S-W-0026-13 | Alternatives | 4.1.2.6 | The text has been revised regarding the Hawaiian Monk Seal in the EIS/OEIS for each of the alternatives. |
| Kevin Sunada<br>State of Hawaii | S-W-0027-1 | | 4.0 | All proposed activities have been evaluated for potential impacts to State waters in the Chapter 4 Water Resource sections of the EIS/OEIS and found to not have impacts. |
| | S-W-0027-2 | | | All Navy activities will follow existing Army regulations and standard operating procedures, as well as future plans and regulations. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Kevin Sunada<br>State of Hawaii | S-W-0027-3 | | 4.3.2.1.13 | Depending on the action or construction being undertaken, a variety of Federal and State approvals, comments, and permits may be required. In addition, all construction activities would follow Spill Prevention, Control, and Countermeasures Plans and transportation safety measures; therefore, potential effects on surface and groundwater resulting from accidental spills of hazardous materials would be minimized.<br><br>The EIS/OEIS also evaluated the potential impacts of launch emissions, spills of toxic materials, and early flight termination. The analysis concluded that hydrogen chloride emissions would not significantly affect the chemical composition of surface or groundwater; that there would be no significant increase in aluminum oxide in surface waters due to launches; that sampling of surface waters in the vicinity of the launch site showed that hydrogen chloride, potentially deposited during past launches, has not affected surface water quality on PMRF or adjacent areas; and that contamination from spills of toxic materials would be highly unlikely. A NPDES permit is not required for launch activity due to the lack of significant storm water runoff (see Section 4.3.2.1.13.2). |
| | S-W-0027-4 | | 4.3.2.1.13 | Depending on the action or construction being undertaken, a variety of Federal and State approvals, comments, and permits may be required. In addition, all construction activities would follow Spill Prevention, Control, and Countermeasures Plans and transportation safety measures; therefore, potential effects on surface and groundwater resulting from accidental spills of hazardous materials would be minimized.<br><br>The EIS/OEIS also evaluated the potential impacts of launch emissions, spills of toxic materials, and early flight termination. The analysis concluded that hydrogen chloride emissions would not significantly affect the chemical composition of surface or groundwater; that there would be no significant increase in aluminum oxide in surface waters due to launches; that sampling of surface waters in the vicinity of the launch site showed that hydrogen chloride, potentially deposited during past launches, has not affected surface water quality on PMRF or adjacent areas; and that contamination from spills of toxic materials would be highly unlikely. A NPDES permit is not required for launch activity due to the lack of significant storm water runoff (see Section 4.3.2.1.13.2). |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # Resource | EIS Section | Response Text |
|---|---|---|---|
| Kevin Sunada<br>State of Hawaii | S-W-0027-5 | 4.3.2.1.13 | Depending on the action or construction being undertaken, a variety of Federal and State approvals, comments, and permits may be required. In addition, all construction activities would follow Spill Prevention, Control, and Countermeasures Plans and transportation safety measures; therefore, potential effects on surface and groundwater resulting from accidental spills of hazardous materials would be minimized.<br><br>The EIS/OEIS also evaluated the potential impacts of launch emissions, spills of toxic materials, and early flight termination. The analysis concluded that hydrogen chloride emissions would not significantly affect the chemical composition of surface or groundwater; that there would be no significant increase in aluminum oxide in surface waters due to launches; that sampling of surface waters in the vicinity of the launch site showed that hydrogen chloride, potentially deposited during past launches, has not affected surface water quality on PMRF or adjacent areas; and that contamination from spills of toxic materials would be highly unlikely. A NPDES permit is not required for launch activity due to the lack of significant storm water runoff (see Section 4.3.2.1.13.2). |
| | S-W-0027-6 | | Navy will comply with all State Water regulations for all its current and future operations at the HRC. |
| | S-W-0027-7 | | Thank you for your comment. |
| | S-W-0027-8 | | Thank you for your comment. |
| C. Harvel | S-W-0028-1 | | Thank you for your comment. |
| Nina Monasevitch | S-W-0029-1 | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-W-0029-2 | 4.1.2, 6.0 | See response to Comment S-T-0005-2. |
| Peter Rappa<br>University of Hawaii-Manoa | S-W-0030-1 | | Thank you for your comment. |
| | S-W-0030-2 | 2 | The EIS/OEIS states that sonar will take place in the HRC OPAREA. |
| | S-W-0030-3 | 4.1.2 | The "dose" refers to the received level of sonar and not the length of the dose. We are not sure what the commenter means by intensity in this context. The higher the dose, the higher the received level. |
| | S-W-0030-4 | | The text has been revised. |

**Table 14.4.1-2. Responses to Written Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Peter Rappa<br>University of Hawaii-Manoa | S-W-0030-5 | | 5 | As discussed in Chapter 5.0, comparing the number of takes between Navy OPAREAs is not relevant given that the marine mammal densities at each location are different and the amount of annual training is different. |

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 14.4.2 EMAIL PUBLIC COMMENTS

There were 198 emails from the public commenting on the Supplement to the Draft EIS/OEIS. A form letter made up 162 of the 198 emails.

Table 14.4.2-1 presents individuals who commented via email, with their respective commenter identification number. This number can be used to find the emailed document that was submitted and to locate the corresponding table in which responses to each comment are provided.

Exhibit 14.4.2-1 presents reproductions of the emails that were received in response to the Supplement to the Draft EIS/OEIS. Comment documents are identified by commenter ID number, and each statement or question that was categorized as addressing a separate environmental issue is designated with a sequential comment number.

Table 14.4.2-2 presents the responses to emailed comments to the Supplement to the Draft EIS/OEIS. Responses to specific comments can be found by locating the corresponding commenter ID number and sequential comment number identifiers.

**Table 14.4.2-1. Commenters on the Supplement to the Draft EIS/OEIS (Email)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Jack Aaron | S-E-0114 | Royelen Boykie | S-E-0160 |
| Christine Ahia | S-E-0194 | John and Joann Breeden | S-E-0115 |
| Earlene Alexiou | S-E-0020 | John Broussard | S-E-0199 |
| Bobbie Alicen | S-E-0136 | Andrea Brower | S-E-0077 |
| Kathy-Lyn Allen | S-E-0032 | Debbie Burack | S-E-0216 |
| Nadine Apo | S-E-0025 | Stu Burley | S-E-0001 |
| Harvey Arkin | S-E-0127 | Diana Burns | S-E-0112 |
| Mikel Athon | S-E-0206 | David Burns | S-E-0223 |
| Chessa Au | S-E-0192 | Carole Burstein | S-E-0068 |
| Meghan Au | S-E-0036 | Flemming Carstensen (Navy League) | S-E-0118 |
| John Barnett | S-E-0080 | Shannan Chan | S-E-0019 |
| Richard Benton | S-E-0184 | Glenn Chapman | S-E-0155 |
| Carl Berg | S-E-0075 | Shirley Chew | S-E-0119 |
| Barbara Best | S-E-0079 | Kelli Chin | S-E-0182 |
| Laura and Andrew Binstock | S-E-0055 | Randy Ching | S-E-0101 |
| Patricia Blair | S-E-0029 | Duane Choy | S-E-0168 |
| Nova Blazej (USEPA) | S-E-0225 | Janet Codispoti | S-E-0162 |
| Trudy and Larry Blow | S-E-0097 | Skye Coe | S-E-0140 |

**Table 14.4.2-1. Commenters on the Supplement to the Draft EIS/OEIS (Email) (Continued)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Steve Colon (Navy League) | S-E-0078 | Myron Gerhard | S-E-0099 |
| Nola Conn | S-E-0048 | Elaine Gima | S-E-0064 |
| Tara Cornelisse | S-E-0169 | Miguel Godinez | S-E-0014 |
| Lowell Wes Cummins | S-E-0113 | Jamesy Gonsalves | S-E-0011 |
| Donna Lee Cussac | S-E-0006 | Sharon Goodwin | S-E-0076 |
| Fred & Claire Dauer | S-E-0117 | Adrianna Grace | S-E-0067 |
| Nancy Davlantes | S-E-0047 | Rose Grady | S-E-0171 |
| Danial Del Monte | S-E-0116 | Jennifer Graybill | S-E-0091 |
| Caren Diamond | S-E-0088 | Mary Groode | S-E-0060 |
| Lisa Diaz | S-E-0174 | Ravi Grover | S-E-0033 |
| Kathleen Dockett | S-E-0163 | Jill Guillermo-Togawa | S-E-0198 |
| Paul Doucette | S-E-0149 | Patti Hackney | S-E-0130 |
| John Dwork | S-E-0073 | Libbie Hambleton | S-E-0166 |
| Tanya Eldridge | S-E-0085 | Kealakai Hammond | S-E-0147 |
| Kim Elegado | S-E-0143 | Cory Harden | S-E-0186 |
| Ann Engerman | S-E-0065 | Hilary Harts | S-E-0172 |
| Marjorie Erway | S-E-0196 | Cynthia Hathaway | S-E-0193 |
| Raquel Esparza | S-E-0030 | Mike Hendrickson | S-E-0131 |
| Dinda Evans | S-E-0022 | Sandra Herndon | S-E-0087 |
| Summer Faria | S-E-0145 | Fern Holland | S-E-0009 |
| Lori Ferrell | S-E-0215 | Ikaika Hussey | S-E-0201 |
| Joel Fischer (University of Hawai'i) | S-E-0002 | Robin James | S-E-0056 |
| Stephanie Fitzgerald | S-E-0104 | Scott Jarvis | S-E-0026 |
| Katy Fogg | S-E-0034 | Michael Jasny (Natural Resources Defense Council) | S-E-0213 |
| Sophie Foulkes-Taylor | S-E-0090 | Jonah Jensen | S-E-0037 |
| Neil Frazer (University of Hawaii, Manoa) | S-E-0100 | Ernest Jepson | S-E-0086 |
| Debbie Friedman | S-E-0102 | David Johnston | S-E-0158 |
| Lauryn Galindo | S-E-0156 | Michael Jones (University of Hawaii) | S-E-0003 |
| Lisa Galloway | S-E-0010 | Jay Jones | S-E-0063 |
| Christina Gauen | S-E-0217 | Leita Kaldi | S-E-0214 |

**Table 14.4.2-1. Commenters on the Supplement to the Draft EIS/OEIS (Email) (Continued)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Emailer-Kealakai | S-E-0109 | Michele McKay | S-E-0141 |
| Serena Kaldi | S-E-0189 | Madeleine Migenes | S-E-0061 |
| Kanoe Kapu | S-E-0017 | Ann Moffat | S-E-0161 |
| Koalani Kaulukukui (Earthjustice) | S-E-0212 | Nina Monasevitch | S-E-0106 |
| Naia Kelly | S-E-0043 | Carolyn Moore | S-E-0015 |
| Lily Kempf | S-E-0084 | Mike Moran | S-E-0038 |
| Angela Kepler | S-E-0142 | Jill Morgyn | S-E-0008 |
| Brown Kevin | S-E-0178 | Don Morrison (Pacific AquaScapes, Inc.) | S-E-0123 |
| Dave Kisor | S-E-0021 | Paul Moss | S-E-0187 |
| Barbara Kranichfeld | S-E-0066 | Kevin Nesnow | S-E-0205 |
| Marina Kuran | S-E-0111 | Tom Norris (Bio-Waves Inc. ) | S-E-0209 |
| Gordon LaBedz | S-E-0093 | Tutabelle Ojeda | S-E-0013 |
| Steve LaFleur | S-E-0042 | Catherine Okimoto | S-E-0138 |
| Jeffrey Lagrimas | S-E-0203 | Ellen Okuma | S-E-0016 |
| Helena Lake | S-E-0082 | Jamie Oshiro | S-E-0204 |
| Cindy Lance | S-E-0126 | Richard Owen | S-E-0089 |
| Aline Larkin | S-E-0157 | Janice Palma-Glennie | S-E-0004 |
| Teri Lawrence | S-E-0046 | Jane Panju | S-E-0210 |
| Marie Le Boeuf | S-E-0023 | Lauri Peacock | S-E-0185 |
| Peggy LeDoux | S-E-0094 | Joy Perfetti | S-E-0044 |
| Katie Leinweber | S-E-0035 | Lauren Pomerantz | S-E-0040 |
| Bobbi Leung | S-E-0071 | Patricia S. Port (U.S. Dept of Interior) | S-E-0121 |
| Bill Lewis | S-E-0051 | Brooke Porter | S-E-0052 |
| Alan Lott | S-E-0098 | Richard Powers | S-E-0188 |
| Rich Lucas | S-E-0058 | Kelly Prince | S-E-0069 |
| John Lyons | S-E-0054 | Kyno Ravelo | S-E-0197 |
| Denise Lytle | S-E-0173 | Jacqueline Remington | S-E-0170 |
| Richard Macke | S-E-0110 | Gail Richard | S-E-0039 |
| Raymond Madigan | S-E-0128 | Anne Rivers | S-E-0108 |
| Den Mark | S-E-0132 | Cathy Robinson | S-E-0175 |
| Laura Marsh | S-E-0183 | Bina Robinson | S-E-0165 |
| Lisa Marshall | S-E-0027 | Constance Rocse | S-E-0041 |
| Mary Martin | S-E-0207 | Puanani Rogers | S-E-0092 |
| Bryan Matsumoto | S-E-0219 | Katy Rose | S-E-0074 |
| Bobby McClintock | S-E-0018 | John Rumbaugh | S-E-0096 |
| Cathy McDuff | S-E-0057 | Annalia Russell | S-E-0031 |

**Table 14.4.2-1. Commenters on the Supplement to the Draft EIS/OEIS (Email) (Continued)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Jeff Sacher | S-E-0191 | Janet Taylor | S-E-0107 |
| Janos Samu | S-E-0081 | Lee Tepley | S-E-0218 |
| Noyita Saravia | S-E-0083 | Healani Trembath | S-E-0024 |
| Forest Shomer | S-E-0139 | Leilani Trocki | S-E-0137 |
| Emailer-Silvia | S-E-0211 | Dona van Bloemen | S-E-0150 |
| Cornelia Skipton | S-E-0179 | Robert Wagner | S-E-0133 |
| Stephen Skogman | S-E-0049 | Briana Wagner | S-E-0028 |
| Steve Slater | S-E-0059 | Robert Wahinehookae | S-E-0148 |
| Victoria Smith | S-E-0103 | Ron Whitmore | S-E-0045 |
| Jody Smith | S-E-0012 | Lacie Whitten | S-E-0222 |
| Whitney Stolman | S-E-0095 | Mark Wichar | S-E-0005 |
| Mary Stone | S-E-0190 | Faith Wilcox | S-E-0053 |
| David Strauch | S-E-0144 | Donald Wilson | S-E-0122 |
| Michael Swerdlow | S-E-0007 | Anita Wintner | S-E-0050 |
| Emailer-Sylvia | S-E-0072 | Dawn Wooten | S-E-0181 |

## SDEIS/OEIS

1 message

**Stu Burley** **Tue, Feb 26, 2008 at 2:57 AM**
To: sdeis_hrc@govsupport.us

Please make changes to the pages that show size of rockets that are and can be launched from PMRF. The charts are out of proportion and present the wrong picture.

Mahalo! Stu Burley

| COMMENT NUMBER |
|---|
| S-E-0001 |
| 1 |

## Fatal Flaws in Conclusions of Hawai`i Range Complex "Supplement to the DEIS/OESIS"

1 message

**Joel Fischer** **Wed, Feb 27, 2008 at 7:09 PM**
To: sdeis_hrc@govsupport.us

Thank you for this opportunity.

The last paragraph of the Executive Summary of this supplement says it all: There may be impacts of the use on Navy sonar on a variety of marine mammals.

Yet, repeatedly, the Navy has failed to heed these warnings and continued their exercises, putting many intelligent, sensitive creatures at risk. Why do an EIS if this is always the response?

The Navy must conduct training in places and at times where marine mammals will not be injured. That's all there is to it.

If the Navy continues to be so inhumane and so rigid as to not make these changes, there will be a constant barrage of court cases for the forseeable future.

What's the fatal flaw in the conclusions of this supplement? The Navy's failure to abide by it!

joel

Dr. Joel Fischer, ACSW
Professor
University of Hawai'i, School of Social Work
Henke Hall
Honolulu, HI 96822

"It is reasonable that everyone who asks justice should DO justice."
Thomas Jefferson

"There comes a time when one must take a position that is neither safe, nor politic, nor popular, but one must take it because one's conscience tells one that it is right."
Dr. Martin Luther King, Jr.

"Never, never, never quit."
Winston Churchill

| COMMENT NUMBER |
|---|
| S-E-0002 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS**

## comments on the HRC DEIS/OEIS Supplement

1 message

**Michael Jones** **Thu, Feb 28, 2008 at 2:24 PM**
To: sdeis_hrc@govsupport.us

28 Feb. 2008

via E-mail to: sdeis_hrc@govsupport.us

Below are my comments on the Supplement to the DEIS/OEIS for the Hawaii Range Complex. I received the Supplement on 26 Feb. 2008
possibly because I submitted scoping comments and comments on the
DEIS/OEIS. However, my name is not included in the distribution
list in section 6.0 so this list is incomplete. (I noted in my
comments on the DEIS/OEIS that my name was not included in the
distribution list for it despite the fact that I had submitted
scoping comments for it.)

I also noted in my comments on the DEIS/OEIS that the very limited distribution of the draft EIS is not conducive to meaningful evaluation of technical aspects and suggested that the Univ. of Hawaii Environmental Center (which did submit comments on the DEIS/OEIS) and Hamilton Library should have been included. Neither is listed in
the distribution list in section 6.0.

Finally, on 28 Aug. 2007 I requested 4 documents listed among the DEIS/OEIS references. I received 3 of them via E-mail a few days before the 17 Sept. deadline for comments. I was informed that
the remaining document (Solis, P., 2004) "is not releasable to the
public." The final EIS should note which of the references, including
those in the Supplement, are not available for public review and explain the justification.

Michael Jones
Dept. of Physics & Astronomy
Univ. of Hawaii

Honolulu, Hawaii

| COMMENT NUMBER |
|---|
| S-E-0003 |
| 1 |

From: Janice palma-glennie
Sent: Wednesday, March 05, 2008 3:00 PM
To: sdeis_hrc@govsupport.us
Subject: Protect Hawai'i's Coastal Resources, Limit Impact of Navy Range Expansion

Aloha Mr. Nakagawa
The U.S. Navy's proposal to establish a live-fire training range encompassing the entire Hawaiian Archipelago, including the highly protected Northwestern Hawaiian Islands Marine Refuge, Papahanaumokuakea Marine National Monument, and the Hawaiian Islands Humpback Whale Sanctuary, poses serious threats to the welfare of Hawaii's unique natural and cultural resources. The federal Coastal Zone Management Act of 1972 (CZMA) empowers states to protect their coastal resources from harm by requiring that federal activities affecting the coast be consistent with state laws protecting coastal zones. Hawaii's Coastal Zone Management Program is obligated to protect our unique natural and cultural resources by ensuring that the Navy's activities are proven to be safe for Hawaii's people and consistent with Hawai'i's laws.

As currently drafted the Navy's proposal is NOT consistent with Hawaii's efforts to protect our unique coastal resources. The Navy is proposing to dramatically increase and expand its training activities near Hawaii, including significant increases in live-fire bombing exercises, expanded use of high-intensity active sonar, and ballistic missile interceptions over the Northwestern Hawaiian Islands. To be consistent with Hawaii's coastal protections, the U.S. Navy must adopt meaningful mitigations for its activities.

Meaningful Mitigations Must Include:

1. STATE INCIDENTAL TAKE PERMIT FOR HARM TO ENDANGERED SPECIES

The Navy admits that its activities will harm threatened and endangered species listed under the federal Endangered Species Act, including the highly endangered Hawaiian monk seal and Pacific Humpback Whale. In total, the Navy expects its range expansion will kill 26 species of marine mammals, 7 of which are protected by the federal ESA. Hawaii state law, implemented through the CZMA, requires the Navy to acquire a state incidental take permit for harm to these species and to implement a plan "designed to result in an overall net gain in the recovery of Hawaii's threatened and endangered species." Hawaii Revised Statutes §195D.

2. PROHIBITION AGAINST THE SPREAD OF CONTAMINANTS AND POLLUTION

The Navy's proposed expansion includes live-fire training exercises that will introduce new contaminants into our environment or cause current contamination to spread. Objective six of Hawaii's CZMA regulations require the Department to prevent the spread of coastal pollution. Therefore, the Navy's activities must be limited to prevent the spread of pollution. This should include:
- prohibit the proposal to use chemicals in ballistic missile tests that simulate chemical and biological warfare.
- prohibit live-fire training

| COMMENT NUMBER |
|---|
| S-E-0004 |
| 1 |
| 2 |
| 3 |
| 4 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

- prohibit activities at sites known or suspected to be contaminated with depleted uranium to prevent the spread of the contamination, including Pohakualoa and Makua Valley.

3. PROHIBITION ON ACTIVITIES THAT MAY AFFECT THE NORTHWESTERN HAWAIIAN ISLANDS STATE REFUGE AND THE PAPAHANAUMOKUAKEA MARINE MONUMENT

The Northwestern Hawaiian Islands are home to rare and endangered species and serve as a nursery for fishery stocks in the Main Hawaiian Islands. These islands are also of extreme historical and cultural significance to Native Hawaiians, as a place of religious sanctity, intact cultural features, and renewed customary practices. Both the state and federal governments acknowledge the importance of protecting this fragile, unique marine ecosystem and rare cultural landscape by establishing the first-ever state marine refuge and first-ever national marine monument. The Navy's current proposal will extend harmful military activities to this, the most highly protected marine ecosystem in the world. The state and federal governments have accepted responsibility for managing this ecosystem as a whole, across jurisdictional boundaries. Under this co-management regime, the state's kuleana to protect the nearshore waters of the Northwestern Hawaiian Islands includes the federal waters extending 50 miles from shore. To be consistent with Hawaii's commitment to protect the entire Northwestern Hawaiian Islands ecosystem, the Navy's activities in this area must be strictly limited. This includes:
- prohibit the testing of ballistic missiles over the Northwestern Hawaiian Islands
- prohibit the use of high-intensity active sonar in the Northwestern Hawaiian Islands
- prohibit any military maneuvers in and around the Northwestern Hawaiian Islands
- require the clean up of any military debris that entires the Northwestern Hawaiians Islands State Refuge or Federal Monument

4. SIGNIFICANT LIMITATIONS ON THE USE OF HIGH-INTENSITY ACTIVE SONAR

The Navy's proposed range expansion includes a significant increase in the use of "high-intensity active sonar." Indeed, this controversial technology is the subject of considerable litigation throughout the United States. Because the Navy's active sonar has already harmed Hawaii's marine environment, the proposal to increase its use must be considered with extreme caution. The CZM program should require the Navy to abide by ALL of the most protective measures designed to mitigate the harm inherent to active sonar. These measures have been developed over an extended period of time and circumstances, and include mitigations imposed by several different federal courts, international agencies, and foreign governments. In addition, the use of active sonar should be prohibited in the Northwestern Hawaiian Islands, the Hawaiian Islands Humpback Whale Sanctuary, and any location where marine mammals are known to frequent.

5. FULL PUBLIC DISCLOSURE OF NAVAL ACTIVITIES IN THE HAWAIIAN ISLANDS

The Navy's proposal to expand military activities in the Hawaiian Islands jeopardizes Hawaii's public trust resources and public health. To ensure that the strongest possible protections are implemented, the Navy must disclose all of its activities with the public. Moreover, Hawaii's coastal zone management

| COMMENT NUMBER |
|---|
| S-E-0004 (cont.) |
| 5 |
| 6 |
| 7 |
| 8 |

regulations require that the department promote public participation in the protection of our coastal resources. The public cannot participate in the protection of our coastal resources without transparency and accountability from the responsible agencies. To this end, the Navy must:
- announce all training activities prior to commencement
- document all activities in and around the Hawaiian Islands in After Action Reports released to the public within 30 days of the activity.

Mahalo.

Janice palma-glennie

| COMMENT NUMBER |
|---|
| S-E-0004 (cont.) |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Protect Hawai'i's Coastal Resources, Limit Impact of Navy Range Expansion

1 message

**Jill Morgyn** **Wed, Mar 5, 2008 at 4:50 PM**
Reply-To:
To: sdeis_hrc@govsupport.us

Aloha Mr. Nakagawa
The U.S. Navy's proposal to establish a live-fire training range encompassing the entire Hawaiian Archipelago, including the highly protected Northwestern Hawaiian Islands Marine Refuge, Papahanaumokuakea Marine National Monument, and the Hawaiian Islands Humpback Whale Sanctuary, poses serious threats to the welfare of Hawaii's unique natural and cultural resources. The federal Coastal Zone Management Act of 1972 (CZMA) empowers states to protect their coastal resources from harm by requiring that federal activities affecting the coast be consistent with state laws protecting coastal zones. Hawaii's Coastal Zone Management Program is obligated to protect our unique natural and cultural resources by ensuring that the Navy's activities are proven to be safe for Hawaii's people and consistent with Hawai'i's laws.

As currently drafted the Navy's proposal is NOT consistent with Hawaii's efforts to protect our unique coastal resources. The Navy is proposing to dramatically increase and expand its training activities near Hawaii, including significant increases in live-fire bombing exercises, expanded use of high-intensity active sonar, and ballistic missile interceptions over the Northwestern Hawaiian Islands.

As a U.S. citizen and Hawaii resident who has volunteered as part of conservation efforts in the NWHI, I do NOT support military activity in the Northwestern Hawaiian Islands. I believe there should be places of ecological significance that are respected and protected as sanctuaries from human activity that is polluting, invasive, hostile and harmful to the NWHI's fragile wildlife and ecosystem.

In order for this planet to continue being a healthy habitat for animal and plant life beyond the next two generations, there has got to be significant change in government policies that begin to place the value of the planet's health above that of the country's love of making war.

Priorities have got to change, and this government has got to start listening to the people instead of plowing ahead with its 1940s values that continue to disrespect ALL LIFE on this planet.

Use your position of power to force change.

Keep the Navy OUT of the NWHI.

Sincerely,

Jill Stephanie Morgyn

Jill Morgyn

Volcano, HI

| COMMENT NUMBER |
|---|
| S-E-0008 |
| 1 |
| 2 |
| 3 |

## PROTECT OUR SEA MAMMALS

1 message

**l e i l a h** **Tue, Mar 11, 2008 at 2:19 AM**
To: sdeis_hrc@govsupport.us

PLEASE DO WHATEVER YOU CAN TO INSURE THE QUIET SAFETY FOR OUR DOLPHINS AND BEAUTIFUL WHALES. MY HUSBAND AND I CAN NOT MAKE IT TO THE HEARING DUE TO PRIOR COMMITMENTS. IT SADDENS ME TO THINK THAT WE WOULD NOT HAVE THE COMMON SENSE TO USE HUMANE PRACTICES AND NOT BE FINDING WHALES BEACHED DUE TO THE EXTREME TRAUMA OF NAVAL SONAR PRACTICES.
THANK YOU SINCERELY LAURA AND ANDREW BINSTOCK

| COMMENT NUMBER |
|---|
| S-E-0055 |
| 1 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Protect Hawai'i's Coastal Resources, Limit Impact of Navy Range Expansion

1 message

**Steve Slater** **Tue, Mar 11, 2008 at 2:18 PM**

To: sdeis_hrc@govsupport.us

Aloha Mr. Nakagawa
I would like to remind you of the unkept promises reguarding the 'Clean-Up' of Kahoolawe as well as the military denials, then confessions, about the use of Depleated Uranium. Huge amount of Superfund Clean-Up Sites. Our Military owes us more, we need protection on all levels, not just arrogant the, "we know what is best for you ..." attitude.

Any use of the Northwest Hawaiian Islands needs to honor Hawaii's guidelines for protection as well as President Clinton's intentions when the Marine Reserve Status was given.

Steve Slater

Paia, HI

| COMMENT NUMBER |
|---|
| S-E-0059 |
| 1 |
| 2 |

## (no subject)

1 message

**Sylvia** **Wed, Mar 12, 2008 at 12:52 PM**
To: sdeis_hrc@govsupport.us

I am opposed to the Navy doing any sonar testing in Hawaiian waters.
Please register my opposition.

| COMMENT NUMBER |
|---|
| S-E-0072 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

Tesitimony is support of the US Navy
March 26th, 2008
CAPT Steve Colón
Member, Board of Directors of the Honolulu Council of the Navy League

The Navy is well aware of the fragile environment and the possible effect of sonar, radar, and other training devices that may impact marine life. That is why they plan exercises to avoid major marine mammal concentration areas whenever possible. The navy is truly dedicated to protecting marine mammals as evidenced by the Fourteen million dollars it spends annually on marine mammal research in FY 07 alone.

Moreover, The Navy has coordinated with the National Marine Fisheries Service to develop 29 protective measures to minimize the potential effects of MFA sonar on marine life. These measures allow the Navy to remain realistically and with respect for the ocean environment…in fact, these measures are in place and currently being used! The Navy also employs a myriad of other preventive measures to protect marine life such as: Station trained lookouts on the ships; Employing night vision and thermal imaging equipment; taking evasive action when marine mammals are spotted; establishing safety zones around ships; and listening for marine mammals.

There is no doubt that Navy training creates or affects some marine life, but the critical point is that Naval training is only a very small part of a much larger picture. Many other external factors are in the ocean at any given time; these include volcanic eruptions, lighting strikes, supertankers, offshore drilling and others. These factors combined with pollution, commercial shipping, fisher entanglements, disease, parasite infection, ship strikes, trauma and other natural factors lead to a rate of approximately 3,500 strandings of marine mammals every year on US shores alone, according to NOAA.

In conclusion, does naval training have any impact on marine life? Yes, To a minimal extent, especially when one considers the risk benefit ratio involved with ensuring our national security. That being said, the Navy is taking aggressive steps to protect marine mammals and other sea life and avoid engagement with them whenever possible and exhibiting sound environmental stewardship with our precious ocean resources. The Navy League of United States Honolulu Council supports the United States Navy's continued use of the HRC for training and testing as the military commanders and the President see fit.

*Steve Colón is a retired Navy Reserve Captain and current President of the Hawaii division for Hunt Development Group, LP, a real estate development firm.*

| COMMENT NUMBER |
|---|
| S-E-0078 |
| 1 |

## whales/sonar

1 message

**Trudy Blow** **Sat, Mar 15, 2008 at 1:09 PM**
To: sdeis_hrc@govsupport.us

We strongly oppose sonor testing in whale waters, especially during the winter months when the most whales are here. At the very least, do the testing in the summer and away from the islands. Surely that can be done.

We love and need the whales.

Trudy and Larry Blow
Kapa'a, Hawaii

| COMMENT NUMBER |
|---|
| S-E-0097 |
| 1 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## sonar and whales

1 message

**Alan Lott** **Sun, Mar 16, 2008 at 6:14 PM**
To: sdeis_hrc@govsupport.us

I am adamantly opposed to the use of sonar by the navy, when the risk is too great to harm whales. It is time to scale back the military in a radical way. Alan lott aloha

| COMMENT NUMBER |
| --- |
| S-E-0098 |
| 1 |

## Sonar use near whales.

1 message

**Myron Gerhard** **Sun, Mar 16, 2008 at 6:59 PM**
To: sdeis_hrc@govsupport.us

Sonar should NOT be used around an known populations of whales, including near the Hawaii island complex. It is my perception that the U.S. Navy has no regard for the well-being of whales.

Myron Gerhard

Littleton, CO

| COMMENT NUMBER |
| --- |
| S-E-0099 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Against active sonar in Hawaii's coastal zone

1 message

**Neil Frazer, PhD** **Mon, Mar 17, 2008 at 10:44 AM**

To: sdeis_hrc@govsupport.us

Aloha Mr. Nakagawa
This is with regard to the U.S. Navy's proposal to establish a live-fire training range in Hawaiian Archipelago....

I am particularly opposed to the use of active sonar at any source level exceeding 150 deciBells relative to 1 microPacal at 1 meter.

As you know, sonar is used by the navy to detect enemy submarines. In order to improve detection, one can use a more powerful source, or one can add more receivers. Adding more receivers does not harm whales.

The modern trend in acoustical detection is toward passive sonar, in which artificial sources are not used.

I have authored and co-authored a number of peer-review papers on underwater sound (see my website), and my research in underwater sound has been sponsored by the Office of Naval Research.

Mahalo you for your service to our state.

Sincerely,
Neil Frazer

Professor of Geophysics
University of Hawaii at Manoa
Honolulu, HI 96822

Neil Frazer, PhD

Kailua, HI

| COMMENT NUMBER |
|---|
| S-E-0100 |
| 1 |

## sonar

1 message

**DEBBIE FRIEDMAN** **Mon, Mar 17, 2008 at 3:41 PM**
To: sdeis_hrc@govsupport.us

To Whom It May Concern, I believe more studies are needed to determine the short and long range effects of sonar testing and its harm to marine mammals, fish, people, coral and other sea animals and maybe even plants. It seems that the range the sonar can go is way farther than the area they say they stay within. Avoiding sonar during humpback whale season may help, and may minimize harming at least this marine mammal. What about the others? Monk seals, divers, snorkelers, dolphins and other whales. Aren't there other ways to spot submarines, like infrared type things or satelittes in the air? Whenever I hear more sonar testing, I think, "Haven't they already tested it....many times, don't they already know if it works?" I do want our country to be protected and ready for anything from a country that doesn't like us, but don't we have other ways that wouldn't harm animals and disrupt ecosystems? Anyway, please stop the sonar or study it much more and use safeguards that would really work and include a wide enough area that's far away enough from living things. Thank you for listening, Debbie Friedman of Kalaheo,HI.

| COMMENT NUMBER |
|---|
| S-E-0102 |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Sonar

1 message

**Victoria Smith** **Mon, Mar 17, 2008 at 4:13 PM**
To: sdeis_hrc@govsupport.us

I am against the sonar testing any where near Hawaii!!

I'm a diver and don't want to have my hearing damaged. What about those of us that don't hear about the testing going on? Would you go out in the water when you are testing? Neither to our marine animals and fish want to!

Victoria Smith, Wailuku, HI

| COMMENT NUMBER |
|---|
| S-E-0103 |
| 1 |

## Critical Navy Training

1 message

**Richard Macke** **Wed, Mar 26, 2008 at 11:11 PM**
To: sdeis_hrc@govsupport.us

Tesitimony in support of the US Navy
March 26th, 2008
Richard Macke
Honolulu, HI

The war between single-focused special interest groups and our Maritime Services continues and continues to waste dwindling resources as the fight to ensure mission-realistic training continues. The Navy provides more funding to the study of effects of our maritime operations on marine mammals than all the other concerned entities combined. Fourteen million dollars spent on marine mammal research in FY 07 alone. The environmental lobby does not contribute to finding scientific answers to questions yet continues to challenge realistic and critically needed training evolutions. The fact that our judicial system largely supports their unfounded allegations is extremely troubling. The training that these special interest groups try to deny is exactly the training that is needed if we intend to fight and win our nations wars. It is inconceivable that, in a country as educated and aware as America, the unfounded assertions spread by these special interest groups continue to have success in thwarting training across a broad geography and all military services. The Navy has been recognized over and over by national environmental agencies and groups for their careful preservation of our environment. They have proven beyond the shadow of doubt that they can achieve the needed training without destroying the habitat.

Moreover, The Navy has coordinated with the National Marine Fisheries Service to develop 29 protective measures to minimize the potential effects of MFA sonar on marine life. These measures allow the Navy to remain realistically and with respect for the ocean environment…in fact, these measures are in place and currently being used! It has yet to be proven scientifically that MFA sonar creates a detrimental affect on marine life. Many external factors exist in the oceans of the world at any given time to include volcanic eruptions, lighting strikes, supertankers, offshore drilling, etc. These "non-Navy" factors lead to approximately 3,500 strandings of marine mammals every year on US shores alone, according to the National Oceanographic and Atmospheric Administration.

I most strongly urge every American to support the Navy in this insidious struggle. Too much of our national treasure and overextended Navy resources are being wasted in fighting to maintain critical training for the young men and women our country sends to sea.

Take care, dick.

Dick Macke

| COMMENT NUMBER |
|---|
| S-E-0110 |
| 1 |
| 2 |
| 3 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Opposed to Navy Sonar Testing in Hawaii and Elsewhere

1 message

**Marina Kuran** **Wed, Mar 26, 2008 at 10:24 PM**
To: sdeis_hrc@govsupport.us

I am a resident of South Kona who wishes to express my extreme opposition to the U.S. Navy's proposal to expand its military training range across the Hawaiian Archipelago. I am opposed to missile testing as well as to both low frequency and mid-range sonar, both of which are extremely detrimental to marine mammals causing death by brain hemorrhage, a horrible sight to witness. The U.S. military has already destroyed much of the quality of life and beauty across the Hawaiian Islands with missile testing, stryker practice,the spread of radiation from depleted uranium at Schofield Barracks, Phakuloa which it first denied and then admitted, and in the thousands of DU canisters that were dropped along our coastlines, probably leaking radiation into the water, during World War II, the bombing and annhilation of Kahoolawe, and the list goes on and on. Enough is enough. The U.S. military, regardless of its branch, needs to be held accountable. It needs to obey the same laws that the rest of us obey.

The U.S. Navy's proposal is not only a violation of the National Environmental Policy Act and the Coastal Zone Management Act, but with the availability of passive listening devices to achieve the same level of national security without inflicting harm to marine life, it is not necessary. I also question the intent of designating marine sanctuaries such as the Northwest Hawaiian Islands Sate Marine Refuge, the Papahanaumokuakea Marine Monument, or the Pacific Humpback Whale Sanctuary if the marine life that is supposed to be protected is not. This only makes a mockery of "protected sanctuaries" to keep the lay person out, but allow the Navy to harm and kill, again, beyond the laws. Protected for whom?

Humpback whales, for example, are already under siege from continued whaling by Japan, Norway and Iceland, eco-tourism, the Super Ferry and other boat activity, pollution, and orcas. Approximately only 3 out of 10 humpback whale babies make it back to Alaska alive.
Again, I oppose the U.S. Navy's proposal, once again, allowing the government to remain above the law.

Sincerely,

Marina Kuran

Captain Cook, HI

| COMMENT NUMBER |
|---|
| S-E-0111 |
| 1 |
| 2 |
| 3 |

## Navy Sonar

1 message

**Wes Cummins** **Fri, Mar 28, 2008 at 12:57 AM**
To: sdeis_hrc@govsupport.us

I love whales. I love the ocean and the creatures in it. I also believe sonar and the living sea can adjust to each other.
Sincerely,
Lowell Wes Cummins

| COMMENT NUMBER |
|---|
| S-E-0113 |
| 1 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Navy's use of sonar

1 message

**Jack Aaron** **Fri, Mar 28, 2008 at 1:49 AM**
To: sdeis_hrc@govsupport.us, Navy League - Honolulu Council <honolulunavyleague@hawaii.rr.com>

Dear Gentlepeople: I am definitely in support of the Navy's use of sonar and radar in marine mammal research. Their sonar training is vital in protecting national interests and safety of our Sailors and Marines. The NAVY is highly responsible and a leader in worldwide Marine & Mammal research. They have a long term plan and I feel no none is better suited to serve this interest then the Unites States Navy.

Sincerely,

Jack Aaron

| COMMENT NUMBER |
|---|
| S-E-0114 |
| 1 |

## sonar training

1 message

**Joann Breeden** **Fri, Mar 28, 2008 at 2:24 AM**

To: sdeis_hrc@govsupport.us

Bob,

John and I support the navy and the sonar training that is needed to continue protecting our country.

John and Joann Breeden

| COMMENT NUMBER |
|---|
| S-E-0115 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## navy sonar training

1 message

**Fri, Mar 28, 2008 at 2:50 AM**

To: sdeis_hrc@govsupport.us

I support the Navy sonar training. We Need to see who is out there especially with China kicking up her heels.
Daniel J Del Monte Jr

| COMMENT NUMBER |
| --- |
| S-E-0116 |
| 1 |

## Navy Sonar

1 message

**Fred Dauer** **Fri, Mar 28, 2008 at 11:42 AM**

To: sdeis_hrc@govsupport.us

I support the Navy position of use and training of sonar and their exercises. It is my opinion their research and findings are logical and should be considered and support their efforts.

Fred & Claire Dauer

| COMMENT NUMBER |
| --- |
| S-E-0117 |
| 1 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Testimony in support of the US Navy

1 message

**flemming carstensen** **Fri, Mar 28, 2008 at 3:27 PM**
To: sdeis_hrc@govsupport.us

**TESTIMONY IN SUPPORT OF THE US NAVY**

There is no doubt that Navy training creates or affects some marine life, but the critical point is that Naval training is only a very small part of a much larger picture. Many other external factors are in the ocean at any given time; these include volcanic eruptions, lighting strikes, supertankers, offshore drilling and others. These factors combined with pollution, commercial shipping, fisher entanglements, disease, parasite infection, ship strikes, trauma and other natural factors lead to a rate of approximately 3,500 stranding of marine mammals every year on US shores alone, according to NOAA.

In conclusion, does naval training have any impact on marine life? Yes, To a minimal extent, especially when one considers the risk benefit ratio involved with ensuring our national security. That being said, the Navy is taking aggressive steps to protect marine mammals and other sea life and avoid engagement with them whenever possible and exhibiting sound environmental stewardship with our precious ocean resources. The Navy League of United States Honolulu Council supports the United States Navy's continued use of the HRC for training and testing as the military commanders and the President see fit.

Respectfully,

Flemming H. Carstensen
Navy League Life Member
Honolulu Council

| COMMENT NUMBER |
|---|
| S-E-0118 |
| 1 |

## Sonar/Navy Training

1 message

**Shirley Chew** **Sat, Mar 29, 2008 at 5:26 PM**
To: sdeis_hrc@govsupport.us

I support the use of naval sonar in training in the Pacific area for defense is critical. With the constant treat of terrorism and countries like North Korea and China with nuclear war heads, we must be constantly vigil. Our Navy must be allowed to prepare and train for our defense in Hawaii/US and to protect our allies in the Pacific. Now, with long range missile accuracy, our missile defense is from the sea. A strong defense protects our freedom as well as our lives. To balance the impact on sea mammals, the Navy can work in concert with marine biologists to determine the least damaging sound levels that still meet national security requirements. To ban the use of sonar is equivalent to blinding our Navy.

I love whales and respect our sea life, but our national security should be our first priority.

Shirleyanne Chew

Honolulu, Hawaii

| COMMENT NUMBER |
|---|
| S-E-0119 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
1111 Jackson Street, Suite 520
Oakland, California 94607

IN REPLY REFER TO:
ER# 08/211

*(Electronically Filed*

2 April 2008

Hawaii Range Complex EIS/OEIS
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Hawaii 96752-0128

Subject: Review of the Draft Supplemental Environmental Impact Statement (DSEIS), for the Hawaii Range Complex (HRC) Project, Kauai, Honolulu, Maui, and Hawaii Counties, HI

To Hawaii Range Complex EIS/OEIS,

The Department of the Interior has received and reviewed the subject document and has no comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC
FWS, Region VIII

COMMENT NUMBER
S-E-0121

1

**From:** doioepc1478@aol.com [mailto:doioepc1478@aol.com]
**Sent:** Wednesday, April 02, 2008 1:23 PM
**To:** sdeis_hrc@govsupport.us
**Subject:** No Comments

The Department of the Interior has no comments.

Thank you for the opportunity to look at this document.

Carolyn R. Myers
Regional Environmental Intern
Office of Environmental Policy and Compliance
U.S. Department of the Interior, Region 9
1111 Jackson Street, Suite 520
Oakland, CA 94607-4807
(510) 817 - 1477 [voice]
(510) 419 - 0177 [fax]
doioepc1478@aol.com

COMMENT NUMBER
S-E-0121 (cont.)

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

**From:** Wilson. Donald H CTR PMRF

**Sent:** Friday, March 21, 2008 6:50 PM
**To:** deis_hrc@govsupport.us
**Cc:** Tauyan, Agnes T CIV CNRH, N00PA; Clements, Tom H CIV PMRF
**Subject:** SUPPLEMENT EIS MID FREQ SONAR COMMENTS

Dear Sir/Ma'am,

Attached are my comments related to the Draft EIS Supplemental dealing with active, mid-frequency sonar.

Would you please include these comments as part of your overall EIS?

Thank you very much.

Sincerely,

Donald H. Wilson
<<Draft EIS.doc>>

ATTACHMENT:

Hawaii Range Complex Supplement to the Draft EIS/OEIS
Written Comment Form
Name: Donald H. Wilson
Address: PO Box 399, Kekaha, HI 96752
Comments: Thank you for the opportunity to comment. As a former submariner, I am aware of the power of active sonar, regardless of frequency. Used indiscriminately, it could have a deleterious effect on marine life in proximity to the source – a fact the Navy well understands, and mitigates through a variety of means: additional lookouts, trained to spot marine mammals; reduced sonar power levels, and eventually, ceasing active sonar transmissions.

COMMENT NUMBER
S-E-0122

COMMENT NUMBER
S-E-0122 (cont.)

The Navy is aware of its responsibilities under federal law. Moreover, and perhaps equally important, the Navy has an abiding interest in, and commitment to, the very medium that assures its raison d'etre.

The Navy is not indifferent to cause and effect relationships, particularly when Navy actions may be the cause. For that reason, the Navy has carefully assessed, through scientific study, the effects of mid-frequency active sonar, and developed procedures to reduce if not eliminate, potential hazards to marine mammals. That said, there is no activity on the ocean that is risk-free, and the overwhelming majority of marine mammal deaths are caused by inadvertent ship strikes – primarily by commercial shipping. Yet there are no calls for ceasing commercial shipping because world trade demands it. Likewise, there is no outrage over commercial whaling, despite the fact Japan and Norway continue to harvest whales to "study" them and invariably sell the meat to consumers. 1

American citizens must decide: impose ever-more restrictive regulations on the use of active sonars, and possibly suffer defeat in naval battles, or accept the fact that with mitigation, there will be some risk to marine mammals, while concurrently reducing risk to the Nation overall. Americans cannot reasonably expect to fund an expensive Navy to protect the Nation while mandating a training regime that is neither realistic, nor contributes to the way it would fight in war. In some scenarios, active sonar is the last resort to detect, localize, and ultimately destroy a threatening submarine. To restrict sonar use and training is ultimately to deny this capability to the Nation. Which begs the question: 2



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

if there are no alternatives – and there haven't been any since WWII – despite other technologies including magnetic anomaly detection, radar, passive sonar, visual, IR, etc., then why debate the merits of using active sonar in training scenarios? The Navy must have the ability to conduct realistic training that simulates how it would fight during war. To mandate further restrictions places Sailors and their vessels at risk and ultimately, places the country at risk too. I support the use of active sonar, regardless of frequency, to ensure we have the technology and proficiency necessary to defend the Nation. Further restrictions on its use, imposed by jurists who do not appreciate the realities of war at sea, and encouraged by activists who ignore far greater risks to marine mammals is counterproductive, extremely shortsighted, and hypocritical.

| COMMENT NUMBER |
|---|
| S-E-0122 (cont.) |
| 1 |
| 1 |

**From:** Don Morrison
**Sent:** Monday, March 31, 2008 6:53 PM
**To:** deis_hrc@govsupport.us
**Subject:** FW: Written Testimony re: Supplemental Drat EIS/OEIS

To Whom It May Concern:

Please find attached my comments with regard to the issue.

Should you have any questions, my contact information follows.

Thank you.

*Donald A. Morrison*

CFO/Sec-Treas.

Pacific AquaScapes, Inc.

| COMMENT NUMBER |
|---|
| S-E-0123 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

ATTACHMENT:

Testimony in support of the US Navy

March 31, 2008

Donald A. Morrison

Waipahu, HI

Once again, our courts have managed to render decisions that place the lives of our fellow citizens and members of our sea services at risk. Courts have ruled that loud sounds might harm whales and other marine mammals if not tightly controlled. What of the harm to human life if an enemy submarine was to launch an attack on one of our cities and the reason for the success of the attack is a lack of adequate training of our sea services?

Mid-Frequency Active Sonar (MFA) is critical to protecting us from quiet diesel-electric submarines. Our ships and submarines need realistic training in order to defend us. From early childhood our children play sports, musical instruments, learn to dance, and more. The common denominator between all these activities is “PRACTICE”. As Americans we encourage our children to practice at home, go to practice, practice makes perfect. Whether it is our young children playing football, soccer, baseball or our athletes training for the Olympics – practice is essential! Yet for our Navy ships and submarines and the men and women who sail them, our courts are denying them the right to this training. Their skills need to be honed and perfected. Without constant realistic practice they lose the critical skills

| COMMENT NUMBER |
|---|
| S-E-0123 (cont.) |
| 1 |

that save lives. The lives of the men and women of the sea services and ours, the citizens of this country!

As for the environment and the mammals being protected, no one does more than the Navy to protect them. There are well documented safeguards in place that are used in all training exercises. The intent is certainly not to deliberately harm marine mammals. In fact the Navy spends millions on marine mammal research annually - $14 million in 2007 alone. They are dedicated to finding if there is a link between the exposure to active sonar and any problems with marine mammals.

I encourage all citizens of this country to support the United States Navy in this effort. Let the scientific foundation that the Navy is building to support their long-term environmental compliance plan be the guide. Let them continue their work with the National Marine Fisheries Service to protect marine life. Most importantly, allow the Navy to resume the realistic training required in the areas requested.

| COMMENT NUMBER |
|---|
| S-E-0123 (cont.) |
| 2 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Support to the Navy's Sonar Training and testing programs

1 message

**Sat, Apr 5, 2008 at 3:20 AM**

To: sdeis_hrc@govsupport.us
Cc: honolulunavyleague@hawaii.rr.com

I am proud to be a Navy League member and it was brought to my attention that the Navy remains in litigation over the use of Mid- Frequency Active (MFA) sonar.
I am stating that I and every knowledgeable person that I discussed this issue with, (military or civilian) has agreed that it is best for the United States Navy to continue use of the HRC for training and testing as the military commanders and the President see fit. With out these programs, the success of our Anti-Submarine Warfare (ASW) missions would be at risk for all participance.
Here in Hawaii, as in other areas of the world (we have programmed persons) these are groups or followers of persons that want no change, from what now exists.
Another driving force, for other programmed persons, is that here in Hawaii every place or every thing, on land or in the sea, has a religious connotation and each group, or joint groups are now interrupting what to do for any action to stop anything that they do not like. They pay lawyers, apply political pressure and issue orders and there followers obey. I state the above to inform the reader that these programmed persons have caused the Hawaii Government to loose millions and millions of dollars in planed programs and other actions. Almost every military action has been challenged by these groups, they search for some excuse to justify there cause. These programmed persons are the main ones that are challenging this project.
I am sure that there is some effect on some marine life, but bouncing the risk of minimal marine damage against ensuring our National Security, leaves no doubt that the risk is the best course to follow. This is especially true because of Navy's excellent description of what action they have taken to minimize the effects of MFA sonar on marine life.

Glenn P. Chapman

Honolulu, HI.

**COMMENT NUMBER**

**S-E-0155**

1

## Protect Hawai'i's Coastal Resources, Limit Impact of Navy Range Expansion

1 message

**Dawn Wooten** **Sat, Apr 5, 2008 at 11:57 PM**

To: sdeis_hrc@govsupport.us

Aloha Mr. Nakagawa
If it is indeed true that the Navy will be using the protected Coastal regions as a firing range (or any other Mlitary activity).... I must object. Please be aware that this was protected for a reason that has not changed. Mahalo.

Dawn Wooten, Kauai Resident

Dawn Wooten

Lihue, HI

**COMMENT NUMBER**

**S-E-0181**

1

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## Protect Hawai'i's Coastal Resources, Limit Impact of Navy Range Expansion

1 message

**John Broussard** **Mon, Apr 7, 2008 at 4:09 PM**

To: sdeis_hrc@govsupport.us

Aloha Mr. Nakagawa
I don't understand why we have to repeatedly fight to get the government to stop torturing marine mammals and to follow the laws allowing states to protect their coastal areas from harmful activities.

These activities make a mockery of the concepts of national monuments, animal sanctuaries, and the Endangered Species Act..

Please do everything you can to stop live-fire exercises, pollution with toxic chemicals, and use of high-intensity sonar in what are supposed to be Hawaii's protected places...or anywhere that they wreak untold death and destruction.

John Broussard

Kamuela, HI

| COMMENT NUMBER |
|---|
| S-E-0199 |
| 1 |

-----Original Message-----
**From:** Tom Norris
**Sent:** Monday, April 07, 2008 10:57 PM
**To:** 'sdeis_hrc@govsupport.us'
**Cc:** Ann Zoidis Mari Smultea
**Subject:** Comments for Hawaii Range Complex supplemental DEIS/OEIS

To: Department of the Navy

Re: Supplement to the Draft Environmental Impact Statement/

Overseas Environmental Impact Statement (DEIS/OEIS) for the

Hawaii Range Complex

Email: sdeis_hrc@govsupport.us

7 April 2008

Dear Sir or Madam:

We have reviewed the Supplement to the Draft Environmental Impact Statement/ Overseas Environmental Impact Statement (DEIS/OEIS) ) for the Hawaii Range Complex and would like to provide the following comments with regards to estimated behavioral harassment exposures for non esa species (minke whales) – no action alternative. Please be aware that we are not directing these comments to the modifications to the analytical methods used to evaluate effect of sonar on marine mammals, rather to the assumptions underlying the density (or lack of) estimates for cetacean species in Hawaiian waters used in your analyses.

Abundance (or density) estimates for minke whales are not yet available for Hawaiian waters because this species has not been sighted in sufficient numbers to allow estimation using standard visual line-transect methods. The reasons for this are varied, but primarily is in part due to the fact that the dedicated NMFS surveys of Hawaiian waters were conducted in Fall, when few minke whales are expected to be present in Hawaiian waters. Even when they are present, minke whales can be difficult to sight. However information from several sources indicates that minke whales in fact occur in Hawaiian waters during the winter and spring. We have attached a file with some references for your convenience. Most of these data were collected using passive acoustic methods (i.e. listening for calls produced by minke whales). Analytical methods to estimate densities of animals have not yet been worked out for most marine mammal species that

| COMMENT NUMBER |
|---|
| S-E-0209 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

can only be detected with passive acoustic methods, therefore a reliable estimate is not yet possible. However we believe that it is important to note the presence of these animals, and perhaps to use an estimate for another species (as was done in your DEIS for fin whales) to derive a conservative estimate of exposure to Navy sonar.

We hope you will take this important information into consideration for the final draft of your EIS/OIES.

Respectfully Submitted,

Thomas Norris,

Ann Zoidis,

and Mari Smultea

Bio-Waves Inc.

Cetos Research Organization and

Smultea Environmental Sciences LLC.

COMMENT NUMBER

S-E-0209 (cont.)

**References for Minke Whale Sightings and Acoustic Detections in Hawaiian Waters**


Balcomb, K. C. Minasian, S. M., and Foster, L. 1987. The Whales of Hawaii, including all species of marine mammsals in Hawaiian and adjacent waters. Marine Mammal Fund. San Fransisco, CA. 99 pp.

Gedamke, J., D.P. Costa, and A. Dunstan (2001): Localization and visual verification of a complex minke whale vocalization. *J. Acoust. Soc. Am., 109*, 3038–3047.
(also see Gedamke's Ph.D. dissertation for additional references to N. Pacific 'boings')

Norris, T.F., Smultea, M. A., Zoidis, A. M., Rankin, S., Loftus, C., Oedekoven, O., Hayes, J. L., and Silva, E. 2005. A Preliminary Acoustic-Visual Survey of Cetaceans in Deep Waters around Ni'ihau, Kaua'i, and portions of O'ahu, Hawai'i from aboard the R/V *Dariabar,* February 2005. Prepared by: Cetos Research Organization, Bar Harbor, ME., under contract #2057SA05-F to Geo-Marine, Inc. for NAVFAC Pacific.

Rankin, S, and Barlow, J. 2005. Source of the North Pacific 'boing' sound attributed to minke whales. Journal of the Acoustical Society of America 118(5):3346-51.

Rankin , S, Norris, T.F., Smultea, M., Oedekoven, C., Zoidis, A., Silva, E., and Rivers, J. 2007. A Visual Sighting and Acoustic Detections of Minke Whales, Balaenoptera acutorostrata (Cetacea: Balaenopteridae), in Nearshore Hawaiian Waters. Pacific Science. 61(3): 395-398.

Thompson, P. O. & W. A. Friedl. 1982. A long term study of low frequency sounds from several species of whales off Oahu, Hawaii. Cetology, 45, 1-19.


COMMENT NUMBER

S-E-0209

## Comment re: HRC Supplement to the Draft EIS/OEIS

1 message

**Tue, Apr 8, 2008 at 2:31 AM**

To: sdeis_hrc@govsupport.us

Pacific Missile Range Facility
Public Affairs Officer

Aloha,
Thankyou to those from our Navy who shared their knowledge regarding the Supplement to the Draft EIS/OEIS at the March 14th public comment session on Maui.

To my knowledge, mid-frequency active sonar is at least correlated with changes in behavior, strandings, and deaths of a number of cetaceans.

It is my understanding also that the effects from MFA sonar have been proven to be a factor in health damage to members of Navy personnel, diving during use of MFA sonar.

I urge that action be in favor of the complete health and safety of human lives, and complete health and safety of marine mammals.

with respect,
Jane Panju
Maui

| COMMENT NUMBER |
|---|
| S-E-0210 |
| 1 |

## (no subject)

1 message

**Sylvia** · **Wed, Mar 12, 2008 at 12:52 PM**

To: sdeis_hrc@govsupport.us

I am opposed to the Navy doing any sonar testing in Hawaiian waters.
Please register my opposition.

| COMMENT NUMBER |
|---|
| S-E-0211 |
| 1 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

EARTHJUSTICE

BOZEMAN, MONTANA DENVER, COLORADO HONOLULU, HAWA
INTERNATIONAL JUNEAU, ALASKA OAKLAND, CALIFORN
SEATTLE, WASHINGTON TALLAHASSEE, FLORIDA WASHINGTON, D

April 7, 2008

By U.S. and Electronic Mail

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kauai, Hawai'i 96752-0128
ATTN: HRC EIS/OEIS
deis_hrc@govsupport.us

**Re: Department of the Navy's 2007 Draft Hawai'i Range Complex ("HRC") Environmental Impact Statement ("DEIS") and 2008 Supplemental Draft Hawai'i Range Complex EIS ("SDEIS")**

Dear Sir or Madam:

Please accept these comments in response to the above-captioned DEIS and SDEIS. The DEIS preferred alternative includes:

1) An increase in the "tempo and frequency" of training exercises;
2) New and intensified Research Development Testing & Executing ("RDT&E") operations;
3) Addition of multiple strike group training; and
4) Addition of a second strike group to Rim of the Pacific ("RIMPAC") exercises

All of the above activities would remain the same under the new preferred alternative introduced in the SDEIS, with the exception that overall sonar usage in Hawai'i will not increase above what the Navy defines as baseline sonar activity.

**LEGAL FRAMEWORK**

The National Environmental Policy Act of 1969 ("NEPA") "declares a broad national commitment to protecting and promoting environmental quality." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989). To achieve this critical goal, NEPA requires that each federal agency consider the potential environmental impacts of any "major Federal actions significantly affecting the quality of the human environment" through the preparation of an EIS. Id.; NEPA § 102(2)(c), 42 U.S.C. § 4332. This directive is known as a "set of action-forcing procedures that require that agencies take a 'hard look' at environmental consequences." Robertson, 490 U.S. at 349 (quoting Kleppe v. Sierra Club, 427 U.S. 390, 410, n.21 (1976)).

The requirement to prepare an EIS "serves NEPA's action-forcing purpose in two important respects." Robertson, 490 U.S. at 349. First, "the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant

223 SOUTH KING STREET, SUITE 400. HONOLULU, HI 96813-4501
T: 808 599-2436 F: 808 521-6841 E: eajushi@earthjustice.org W: www.earthjustice.org

10% NON WOOD FIBERS • 90% POST CONSUMER PAPER • PROCESSED CHLORINE FREE

COMMENT NUMBER
S-E-0212



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." Id. (emphasis added). Judicial review generally focuses on whether the dual goals of NEPA have been satisfied.

NEPA's mandate that federal agencies take a "hard look" requires 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." Klamath-Siskiyou Wilderness Center v. Bureau of Land Management, 387 F.3d 989, 994 (9th Cir. 2004) (quoting Neighbors of Cuddy Mountain v. United States Forest Service, 137 F.3d 1372, 1380 (9th Cir 1998)). If it is possible to quantify effects objectively, NEPA requires that the Navy do so. Id.

The Navy must consider reasonably foreseeable effects including "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8 (emphasis added).

**THE DEIS AND SDEIS ARE INADEQUATE**

For the reasons detailed below, the Navy's HRC DEIS fails to comply with both the letter and spirit of NEPA by failing to provide detailed information about its proposed action, failing to consider adequate alternatives, and failing to seriously analyze the environmental risks and consequences of its preferred alternative.

The DEIS fails to provide fundamental information about its proposed action

The DEIS falls far short of NEPA's fundamental purpose to "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken" by failing to provide basic information about the scope of the proposed action. 40 C.F.R. § 1500.1(a) (emphasis added).

Specifically, the DEIS fails to quantify the number of additional individual training exercises the Navy proposes to conduct during each major exercise. For example, although the DEIS at 4-372 explains that the number of Explosive Ordnance Disposal ("EOD") training operations at the EOD Land Range will increase from 85 to 93 per year under Alternative 2, the DEIS at 4-374 admits that "Multiple Strike Group Training would result in an unspecified number of additional training events at the EOD Land Range." 1

The number of exercises to be carried out each year is essential information to understand the full gamut of effects from each proposed alternative. For example, the number of increased exercises directly affects the amount of hazardous materials introduced to Hawai'i's marine environment. The Navy states its increased training will inject up to 56,422 additional "hazardous training materials" into Hawai'i each year. DEIS at 4-183. An unspecified number of additional multiple strike group training operations will result in an unspecified number of additional hazardous training materials. Without this basic underlying information, it is 2

COMMENT NUMBER
S-E-0212 (cont.)

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

impossible to quantify the increased effect on Hawai'i's coastal uses and resources from the preferred alternative.

The DEIS also presents inaccurate information about its baseline activities. In one instance, the Navy claims that live-fire exercises currently occur at Makua Military Reservation ("MMR"), when, in fact, pursuant to a consent decree entered by the district court for the district of Hawai'i, no live-fire exercises have been conducted at Makua since the summer of 2004. Notably, the Army's draft environmental impact statement for military training at MMR recognizes that the "no action" alternative is no military training at MMR. Likewise, the Navy's DEIS must inform the public the baseline at MMR is no live-fire training.

Lacking complete and accurate information about the scope of the proposed action, it is impossible for the Navy to take the required hard look at the Navy's proposed action, or for the public to adequately participate in the NEPA process.

The DEIS fails to analyze alternatives adequately

In enacting NEPA, Congress intended that all federal agencies, including the Navy, would consider in their review of project proposals "choices or alternatives that might be pursued with less environmental harm." Lands Council v. Powell, 395 F.3d 1019, 1027 (9th Cir. 2005). The heart of an EIS is its discussion of alternatives. 40 C.F.R. § 1502.14. Every EIS must contain a "rigorous and objective" analysis of "all reasonable alternatives" to the proposed action, including a discussion of the "no action" alternative as a base-point to which the proposed action can be compared. 40 C.F.R. § 1502.14(a); see also City of Carmel-by-the-Sea v. United States DOT, 123 F.3d 1142, 1155 (9th Cir. 1997).

"The existence of a viable but unexamined alternative renders an environmental impact statement inadequate." Citizens for a Better Henderson v. Hodel, 768 F.2d 1051, 1057 (9th Cir. 1985). The requisite alternatives are determined by the stated purposes and goals underlying the proposed agency action, however, "an agency cannot define its objectives in unreasonably narrow terms." City of Carmel, 123 F.3d at 1155.

The DEIS proffers three alternatives. The "no-action" alternative contemplates continued baseline activity at HRC. Alternative 1 will increase the "tempo and frequency" of training exercises, double the number of strike groups associated with RIMPAC, add an additional training operation, and increase the number and intensity of Research Development Training and Execution ("RDT&E") operations in Hawai'i. Alternative 2 includes all the proposed activity under Alternative 1, plus an additional increase in the "tempo and frequency" of training exercises, additional new RDT&E operations, and the addition of multiple strike group training. The SDEIS adds an Alternative 3, the preferred alternative, which involves all the proposed actions of Alternative 2, minus any increase in overall sonar hours.

A similar alternatives analysis proffered by the Navy in its Undersea Warfare Exercise ("USWEX") Environmental Assessment ("EA") was flatly rejected by the district court for the district of Hawai'i in February 2008:

COMMENT NUMBER
S-E-0212 (cont.)

3

4



> In essence, the Navy's alternatives analysis consists of a preferred option, which allows them to undertake the maximum level of USWEXs to meet their operational objectives, a second option, which mirrors the first option except that it decreases the amount of USWEXs by four (or one-third of the proposed total in Alternative 1), and a third option, which allows them to conduct the same exercises, just not consolidated into a single USWEX, and which is summarily dismissed as fundamentally inconsistent with naval training objectives. Moreover, the No Action Alternative is a true "no action" alternative in name only; in reality, this option would allow the Navy, though not in the manner required by its training needs, to engage in exercises using MFA sonar at much the same level and frequency as the preferred alternatives.
>
> This alternatives analysis essentially relegates environmental considerations to secondary status and, thus, runs contrary to the goal of NEPA. The goal of the statute is to ensure that federal agencies infuse in project planning a thorough consideration of environmental values. The consideration of alternatives requirement furthers that goal by guaranteeing that agency decision makers have before them and take into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance. The kind of thorough consideration of environmental values called for by NEPA is not possible when the end result-engaging in military exercises using devices that are potentially harmful to the environment-is predetermined. The Court also fails to see how a "no action" alternative that involves the continuation of individual training exercises using MFA sonar subject to the Navy's discretionary environmental review falls within NEPA's explicit alternatives analysis requirement.
>
> The Navy's alternatives analysis fails to meet NEPA's standards and, as a result, Plaintiffs have a high likelihood of success on this claim.

Ocean Mammal Institute v. Gates, 2008 WL 564664, *13-14 (Feb. 29, 2008 D. Hawai'i) (internal quotation marks and citation omitted) (emphasis in the original). As in Ocean Mammal Institute, the Navy has "tailor[ed] its environmental analysis so narrowly as to preclude anything but its desired result" and has relied on a spurious alternative in violation of NEPA. Id.

The DEIS fails to analyze adequately high-intensity, mid-frequency sonar

The Navy's analysis of mid-frequency active sonar has been rejected time and again by each court faced with it, resulting in injunctions enjoining the Navy from carrying out its plans. See NRDC v. Winter, CV-06-4131 (C.D. Cal. 2006) (Winter I); NRDC v. Winter, CV-010335-FMC, 2007 WL 2481037 (C.D. Cal. Aug. 7, 2007) (Winter II); and Ocean Mammal Institute v. Gates, 2008 WL 564664 (Feb. 29, 2008 D. Hawai'i). The Navy's analysis in the HRC DEIS and SDEIS has not significantly changed from the analyses that have been continually struck down. The Navy now applies a new methodology to estimate risk of behavioral effects, while any consequence analysis remains conspicuously missing.

COMMENT NUMBER
S-E-0212 (cont.)

5

Most strikingly, the risk function fails to account for the cumulative effects of ASW from (1) execution of USWEX, RIMPAC, and multiple strike groups training in Hawai'i over time; (2) multiple strike groups engaging in sonar exercises simultaneously; and (3) a double strike group RIMPAC. "Cumulative effects analysis requires the [DEIS] to analyze the impact of a proposed project in light of that project's interaction with the effects of past, current, and reasonably foreseeable future projects." Lands Council v. Powell, 395 F.3d 1019, 1027 (9th Cir. 2005) (citing 40 C.F.R. § 1508.7). This DEIS fails to analyze the effects of past, present, and future use.

In addition, in Winter I, Winter II, and Ocean Mammal Institute, the Navy and the courts had before them discrete training exercises carried out by single strike groups. Here, the Navy proposes to intensify its training with an additional strike group during RIMPAC and multiple strike group training. The Navy has erred by failing to factor this increased intensity into its analysis of sonar-induced risk and consequences.

The DEIS fails to analyze adequately effects from increased "training debris"

Along with increased tempo and frequency of training and RDT&E operations comes an increase in hazardous materials left behind in Hawai'i's coastal environment. The Navy recognizes that "[s]ome training materials, including gun ammunition, bombs and missiles, targets, sonobuoys, chaff, and flares, will be expended on the range and not recovered." DEIS at 4-176. The Navy also recognizes that "debris in the marine environment is a great hazard and can be harmful to wildlife[,]" DEIS at 4-77, and "[h]igh concentrations of potentially toxic substances within marine mammals along with an increase in new diseases have been documented in recent years," DEIS at 4-78. Despite this harm, the Navy illegally failed to analyze adequately the risk and consequences posed by the training debris it will inject into Hawai'i's coastal zone.

Initially, the Navy failed to quantify the amount of additional training debris that will be deposited in Hawai'i's waters. The Navy brushes aside any potential effects of 56,422 additional pieces of training debris (plus any additional waste generated by major exercises), declaring "[w]ithin the approximately 235,000 sq. nmi. of ocean encompassed by the HRC, however, the amount of ocean bottom habitat affected by a few tons per year of training debris will be insignificant, even assuming that some portions of the training areas are used more heavily than others." DEIS at 4-177 to 4-178. Among other things, the Navy:

- Improperly relied on data from the San Clemente Island Ordnance Database to estimate the amount of toxic chemicals released by sonobuoys, without demonstrating whether San Clemente's sonobuoy use is consistent with Hawai'i's sonobuoy use. DEIS at 4-178.
- Failed to disclose the components of chaff or the amount of chaff per package. DEIS at 4-179.
- Failed to clarify the quantity, type, and source of hazardous materials expected to be generated by intensified RDT&E operations such as "additional chemical simulants" and increased missile launches. DEIS at 4-180.

| COMMENT NUMBER |
|---|
| S-E-0212 (cont.) |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |



- Failed to account for additional hazardous materials generated by HRC enhancements, such as the debris generated by the proposed Portable Undersea Tracking Range; construction of an open-water Acoustic Test Facility off Ford Island; demolition of 13 buildings within PMRF; and construction of a 90,000 sq. ft. Range Operations Control Building in PMRF; and enhancement of the Explosive Ordnance Disposal ranges.
- Failed to quantify instances in which the "incidental release" of fuel and oil could occur. DEIS at 4-192.

Chalking up the 56,422 additional "hazardous training materials" to be introduced annually to Hawai'i's marine environment to a "few tons per year" without any attempt at quantification does not meet NEPA's standard of "high quality information." 40 C.F.R. § 1500.1(b). The amount of additional training debris must be quantified before a "hard look" at the effects can even begin. Accordingly, the Navy's discussion of the effects of training debris is seriously flawed:

- The Navy failed to address the cumulative effects of increasing the amounts of training debris in a coastal zone already littered with 80 years of the Navy's expended training materials. The Navy ends its "analysis" at the acknowledgment that "the amounts of toxic substances being released to the environment[] will gradually increase over the period of military use. Concentrations of some substances in sediments surrounding the disposed items will increase over time, possibly inhibiting benthic flora and fauna." DEIS at 4-176 to 4-177. "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." Klamath-Siskiyou, 387 F.3d at 994.
- The Navy failed to address the cumulative effects of introducing training debris in heavy concentrations by simultaneous unit-level and major exercises. The same phrase cut-and-pasted over and over again throughout the DEIS demonstrates that the cumulative effects of intensified training have not been considered: "Potential impacts from Major Exercises will be similar to those described earlier for training operations and RDT&E."
- The Navy failed to address the cumulative effects of conducting training and RDT&E operations in certain areas more often than in others. In the few instances that the Navy provides probability of risk analyses, it fails to account for the fact that training exercises are often conducted at that same location. See, e.g., DEIS at 4-178 (estimating the rate of deposition for pyrotechnic residues at 0.01 lb/nmi/year based on an area of 235,000 nm).
- The Navy failed to address the indirect effect on the continued survival of endangered and threatened marine species and the health and safety of the general public through the potential bioaccumulation of hazardous materials in benthic species and coral, which form the basis of the food chain.
- The Navy failed to assess adequately the probability of training debris or live ordnance directly striking marine mammals. If it is possible to quantify risk, the Navy must do so.

| COMMENT NUMBER |
|---|
| S-E-0212 (cont.) |
| 11 |
| 12 |
| 13 |
| 14 |
| 15 |
| 16 |
| 17 |

Klamath-Siskiyou, 387 F.3d at 994. Instead, it improperly concluded that the possibility of being struck by a missile is small, based on a probability analysis conducted for the Point Mugu Sea Range EIS and the fact that the TOA is 2.1 million nmi. DEIS at 4-212. The existence of a probability analysis in the Point Mugu EIS indicates that the risk is quantifiable. Moreover, the risk analysis cannot be diluted with the assumption that the entire 2.1 million nmi. will be used. In fact, the DEIS recognizes that certain portions of the TOA are used more heavily than others. See DEIS at 4-198 ("Of particular concern are overflight of and the potential for debris on Nihoa and Necker islands").

- The Navy failed to account for the risk or consequences of direct strikes on corals around the main Hawaiian Islands and within Papahanaumokuakea National Marine Monument (which protects 70% of the United States' coral reefs). Direct impacts on coral indirectly affects threatened and endangered species through destruction of their habitat and food sources. In addition, the Navy failed to account for the cumulative effects of its proposed action on coral with rising sea levels caused by global warming.

- The Navy failed to analyze the risk of turtle and marine mammal entanglement in expended sonobuoy parachutes and torpedo air stabilizer canopies, which it admits will sink to the seafloor where currents could cause them to billow. A billowing parachute could attract and entangle threatened sea turtles and endangered Hawaiian monk seals or other marine life.

The DEIS fails to analyze adequately effects of increased detonations on fish

Similarly, the Navy has failed to quantify the amount of increased detonations within the marine environment or to analyze the direct, indirect, and cumulative effects of increased and intensified exercises and activities involving explosives on Hawai'i's fish population.[1] For example, in listing the effects of underwater detonation on fish, the Navy concludes without analysis that live fire rounds "pose little risk to fish unless they were to be near the surface of at the point of impact." DEIS at 4-16. At page 4-326, the Navy admits that Pu'uloa Mine Neutralization and Salvage Operations occur within Essential Fish Habitat and will result in the loss of fish and benthic communities, but it fails to quantify the risk of loss for any of the alternatives. Without this initial analysis, it is impossible to quantify the indirect socioeconomic effects attendant with harm to fisheries. Further, as the DEIS notes that the Native Hawaiian community would be disproportionately affected if fish stock were reduced, triggering environmental justice concerns. DEIS at 4-466.

"The purpose of NEPA is to require disclosure of relevant environmental considerations that were given a 'hard look' by the agency, and thereby to permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm." Lands Council, 395 F.3d at 1027. Because the Navy failed to "put on the table, for the

[1] The Navy has refused to analyze Essential Fish Habitat in the HRC EIS because it claims to have done that analysis in the Essential Fish Habitat & Coral Reef Assessment for the Hawai'i Range Complex. DEIS at 4-13. Earthjustice was unable to locate a copy of that document online. It is well-established that "NEPA documents are inadequate if they contain only narratives of expert opinions." Klamath-Siskiyou Wildlands Center, 387 F.3d at 996.

| COMMENT NUMBER |
|---|
| S-E-0212 (cont.) |
| 18 |
| 23 |
| 19 |
| 20 |
| 21 |
| 22 |

Earthjustice Comments on HRC DEIS and DSEIS
April 7, 2008


deciding agency's and for the public's view, a sufficiently detailed statement of environmental impacts and alternatives so as to permit informed decision making[,]" the Navy cannot legally base a Record of Decision on this DEIS, and must issue a revised DEIS that discloses the full extent of the proposed action, properly analyzes alternatives, and addresses all reasonably foreseeable direct, indirect, and cumulative effects. Id.

Sincerely,

Koalani Kaulukukui

Koalani Kaulukukui
Associate Attorney

COMMENT NUMBER
S-E-0212 (cont.)

NRDC
THE EARTH'S BEST DEFENSE

NATURAL RESOURCES DEFENSE COUNCIL

**By Electronic and Regular Mail**

April 7, 2008

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kauai, Hawaii 96752-0128
ATTN: HRC EIS/OEIS
deis_hrc@govsupport.us

Re: Draft Supplemental Environmental Impact Statement for the Hawaii Range Complex

Dear Sir or Madam:

On behalf of the Natural Resources Defense Council ("NRDC'), The Humane Society of the United States, the International Fund for Animal Welfare, Cetacean Society International, Ocean Mammal Institute, the International Ocean Noise Coalition, Seaflow, and Ocean Futures Society and its founder Jean-Michel Cousteau, and on behalf of our millions of members, thousands of whom reside in Hawaii, we are writing to submit comments on the Navy's Draft Supplemental Environmental Impact Statement! Overseas Environmental Impact Statement for the Hawaii Range Complex ("DSEIS"). See 73 Fed. Reg. 10232 (Feb. 26,2008).1

I. Alternatives Analysis

In September, we called of attention to several deficiencies in the Navy's alternatives analysis: the Navy's refusal to consider a reduction in the level of current training in the Hawaii Range Complex ("HRC") or the siting of exercises in locations outside the range; the failure of the DEIS to analyze meaningfully whether a different mix of simulators and at-sea exercises would accomplish its aims; and the failure to adequately consider a range of mitigation measures that would achieve the Navy's core aim while minimizing environmental harm. DEIS Comments at 28-32. We are dismayed to see that none of these faults have been corrected in the supplemental document,

1 NRDC is aware that comments may be submitted separately by government agencies, individual scientists, environmental organizations, and the public. The comments that follow do not constitute a waiver of any factual or legal issue raised by any of these organizations or individuals and not specifically discussed herein. We hereby incorporate by reference all comments separately submitted on both the DEIS and DSEIS.

w.nrdc.org
1314 Second Street
Santa Monica, CA 90401
TEL 310-434-2300 FAX 310-434-2399
NEW YORK . WASHINGTON D.C. ' SAN FRANCISCO

| COMMENT NUMBER |
|---|
| S-E-0213 |
| 1 |



notwithstanding several recent court rulings that would seem to compel a different approach than the Navy has taken thus far.

The only aspect of the alternatives to change is the number of sonar use hours modeled for each suite of events. In general, the numbers of modeled hours are far lower than those set forth in the DEIS, so that, for example, the hours assigned to surface-ship tactical sonars in the Navy's No-Action Alternative have decreased by half- a change due, apparently, to the Navy's application of its Sonar Positional Reporting System (SPORTS). Following the release of the DEIS, the Navy determined that the SPORTS system might aid in quantifying the number of sonar use hours expected under each alternative. DSEIS at 1-3. We note, however, that the SPORTS system is a relatively novel means of centralizing data on mid-frequency sonar use, and the large discrepancy in use hours between the DEIS and DSEIS raises some question about its reliability. We therefore request that the Navy compare SPORTS data with logs retained by the Pacific Fleet, over a sample period, to confirm that SPORTS reporting does indeed capture all mid-frequency sonar use in the Hawaii Range Complex. Assuming that this is the case, we request that the Navy publicly report the total number of sonar use hours occurring on the HRC on a semi-annual basis, to ensure that levels remain below the levels established here.

II. Analysis of Species "Take"

The threshold used in the DSEIS differs from the one used by the Navy to estimate marine mammal take during RIMPAC 2006 and during subsequent major exercises off Hawaii and California. In short, instead of using an EL standard of 173 dB re 1 $\mu Pa^{2}$•s, which NMFS had insisted the Navy adopt, the Navy rather applies a behavioral risk function that begins at 120 dB re 1 µPa and reaches its mean at 165 dB re 1 µPa.

The Navy's adoption of this risk function has significant implications for its Navy's analysis. Under the current 173 dB (EL) standard, the RIMPAC 2006 event was expected to result in slightly less than 33,000 behavioral takes of marine mammals; under the proposed standard, RIMPAC events conducted with the same number of hours of sonar use would supposedly cause fewer than 6,000 takes. DSEIS at 3-24. Under the current standard, the conduct of 6 USWEX events was predicted to cause over 30,000 behavioral takes of marine mammals; under the proposed one, annual takes would not exceed 18,000. DSEIS at 3-26. Across the Hawaii Range Complex, the Pacific Fleet estimates that sonar training will result each year in approximately 45,000 behavioral takes of marine mammals, including behavioral impacts coinciding with temporary hearing loss. DSEIS at 3-17. These differences suggest that the predicted take-while still very large-represents far less than what the Fleet would have . estimated had it continued to use the previous standard. (Indeed, we request that the Navy provide a take estimate using the 173 dB (EL) standard.)

As the Navy should well know, agencies are not entitled to substantial deference under the Administrative Procedure Act when they reverse previously held positions. Among the most significant problems:

| COMMENT NUMBER |
|---|
| S-E-0213 (cont.) |
| 2 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

COMMENT NUMBER
S-E-0213 (cont.)

First, the Navy again relies on inapposite studies of temporary threshold shift in captive animals for its primary source 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. Cf. 42 C.F.R. § 1502.22. The problem is exacerbated further by the fact that the subjects in question, rougWy 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.[2] 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.[3] 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 once again ignored the comments of numerous marine mammal behaviorists on the Navy's USWTR DEIS, which sharply criticize the Navy for putting any serious stock in them.[4]

3

Second, 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 Shoup was at its closest approach (see discussion below at section A.2). DEIS at 4-51. 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.[5] Not surprisingly, then, the Navy's results are inconsistent with other studies of the effects of various noise sources, including mid-frequency sonar, on killer whales. We must insist that the NaVY provide the public with its propagation analysis for the Haro Strait event, and also describe precisely how this data

4

2 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. Tursiops truncatus, to 1-Second Tones of 141 to 201 dB re 1 uPa (1997)(SPAWAR Tech. Rep. 1751, Rev. 1).

3 C.E. Schlundt, J.1. Finneran, D.A. Carder, and S.H. Ridgway, Temporary Shift in Masked Hearing Thresholds of Bottlenose Dolphins, Tursiops truncates, and White Whales, Delphinapterus leucas, after Exposure to Intense Tones, 107 Journal of the Acoustical Society of America 3496, 3504 (2000).

4 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. These comments, and those of the fishermen cited below, are hereby incorporated into this letter. See also Letter from Rodney F. Weiher, NOAA, to Keith Jenkins, Naval Facilities Engineering Command Atlantic (Jan. 30, 2006); Memo, A.R. document 51, NRDC v. Winter, CV 06-4131 FMC (JCx) (undated NOAA memorandum).

5 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 Ham Strait, Washington-5 May 2003 at 4-6 (2005); Letter from D. Bain to California Coastal Commission (Jan. 9,2007).



COMMENT NUMBER
S-E-0213 (cont.)

set, along with results from the SPAWAR and Nowacek et al. studies, were factored into its development of the behavioral risk function.

Third, the Navy excludes a substantial body of both experimental and opportunistic research on the impacts of ocean noise on marine mammals. For example, the Navy does not consider the established literature on harbor porpoises, which have evinced a strong sensitivity to many types of anthropogenic sound at levels well below those captured by the Navy's risk function. The DEIS recently prepared for the Navy's Atlantic Fleet Active Sonar Training, in implicit acknowledgment of these data, sets an absolute take threshold of 120 dB (SPL) for the species; yet neither the Atlantic Fleet DEIS nor the instant DEIS includes any of these studies in its data set. DEIS at 4-48,4-50-51. The result is clear bias, for even if one assumes (for argument's sake) that the SPAWAR data has value, the Navy has included a relatively insensitive species in setting its general standard for marine mammals while excluding a relatively sensitive one.

In short, by placing great weight on the SPAWAR data, excluding other relevant data, and misusing the Haro Strait data, the Navy has produced a risk function that is belied by the existing record.[6] That record clearly demonstrates a high risk of significant behavioral impacts from mid-frequency sources, including mid-frequency sonar, on a diverse range of wild species (e.g., right whales, minke whales, killer whales, harbor porpoises, Dall's porpoises) at levels well below the "K" value of 165 dB (SPL), and well below 150 dB (SPL), where the Navy assumes take is minimal.[7]

5

Fourth, any risk function 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

6

6 It should further be noted that the Nowacek et al. 2004 study, the one other data set considered by the Navy, indicates that more than 50% of exposed animals responded profoundly at sound pressure levels below 135 dB re 1 µPa.

7 See, e.g., id.; R.A. Kastelein, H.T. Rippe, N. Vaughan, N.M. Schooneman, W.C. Verboom, and D. de Haan, The Effects of Acoustic Alarms on the Behavior of Harbor Porpoises in a Floating Pen, 16 Marine Mammal Science 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, 18 Marine Mammal Science 843 (2002); 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 Ham Strait, Washington, 5 May 2003 at 10 (2005); D.P. Nowacek, M.P. Johnson, and P.L. Tyack, North Atlantic Right Whales CEubalaena glacialis) Ignore Ships but Respond to Alerting Stimuli, 271 Proceedings of the Royal Society of London, Part B: Biological Sciences 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, 14 European Research on Cetaceans 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). See also A.A. Truett, Ecological Risk to Cetaceans from Anthropogenic Ocean Sound: Characterization Analysis Using a Professional Judgment Approach to Uncertainty 95 (2007).



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

example, are prone to mass strand for precisely this reason; and the plight of the 200 melon-headed whales in Hanalei Bay, and of the "J" pod of killer whales in Haro Strait, as described in our DEIS comment letter, may be pertinent examples. Should the pod or group contain a few sensitive individuals, the entire social unit could experience harassment-a dynamic that is not reflected in the Navy's risk function. In developing its "A" parameter, the Navy must take account of such potential indirect effects. 42 C.F.R. § 1502.16(b).

Fifth, the Navy's exclusive reliance on sound pressure levels ("SPLs") in setting a behavioral threshold is misplaced. The discussion in the DEIS speaks repeatedly of uncertainty in defining the risk function and recapitulates, in its summary of the earlier methodology, the benefits implicit in the use of a criterion that takes duration into account. It is therefore appropriate for the Navy to set dual thresholds for behavioral effects, one based on SPLs and one based either on energy flux density levels ("ELs") or another measure of exposure or exercise duration.

Sixth, as noted in our comments on the DEIS, 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.[8] The problem is only compounded by the Navy's failure to consider the best available evidence of population structuring in Hawaiian marine mammals, as discussed in our DEIS comment letter.

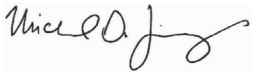
For all these reasons, the behavioral risk function utilized by the Navy in this DEIS is fundamentally inconsistent with the scientific literature on acoustic impacts, and, indeed, with marine mammal science in general, and, if used to support a Record of Decision, would violate NEPA. Further, the model is highly sensitive to changes in the Navy's assumptions, meaning that its assumptions result in significant underestimates of take. Please note that we will forward a more detailed, technical analysis expanding on these points later this month.

8 The importance of this problem for marine mammal conservation is reflected in a recent NRC report, which calls for models that, inter alia, translate such subtle changes into disruptions in key activities like feeding and breeding that are significant for individual animals. National Research Council. Marine Mammal Populations and Ocean Noise: Determining When Noise Causes Biologically Significant Effects 35-68 (2005). Additional evidence relevant to the problem of stress in marine mammals is summarized in A.J. Wright, N. Aguilar Soto, A.L. Baldwin, M. Bateson, C.M. Beale, C.Clark, T. Deak, E.F. Edwards, A Fernandez, 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?" (in press and forthcoming 2008) (attached to this letter).

| COMMENT NUMBER |
|---|
| S-E-0213 (cont.) |
| 7 |
| 8 |
| 9 |

Public Affairs Officer
April 7, 2008
Page 6

Very truly yours,



Michael Jasny
Senior Policy Analyst

Encl.

COMMENT NUMBER
S-E-0213 (cont.)

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

## MY Comments on the SDEIS/OEIS

1 message

**Lee Tepley** **Wed, Apr 9, 2008 at 1:48 AM**
To: sdeis_hrc@govsupport.us

In the the Supplement to the draft EIS, the Navy admits that it's complex 112 page data analysis is based on an incredibly large number of approximations as listed below. At the Hilo meeting a Navy representative told me that under the circumstances, the Supplement to the draft EIS was "the best that they could do". I think that it is disgraceful that the Navy should have based a complex mathematical analysis on such poor data.

My first question is: Why did the Navy base the complex mathematical analysis in the Supplement to the draft EIS on such incredibly poor data??

Below I have copied a number of the approximations on which the Supplement to the draft EIS is based. The approximations started at about page 3-3.

**There is widespread consensus that cetacean response to MFA sound signals needs to be better defined using controlled experiments.**

**Until additional data is available, NMFS and the Navy have determined that the following three data sets are most applicable for the direct use in developing risk function parameters for MFA/HFA sonar. These data sets represent the only known data that specifically relate altered behavioral responses to exposure to MFA sound sources.**

**The only mysticete data available resulted from field experiments in which were exposed to a range frequency sound sources from 120 Hz to 4500 Hz.**

**Although these observations were made in an uncontrolled environment, the sound field that may have been associated with the sonar operations had to be estimated, and the behavioral observations were reported for groups of whales, not individual whales, the observations associated**

**with the USS SHOUP provide the only data set available of the behavioral responses of wild, non-captive animal upon exposure to the AN/SQS-53 MFA sonar.**

**Observations from this reconstruction included an approximate closest approach time which was correlated to a reconstructed estimate of received level at an approximate whale location**

**There are significant limitations and challenges to any risk function derived to estimate the probability of marine mammal behavioral responses; these are largely attributable to sparse data. Ultimately there should be multiple functions for different marine mammal taxonomic groups, but the current data are insufficient to support them.**

**The risk function presented here is based on three data sets that NMFS and Navy have determined are the best available science at this time. The Navy and NMFS acknowledge each of these data sets has limitations. However, this risk function, if informed by the limited available datarelevant to the MFA sonar application, has the advantages of simplicity and the fact that there is precedent for its application and foundation in marine mammal research. While NMFS considers all data sets as being**

**weighted equally in the development of the risk function, the Navy believes the SSC San Diego data is the most rigorous and applicable for the following reasons:**

| COMMENT NUMBER |
|---|
| S-E-0218 |
| 1 |

**The risk function presented here is based on three data sets that NMFS and Navy have determined are the best available science at this time. The Navy and NMFS acknowledge each of these data sets has limitations. However, this risk function, if informed by the limited available data relevant to the MFA sonar application, has the advantages of simplicity and the fact that there is precedent for its application and foundation in marine mammal research. While NMFS considers all data sets as being**

**weighted equally in the development of the risk function, the Navy believes the SSC San Diego data is the most rigorous and applicable for the following reasons:**

**• The data represents the only source of information where the researchers had complete control over and ability to quantify the noise exposure conditions.**

**However, the Navy and NMFS do agree that the following are limitations associated with the three data sets used as the basis of the risk function:**

**• The three data sets represent the responses of only four species: trained bottlenose dolphins and beluga whales, North Atlantic right whales in the wild and killer whales in the wild.**

**• None of the three data sets represent experiments designed for behavioral observations of animals exposed to MFA sonar.**

**• The behavioral responses of marine mammals that were observed in the wild are based solely on an estimated received level of sound exposure; they do not take into consideration (due to minimal or no supporting data):**

**– Potential relationships between acoustic exposures and specific behavioral activities (e.g., feeding, reproduction, changes in diving behavior, etc.), variables such as bathymetry, or acoustic waveguides;**

**– Differences in individuals, populations, or species, or the prior experiences, reproductive state, hearing sensitivity, or age of the marine mammal.**

**• The observations of behavioral response were from exposure to alert stimuli that contained mid-frequency components but was not similar to a MFA sonar ping.**

**This 18-minute alert stimuli is in contrast to the average 1-sec ping every 30 sec in acomparatively very narrow frequency band used by military sonar.**

**• The observations of behavioral harassment were complicated by the fact that there were other sources of harassment in the vicinity (other vessels and their interaction with the animals during the observation).**

**• The observations were anecdotal and inconsistent. There were no controls during the observation period, with no way to assess the relative magnitude of the any observed response as opposed to baseline conditions.**

In view of the incredibly large number of approximations above (and other approximations not listed), please tell me why this draft EIS should be taken seriously??

My 2nd question is based on the fact that the Supplement to the draft EIS does not even mention the strong possibility of deep diving whales (and especially beaked whales) getting decompression sickness (the "bends) from exposure to an unknown (but possibly low) level of MFA sonar.

| COMMENT NUMBER (cont.) |
|---|
| S-E-0218 (cont.) |
| 1 |
| 2 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

Question #2. Why was the above totally ignored in the 2nd draft EIS??

Sincerely,

Lee Tepley

Ph. D. Physics.

COMMENT NUMBER
S-E-0218 (cont.)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

April 10, 2008

Tom Clements
Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kehaha, Kauai, HI 96752-0128

Subject: Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), Hawaii Range Complex, Hawaii (CEQ # 20070312)

Dear Mr. Clements:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA reviewed the Draft Environmental Impact Statement (DEIS) and provided comments to the Department of the Navy (DON) on September 17, 2007. We rated the DEIS as Environmental Concerns - Insufficient Information (EC-2) due to concerns regarding impacts to marine resources from the preferred alternative. We recommended additional alternatives be evaluated and a more precautionary approach be taken regarding the use of mid-frequency active (MFA) sonar in training exercises due to the substantial uncertainty of these impacts on marine resources. We also requested additional information regarding impacts to fish from MFA sonar and additional discussion of the potential for underwater detonations to disperse polychlorinated biphenyls (PCBs) and heavy metal contamination in Pearl Harbor.

DON has prepared this Supplemental DEIS (SDEIS) to address impacts to marine mammals from Navy acoustic sources. Specifically, the Navy has changed the methodology used to estimate sonar hours of mid-frequency active (MFA) use for the exercises and has changed the methodology used to evaluate effects of MFA sonar on marine mammals. The new methodologies result in substantially lower estimates of sonar hours and predicted adverse impacts to marine mammals.

The Supplement DEIS also includes an additional Alternative 3 which proposes the same increased frequency and tempo of training events, addition of major exercises including supporting up to three Strike Groups, and increased research, development, test and evaluation (RDT&E) operations as the previously preferred Alternative 2, but with the amount of MFA sonar use as occurs in current ongoing training, RDT&E operations and support of existing range

*Printed on Recycled Paper*

COMMENT NUMBER
S-E-0225

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

capabilities (No Action Alternative). Alternative 3 is the new preferred alternative.

We must commend the Navy for reducing the proposed increase in mid-frequency sonar use under Alternative 2. However, we have concerns regarding the changes to the methodologies for impact assessment, the basis of which contains substantial uncertainties, and for the possibility that impacts could be underestimated. We are also concerned with impacts to the endangered Hawaiian Monk Seal, especially since the threshold for harassment has been raised in the SDEIS for this species. The Hawaiian Monk Seal is in precipitous decline with extinction a real possibility in the Northwest Hawaiian Islands. Additionally, we note that the Record of Decision for this action will utilize the National Defense Exemption from the Marine Mammal Protection Act. We are rating the DSEIS as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions").

EPA recommends the Navy identify and explore additional ways of minimizing MFA sonar use in its Anti-submarine Warfare (ASW) training and utilize the NEPA process to develop a broader range of alternatives which avoid potentially significant impacts (40 CFR 1500.2(e)). We encourage precaution, as a remedy for the significant uncertainties that abound in the impact assessment, and in the use of MFA sonar. We also encourage collaboration and joint fact-finding with interested agencies and organizations to resolve disputes over scientific and technical issues.

We note that EPA's comments on the DEIS regarding the potential for underwater detonations to disperse polychlorinated biphenyls (PCBs) and heavy metal contamination in Pearl Harbor and our request for disclosure of the amount of munitions use and their associated pollutants for all alternatives were not addressed in this SDEIS. We continue to extend these requests.

EPA appreciates the opportunity to review this SDEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3846 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

FOR Connell Dunning

Nova Blazej, Manager
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Chris Yates, National Marine Fisheries Service



| COMMENT NUMBER |
|---|
| S-E-0225 (cont.) |
| 1 |
| 2 |
| 3, 4 |
| 5 |
| 6 |
| 7 |

## SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

### ENVIRONMENTAL IMPACT OF THE ACTION

***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

### ADEQUACY OF THE IMPACT STATEMENT

***Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

| COMMENT NUMBER |
|---|
| S-E-0225 (cont.) |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

EPA DETAILED COMMENTS ON THE SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT, HAWAII RANGE COMPLEX, HAWAII, APRIL 9, 2008

**Minimizing Mid-Frequency Sonar Use**

We understand the need for the Navy to use mid-frequency active (MFA) sonar in its anti-submarine warfare (ASW) training. MFA sonar is currently the only way to detect modern quiet submarines, and the Navy maintains that its use is the only way to provide realistic training and testing with this sonar technology. However, the potentially significant impacts from MFA sonar on marine mammals are of significant concern to the public, as evidenced in high litigation for these projects. EPA is also concerned about these impacts, especially considering future anticipated effects of climate change on marine ecosystems[1] and the additional strain MFA sonar impacts may have on increasingly stressed resources.

COMMENT NUMBER S-E-0225 (cont.)

8

EPA recommends a comprehensive strategy for meeting ASW training needs while minimizing the use of MFA sonar. Since, as the Navy indicates, the effective use of sonar is a perishable skill that must be practiced frequently, additional means of practicing these skills should be developed. Computer-assisted simulations of sonar use and response that simulates what sonar technicians see on ship should be explored, if this is not already occurring, to augment and complement the use of MFA sonar in training. The drawbacks of simulation must be compared to training situations that include the various court and agency imposed restrictions on MFA sonar use, not to an ideal situation with no restrictions.

9

The clear identification of minimum training needs with regard to MFA sonar use can be useful in planning training programs that minimize MFA sonar use and maximize the skills gained from its use. This was the basis for our comment on the DEIS which recommended that the document include a range of alternatives developed with reference to how well they meet immediate and future training needs. Without specifically identifying minimum training needs, it is difficult to devise alternatives that avoid potentially significant impacts. The inclusion of an additional alternative in the SDEIS that proposes to stretch the existing hours of MFA sonar use (no action alternative) across additional training exercises demonstrates that there is flexibility in the amount of MFA sonar use that occurs during training. The NEPA documents do not identify the minimum requirements that are needed for the Hawaii Range Complex, nor is there evidence of Navy coordination with other Range Complexes in Southern California, the Northern Mariana Islands, and the Pacific Northwest for opportunities to maximize the training benefit of MFA sonar use.

10

EPA also encourages the Navy to consider the benefits of collaboration in addressing this controversial issue. The Council on Environmental Quality, by releasing new guidance on Collaboration in NEPA[2], has communicated the need for Federal agencies to better engage interested parties in collaborative environmental analysis and federal decision-making. We understand national security issues would limit some opportunities to collaborate, but we suspect

11

[1] Intergovernmental Panel on Climate Change, 4th Assessment Report ""Impacts, Adaptation and Vulnerability", Section 4.4.9 – Oceans and Shallow Seas. Available: http://www.ipcc.ch/ipccreports/ar4-wg2.htm

[2] Available: http://www.nepa.gov/ntf/Collaboration_in_NEPA_Oct_2007.pdf



COMMENT NUMBER S-E-0225 (cont.)

that some opportunities with other interested parties may exist, such as in developing a broader range of alternatives and/or in joint fact-finding (an inclusive and deliberative process to foster mutual learning and resolve disputes over scientific and technical issues). Collaboration might offer an alternative to litigation and we recommend its consideration.

*Recommendation:* EPA recommends that the FEIS identify all efforts that the Navy is taking to minimize MFA sonar use in ASW training and to identify additional opportunities to meet training needs while minimizing MFA sonar use. We continue to recommend that a broader range of alternatives be evaluated, and the identification of minimum training requirements and minimum sonar use for ASW exercises will facilitate the development of alternatives that avoid potentially significant impacts (40 CFR 1500.2(e)).

12

We also recommend the Navy explore the use of simulations to augment the use of MFA sonar training, or if this is occurring, to invest in better simulations. We request that information about these efforts be included in the FEIS. We also recommend coordination of ASW training that is occurring in other Range Complexes in Southern California, the Northern Mariana Islands, and the Pacific Northwest for opportunities to maximize the benefit gained from each MFA sonar use.

13

We encourage collaboration with interested outside parties where possible, especially in the development of alternatives and in joint fact-finding to resolve disputes over scientific and technical issues. Please address this possibility in the FEIS.

14

**Changes to Sonar Hours**

The new method of calculating sonar hours utilizes the Sonar Positional Reporting System (SPORTS), a database tool established in March 2006 to determine geographic locations of sonar use and into which all commands employing MFA sonar and sonobuoys are to input MFA sonar use daily. We commend the Navy for attempting to refine the estimated sonar hour usage originally collected, and for including submarine sonar in the analysis in the SDEIS (p. 2-1). However, very little information regarding the SPORTS database is revealed in the SDEIS. We understand from the Navy that the database is classified, had been in use for 14 months, and contained some inaccuracies that were corrected using best professional judgment. Since so little information about this data is revealed, it is not clear that the SPORTS data is in fact more representative; certainly the documentation in the SDEIS does not demonstrate this. Since this new method of calculating sonar use produced an estimate that is much lower than that estimated in the DEIS, more information is needed to substantiate its use to ensure that sonar use is not being underreported.

15

*Recommendation:* The FEIS should include more information about the data in the SPORTS database. The FEIS should also provide detail of the method previously used, which we understand from the Navy was based on a 2-year study for the Range Complex Management Plan and involved estimates and the use of best professional judgment. Additional discussion as to why the SPORTS method is considered more accurate should

16



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

be included in the FEIS. EPA recommends that this discussion include a comparison of the attributes and limitations of both methodologies in a comparative manner for the benefit of the reader and decision-maker.

**Analytical Methodology**

The Supplemental Draft Environmental Impact Statement (SDEIS) modifies the analytical methodology used to evaluate marine mammal behavior responses to MFA sonar in the Hawaii Range Complex (HRC). The DEIS had used a dose function analytical approach, and the SDEIS uses a risk function developed with the National Marine Fisheries Service (NMFS). The SDEIS indicates that this change resulted from efforts to develop more appropriate model input parameters (p. es-2) in the hopes of increasing the accuracy of the Navy's assessment. It also indicates that the Navy believed that the methodology in the DEIS had overestimated potential effects (p. 3-14).

We commend the Navy for attempting to refine and improve methods for impact analysis, however substantial limitations and uncertainty appear to exist for the risk function. The SDEIS admits the risk function is based on "very limited data" (p. 3-6) consisting of just three data sets. One of the three data sets used acoustic stimuli that was unlike the Navy's MFA sonar (p. 3-9), and another data set's observations were "anecdotal and inconsistent" and lacked controls (p. 3-10). Additionally, the data sets represent responses from a limited number of species (four).

*Recommendation:* EPA has concerns due to the substantial scientific uncertainty associated with the data that informed the Navy's new methodology. In the process of refining methods for impact analysis, the Navy should ensure that impacts are not underreported. Because of the high level of uncertainty, it is prudent to err on the side of more precaution. We recommend application of buffers in calculating impacts to account for this uncertainty and that considers cumulative impacts that these resources are receiving from other stressors. As we stated in our comments on the DEIS, the determination of impact significance, as it relates to NEPA disclosure, must consider this uncertainty.[3]

As mentioned above, opportunities for joint fact-finding with interested parties to resolve disputes over scientific and technical issues should be considered.

**Impacts to the Hawaiian Monk Seal**

The impact analysis in the SDEIS raised the threshold for determining harassment to the endangered Hawaiian monk seal (HMS). The determination of temporary threshold shift (TTS), a temporary shift in hearing sensitivity, and the permanent threshold shift (PTS), a permanent hearing loss, were altered to utilize the TTS of the elephant seal which the SDEIS states is more closely related to the HMS than other pinnepeds. The SDEIS provides very little information regarding this change, which appears to be based on the information from one researcher. We

[3] The Council on Environmental Quality Regulations for Implementing NEPA state that "the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks" should be considered in evaluating significance (40 CFR 1508.27 (b) 5)



| COMMENT NUMBER |
|---|
| S-E-0225 (cont.) |
| 17 |
| 18 |
| 19 |
| 20 |

| COMMENT NUMBER |
|---|
| S-E-0225 (cont.) |
| 22 |

are concerned with potentially underestimating impacts to the HMS because the species is in such precipitous decline, with extinction of the Northwest HMS a real possibility.[4]

*Recommendation:* Provide additional information in the FEIS regarding the use of a higher harassment threshold for the rapidly declining HMS. Unless there is complete scientific agreement that these thresholds are more appropriate, we recommend against change to the assessment methodology, believing a more precautionary approach is appropriate for such a vulnerable species.

**Additional Comment**

We recommend that the tables in Chapter 3 of the SDEIS be reviewed as it appears there are some errors, at least for the humpback whale PTS in Table 3.3.1-1 and on pages 3-22, 3-26, and 3-28.

[4] Western Pacific Regional Fishery Management Council, Pacific Islands Fishery News, Winter 2008

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0005 was the same as that of S-E-0004. This comment was submitted by Mark Wichar of Vancouver, WA. | S-E-0005 |
| The text of comment S-E-0006 was the same as that of S-E-0004. This comment was submitted by Donna Lee Cussac of Cleveland, TN. | S-E-0006 |
| The text of comment S-E-0007 was the same as that of S-E-0004. This comment was submitted by Michael Swerdlow of Waikoloa, HI. | S-E-0007 |
| The text of comment S-E-0009 was the same as that of S-E-0004. This comment was submitted by Fern Holland of Kapa'a, Kauai, HI. | S-E-0009 |
| The text of comment S-E-0010 was the same as that of S-E-0004. This comment was submitted by Lisa Galloway of Honolulu, HI. | S-E-0010 |
| The text of comment S-E-0011 was the same as that of S-E-0004. This comment was submitted by Jamesy Gonsalves of Honolulu, HI. | S-E-0011 |
| The text of comment S-E-0012 was the same as that of S-E-0004. This comment was submitted by Jody Smith of Honolulu, HI. | S-E-0012 |
| The text of comment S-E-0013 was the same as that of S-E-0004. This comment was submitted by Tutabelle Ojeda of Keaau, HI. | S-E-0013 |
| The text of comment S-E-0014 was the same as that of S-E-0004. This comment was submitted by Miguel Godinez of Hanalei, HI. | S-E-0014 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0015 was the same as that of S-E-0004. This comment was submitted by Carolyn Moore of Mesa, AZ. | S-E-0015 |
| The text of comment S-E-0016 was the same as that of S-E-0004. This comment was submitted by Ellen Okuma of Kea'au, HI. | S-E-0016 |
| The text of comment S-E-0017 was the same as that of S-E-0004. This comment was submitted by Kanoe Kapu of Hilo, HI. | S-E-0017 |
| The text of comment S-E-0018 was the same as that of S-E-0004. This comment was submitted by BOBBY McClintock of Honolulu, HI. | S-E-0018 |
| The text of comment S-E-0019 was the same as that of S-E-0004. This comment was submitted by Shannan Chan of Honolulu, HI. | S-E-0019 |
| The text of comment S-E-0020 was the same as that of S-E-0004. This comment was submitted by Earlene Alexiou of Soquel, CA. | S-E-0020 |
| The text of comment S-E-0021 was the same as that of S-E-0004. This comment was submitted by Dave Kisor of Riverside, CA. | S-E-0021 |
| The text of comment S-E-0022 was the same as that of S-E-0004. This comment was submitted by Dinda Evans of San Diego, CA. | S-E-0022 |
| The text of comment S-E-0023 was the same as that of S-E-0004. This comment was submitted by Marie Le Boeuf of Makawao, HI. | S-E-0023 |
| The text of comment S-E-0024 was the same as that of S-E-0004. This comment was submitted by Healani Trembath of Lihue, HI. | S-E-0024 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0025 was the same as that of S-E-0004. This comment was submitted by Nadine Apo of Denver, CO. | S-E-0025 |
| The text of comment S-E-0026 was the same as that of S-E-0004. This comment was submitted by Scott Jarvis of Hanalei, HI. | S-E-0026 |
| The text of comment S-E-0027 was the same as that of S-E-0004. This comment was submitted by Lisa Marshall of Houston, TX. | S-E-0027 |
| The text of comment S-E-0028 was the same as that of S-E-0004. This comment was submitted by Briana Wagner of Hagerstown, MD. | S-E-0028 |
| The text of comment S-E-0029 was the same as that of S-E-0004. This comment was submitted by Patricia Blair of Kailua, HI. | S-E-0029 |
| The text of comment S-E-0030 was the same as that of S-E-0004. This comment was submitted by Raquel Esparza of Hollywood, CA. | S-E-0030 |
| The text of comment S-E-0031 was the same as that of S-E-0004. This comment was submitted by Annalia Russell of Kapa'a, HI. | S-E-0031 |
| The text of comment S-E-0032 was the same as that of S-E-0004. This comment was submitted by Kathy-Lyn Allen of Pueblo, CO. | S-E-0032 |
| The text of comment S-E-0033 was the same as that of S-E-0004. This comment was submitted by Ravi Grover of Chicago, IL. | S-E-0033 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0034 was the same as that of S-E-0004. This comment was submitted by Katy Fogg of Olympia, WA. | S-E-0034 |
| The text of comment S-E-0035 was the same as that of S-E-0004. This comment was submitted by Katie Leinweber of Kihei, HI. | S-E-0035 |
| The text of comment S-E-0036 was the same as that of S-E-0004. This comment was submitted by Meghan Au of Waimanalo, HI. | S-E-0036 |
| The text of comment S-E-0037 was the same as that of S-E-0004. This comment was submitted by Jonah Jensen of Lawai, HI. | S-E-0037 |
| The text of comment S-E-0038 was the same as that of S-E-0004. This comment was submitted by Mike Moran of Kihei, HI. | S-E-0038 |
| The text of comment S-E-0039 was the same as that of S-E-0004. This comment was submitted by Gail Richard of Menlo Park, CA. | S-E-0039 |
| The text of comment S-E-0040 was the same as that of S-E-0004. This comment was submitted by Lauren Pomerantz of Kihei, HI. | S-E-0040 |
| The text of comment S-E-0041 was the same as that of S-E-0004. This comment was submitted by Constance Rocse of Lahaina, HI. | S-E-0041 |
| The text of comment S-E-0042 was the same as that of S-E-0004. This comment was submitted by Steve LaFleur of Paia, HI. | S-E-0042 |
| The text of comment S-E-0043 was the same as that of S-E-0004. This comment was submitted by Naia Kelly of Haiku, HI. | S-E-0043 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0044 was the same as that of S-E-0004. This comment was submitted by Joy Perfetti of Haiku, HI. | S-E-0044 |
| The text of comment S-E-0045 was the same as that of S-E-0004. This comment was submitted by Ron Whitmore of Hilo, HI. | S-E-0045 |
| The text of comment S-E-0046 was the same as that of S-E-0004. This comment was submitted by Teri Lawrence of Lahaina, HI. | S-E-0046 |
| The text of comment S-E-0047 was the same as that of S-E-0004. This comment was submitted by Nancy Davlantes of Greendale, WI. | S-E-0047 |
| The text of comment S-E-0048 was the same as that of S-E-0004. This comment was submitted by Nola Conn of Anahola, HI. | S-E-0048 |
| The text of comment S-E-0049 was the same as that of S-E-0004. This comment was submitted by Stephen Skogman of Kula, HI. | S-E-0049 |
| The text of comment S-E-0050 was the same as that of S-E-0004. This comment was submitted by Anita Wintner of Kihei, HI. | S-E-0050 |
| The text of comment S-E-0051 was the same as that of S-E-0004. This comment was submitted by Bill Lewis of Volcano, HI. | S-E-0051 |
| The text of comment S-E-0052 was the same as that of S-E-0004. This comment was submitted by Brooke Porter of Wailuku, HI. | S-E-0052 |
| The text of comment S-E-0053 was the same as that of S-E-0004. This comment was submitted by Faith Wilcox of Westport, ME. | S-E-0053 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0054 was the same as that of S-E-0004. This comment was submitted by John Lyons of Makawao, HI. | S-E-0054 |
| The text of comment S-E-0056 was the same as that of S-E-0004. This comment was submitted by Robin James of Ashland, OR. | S-E-0056 |
| The text of comment S-E-0057 was the same as that of S-E-0004. This comment was submitted by Cathy McDuff of Haiku, HI. | S-E-0057 |
| The text of comment S-E-0058 was the same as that of S-E-0004. This comment was submitted by Rich Lucas of Haiku, HI. | S-E-0058 |
| The text of comment S-E-0060 was the same as that of S-E-0004. This comment was submitted by Mary Groode of Kihei, HI. | S-E-0060 |
| The text of comment S-E-0061 was the same as that of S-E-0004. This comment was submitted by Madeleine Migenes of Haiku, HI. | S-E-0061 |
| The text of comment S-E-0063 was the same as that of S-E-0004. This comment was submitted by Jay Jones of , HI. | S-E-0063 |
| The text of comment S-E-0064 was the same as that of S-E-0004. This comment was submitted by Elaine Gima of Kahului, HI. | S-E-0064 |
| The text of comment S-E-0065 was the same as that of S-E-0004. This comment was submitted by Ann Engerman of Paia, HI. | S-E-0066 |
| The text of comment S-E-0066 was the same as that of S-E-0004. This comment was submitted by Barbara Kranichfeld of Haiku, HI. | S-E-0066 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0067 was the same as that of S-E-0004. This comment was submitted by Adrianna Grace of Haiku, HI. | S-E-0067 |
| The text of comment S-E-0068 was the same as that of S-E-0004. This comment was submitted by Carole Burstein of Kihei, HI. | S-E-0068 |
| The text of comment S-E-0069 was the same as that of S-E-0004. This comment was submitted by Kelly Prince of Kihei, HI. | S-E-0069 |
| The text of comment S-E-0070 was the same as that of S-E-0004. This comment was submitted by Gail Richard of Menlo Park, CA. | S-E-0070 |
| The text of comment S-E-0071 was the same as that of S-E-0004. This comment was submitted by Bobbi Leung of Los Angeles, CA. | S-E-0071 |
| The text of comment S-E-0073 was the same as that of S-E-0004. This comment was submitted by John Dwork of Maui, HI. | S-E-0073 |
| The text of comment S-E-0074 was the same as that of S-E-0004. This comment was submitted by Katy Rose of Hanalei, HI. | S-E-0074 |
| The text of comment S-E-0075 was the same as that of S-E-0004. This comment was submitted by Carl Berg of Lihue, HI. | S-E-0075 |
| The text of comment S-E-0076 was the same as that of S-E-0004. This comment was submitted by Sharon Goodwin of Kapaa, HI. | S-E-0076 |
| The text of comment S-E-0077 was the same as that of S-E-0004. This comment was submitted by Andrea Brower of Anahola, HI. | S-E-0077 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0079 was the same as that of S-E-0004. This comment was submitted by Barbara Best of Wailuku, HI. | S-E-0079 |
| The text of comment S-E-0080 was the same as that of S-E-0004. This comment was submitted by John Barnett of Kapaa, HI. | S-E-0080 |
| The text of comment S-E-0081 was the same as that of S-E-0004. This comment was submitted by Janos Samu of Kalaheo, HI. | S-E-0081 |
| The text of comment S-E-0082 was the same as that of S-E-0004. This comment was submitted by Helena Lake of Cardiff by the Sea, CA. | S-E-0082 |
| The text of comment S-E-0083 was the same as that of S-E-0004. This comment was submitted by Noyita Saravia of Kahuku, HI. | S-E-0083 |
| The text of comment S-E-0084 was the same as that of S-E-0004. This comment was submitted by Lily Kempf of Colorado Springs, CO. | S-E-0084 |
| The text of comment S-E-0085 was the same as that of S-E-0004. This comment was submitted by Tanya Eldridge of Nantucket, MA. | S-E-0085 |
| The text of comment S-E-0086 was the same as that of S-E-0004. This comment was submitted by Ernest Jepson of Kihei, HI. | S-E-0086 |
| The text of comment S-E-0087 was the same as that of S-E-0004. This comment was submitted by Sandra Herndon of Kapaa, HI. | S-E-0087 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0088 was the same as that of S-E-0004. This comment was submitted by Caren Diamond of Hanalei, HI. | S-E-0088 |
| The text of comment S-E-0089 was the same as that of S-E-0004. This comment was submitted by Richard Owen of Kihei, HI. | S-E-0089 |
| The text of comment S-E-0090 was the same as that of S-E-0004. This comment was submitted by Sophie Foulkes-Taylor of Lahaina, HI. | S-E-0090 |
| The text of comment S-E-0091 was the same as that of S-E-0004. This comment was submitted by Jennifer Graybill of New York, NY. | S-E-0091 |
| The text of comment S-E-0092 was the same as that of S-E-0004. This comment was submitted by Puanani Rogers of Kapaa, HI. | S-E-0092 |
| The text of comment S-E-0093 was the same as that of S-E-0004. This comment was submitted by Gordon LaBedz of Waimea, HI. | S-E-0093 |
| The text of comment S-E-0094 was the same as that of S-E-0004. This comment was submitted by Peggy LeDoux of Kihei, HI. | S-E-0094 |
| The text of comment S-E-0095 was the same as that of S-E-0004. This comment was submitted by Whitney Stolman of San Francisco, CA. | S-E-0095 |
| The text of comment S-E-0096 was the same as that of S-E-0004. This comment was submitted by John Rumbaugh of Phoenix, AZ. | S-E-0096 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0101 was the same as that of S-E-0004. This comment was submitted by Randy Ching of Honolulu, HI. | S-E-0101 |
| The text of comment S-E-0104 was the same as that of S-E-0004. This comment was submitted by Stephanie Fitzgerald of Hanalei, HI. | S-E-0104 |
| The text of comment S-E-0106 was the same as that of S-E-0004. This comment was submitted by Nina Monasevitch of Lihue, HI. | S-E-0106 |
| The text of comment S-E-0107 was the same as that of S-E-0004. This comment was submitted by Janet Taylor of Hilo, HI. | S-E-0107 |
| The text of comment S-E-0108 was the same as that of S-E-0004. This comment was submitted by Anne Rivers of Lahaina, HI. | S-E-0108 |
| The text of comment S-E-0109 was the same as that of S-E-0004. This comment was submitted by Kealakai of Honolulu, HI. | S-E-0109 |
| The text of comment S-E-0112 was the same as that of S-E-0004. This comment was submitted by Diana Burns of Keaau, HI. | S-E-0112 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0126 was the same as that of S-E-0004. This comment was submitted by Cindy Lance of Honolulu, HI. | S-E-0126 |
| The text of comment S-E-0127 was the same as that of S-E-0004. This comment was submitted by Harvey Arkin of Honolulu, HI. | S-E-0127 |
| The text of comment S-E-0128 was the same as that of S-E-0004. This comment was submitted by Raymond Madigan of Honolulu, HI. | S-E-0128 |
| The text of comment S-E-0129 was the same as that of S-E-0004. This comment was submitted by Lisa Galloway of Honolulu, HI. | S-E-0129 |
| The text of comment S-E-0130 was the same as that of S-E-0004. This comment was submitted by Patti Hackney of Wailuku, HI. | S-E-0130 |
| The text of comment S-E-0131 was the same as that of S-E-0004. This comment was submitted by Mike Hendrickson of Denver, CO. | S-E-0131 |
| The text of comment S-E-0132 was the same as that of S-E-0004. This comment was submitted by Den Mark of Vancouver, WA. | S-E-0132 |
| The text of comment S-E-0133 was the same as that of S-E-0004. This comment was submitted by Robert Wagner of Lawrenceville, GA. | S-E-0133 |
| The text of comment S-E-0134 was the same as that of S-E-0004. This comment was submitted by Nina Monasevitch of Lihue, HI. | S-E-0134 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0135 was the same as that of S-E-0004. This comment was submitted by Mike Moran of Kihei, HI. | S-E-0135 |
| The text of comment S-E-0136 was the same as that of S-E-0004. This comment was submitted by Bobbie Alicen of Kea'au, HI. | S-E-0136 |
| The text of comment S-E-0137 was the same as that of S-E-0004. This comment was submitted by leilani Trocki of Alta Loma, CA. | S-E-0137 |
| The text of comment S-E-0138 was the same as that of S-E-0004. This comment was submitted by Catherine Okimoto of Pahoa, HI. | S-E-0138 |
| The text of comment S-E-0139 was the same as that of S-E-0004. This comment was submitted by Forest Shomer of Port Townsend, WA. | S-E-0139 |
| The text of comment S-E-0140 was the same as that of S-E-0004. This comment was submitted by Skye Coe of Kihe'i, HI. | S-E-0140 |
| The text of comment S-E-0141 was the same as that of S-E-0004. This comment was submitted by Michele McKay of Honolulu, HI. | S-E-0141 |
| The text of comment S-E-0142 was the same as that of S-E-0004. This comment was submitted by Angela Kepler of Haiku, HI. | S-E-0142 |
| The text of comment S-E-0143 was the same as that of S-E-0004. This comment was submitted by Kim Elegado of Hanalei, HI. | S-E-0144 |
| The text of comment S-E-0144 was the same as that of S-E-0004. This comment was submitted by David Strauch of Hohohulu, HI. | S-E-0144 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0145 was the same as that of S-E-0004. This comment was submitted by Summer Faria of Pearl City, HI. | S-E-0145 |
| The text of comment S-E-0146 was the same as that of S-E-0004. This comment was submitted by Jill Morgyn of Kurtistown, HI. | S-E-0146 |
| The text of comment S-E-0147 was the same as that of S-E-0004. This comment was submitted by Kealakai Hammond of Honolulu, HI. | S-E-0147 |
| The text of comment S-E-0148 was the same as that of S-E-0004. This comment was submitted by Robert Wahinehookae of Honolulu, HI. | S-E-0148 |
| The text of comment S-E-0149 was the same as that of S-E-0004. This comment was submitted by PAUL DOUCETTE of Wailuku, HI. | S-E-0149 |
| The text of comment S-E-0150 was the same as that of S-E-0004. This comment was submitted by Dona van Bloemen of Santa Monica, CA. | S-E-0150 |
| The text of comment S-E-0151 was the same as that of S-E-0004. This comment was submitted by Dinda Evans of San Diego, CA. | S-E-0151 |
| The text of comment S-E-0152 was the same as that of S-E-0004. This comment was submitted by Janice Palma-Glennie of Kailua-kona, HI. | S-E-0152 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0153 was the same as that of S-E-0004. This comment was submitted by Scott Jarvis of Hanalei, HI. | S-E-0153 |
| The text of comment S-E-0154 was the same as that of S-E-0004. This comment was submitted by Annalia Russell of Kapa'a, HI. | S-E-0154 |
| The text of comment S-E-0156 was the same as that of S-E-0004. This comment was submitted by Lauryn Galindo of Hanalei, HI. | S-E-0156 |
| The text of comment S-E-0157 was the same as that of S-E-0004. This comment was submitted by Aline Larkin of Saco, ME. | S-E-0157 |
| The text of comment S-E-0158 was the same as that of S-E-0004. This comment was submitted by David Johnston of Wailuku, HI. | S-E-0158 |
| The text of comment S-E-0159 was the same as that of S-E-0004. This comment was submitted by Miguel Godinez of Hanalei,, HI. | S-E-0159 |
| The text of comment S-E-0160 was the same as that of S-E-0004. This comment was submitted by Royelen Boykie of Washington, DC. | S-E-0160 |
| The text of comment S-E-0161 was the same as that of S-E-0004. This comment was submitted by Ann Moffat of Wilmette, IL. | S-E-0161 |
| The text of comment S-E-0162 was the same as that of S-E-0004. This comment was submitted by Janet Codispoti of Pahoa, HI. | S-E-0162 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0163 was the same as that of S-E-0004. This comment was submitted by Kathleen Dockett of Washington, DC. | S-E-0163 |
| The text of comment S-E-0164 was the same as that of S-E-0004. This comment was submitted by Lisa Marshall of Houston, TX. | S-E-0164 |
| The text of comment S-E-0165 was the same as that of S-E-0004. This comment was submitted by Bina Robinson of Swain, NY. | S-E-0165 |
| The text of comment S-E-0166 was the same as that of S-E-0004. This comment was submitted by Libbie Hambleton of Destin, FL. | S-E-0166 |
| The text of comment S-E-0167 was the same as that of S-E-0004. This comment was submitted by Katy Rose of Hanalei, HI. | S-E-0167 |
| The text of comment S-E-0168 was the same as that of S-E-0004. This comment was submitted by Duane Choy of Honolulu, HI. | S-E-0168 |
| The text of comment S-E-0169 was the same as that of S-E-0004. This comment was submitted by Tara Cornelisse of San Rafael, CA. | S-E-0169 |
| The text of comment S-E-0170 was the same as that of S-E-0004. This comment was submitted by Jacqueline Remington of Waimanalo, HI. | S-E-0170 |
| The text of comment S-E-0171 was the same as that of S-E-0004. This comment was submitted by Rose Grady of Kailua, HI. | S-E-0171 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0172 was the same as that of S-E-0004. This comment was submitted by Hilary Harts of Kula, HI. | S-E-0172 |
| The text of comment S-E-0173 was the same as that of S-E-0004. This comment was submitted by Denise Lytle of Fords, NJ. | S-E-0173 |
| The text of comment S-E-0174 was the same as that of S-E-0004. This comment was submitted by Lisa Diaz of Kailua-Kona, HI. | S-E-0174 |
| The text of comment S-E-0175 was the same as that of S-E-0004. This comment was submitted by Cathy Robinson of Mobile, AL. | S-E-0175 |
| The text of comment S-E-0177 was the same as that of S-E-0004. This comment was submitted by Katy Fogg of Olympia, WA. | S-E-0177 |
| The text of comment S-E-0178 was the same as that of S-E-0004. This comment was submitted by Brown Kevin of Kaunakakai, HI. | S-E-0176 |
| The text of comment S-E-0179 was the same as that of S-E-0004. This comment was submitted by Cornelia Skipton of Rockville, MD. | S-E-0179 |
| The text of comment S-E-0180 was the same as that of S-E-0004. This comment was submitted by Nancy Davlantes of Greendale, WI. | S-E-0180 |
| The text of comment S-E-0182 was the same as that of S-E-0004. This comment was submitted by Kelli Chin of Honolulu, HI. | S-E-0182 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0183 was the same as that of S-E-0004. This comment was submitted by Laura Marsh of Kapaa, HI. | S-E-0183 |
| The text of comment S-E-0184 was the same as that of S-E-0004. This comment was submitted by Richard Benton of , HI. | S-E-0184 |
| The text of comment S-E-0185 was the same as that of S-E-0004. This comment was submitted by Lauri Peacock of Hobbs, NM. | S-E-0185 |
| The text of comment S-E-0186 was the same as that of S-E-0004. This comment was submitted by Cory Harden of Hilo, HI. | S-E-0186 |
| The text of comment S-E-0187 was the same as that of S-E-0004. This comment was submitted by Paul Moss of White Bear Lake, MN. | S-E-0187 |
| The text of comment S-E-0188 was the same as that of S-E-0004. This comment was submitted by Richard Powers of Naalehu, HI. | S-E-0188 |
| The text of comment S-E-0189 was the same as that of S-E-0004. This comment was submitted by Serena Kaldi of Kaneohe, HI. | S-E-0189 |
| The text of comment S-E-0190 was the same as that of S-E-0004. This comment was submitted by Mary Stone of Kalaheo, HI. | S-E-0190 |
| The text of comment S-E-0191 was the same as that of S-E-0004. This comment was submitted by Jeff Sacher of Kamuela, HI. | S-E-0191 |
| The text of comment S-E-0192 was the same as that of S-E-0004. This comment was submitted by Chessa Au of Ronkonkoma, NY. | S-E-0192 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0193 was the same as that of S-E-0004. This comment was submitted by Cynthia Hathaway of Keaau, HI. | S-E-0193 |
| The text of comment S-E-0194 was the same as that of S-E-0004. This comment was submitted by Christine Ahia of Hilo, HI. | S-E-0194 |
| The text of comment S-E-0196 was the same as that of S-E-0004. This comment was submitted by Marjorie Erway of Kailua-Kona, HI. | S-E-0196 |
| The text of comment S-E-0197 was the same as that of S-E-0004. This comment was submitted by Kyno ravelo of HI, . | S-E-0197 |
| The text of comment S-E-0198 was the same as that of S-E-0004. This comment was submitted by Jill Guillermo-Togawa of HI, . | S-E-0198 |
| The text of comment S-E-0200 was the same as that of S-E-0004. This comment was submitted by Michael Swerdlow of HI, . | S-E-0200 |
| The text of comment S-E-0201 was the same as that of S-E-0004. This comment was submitted by Ikaika Hussey of Kanehoe, HI. | S-E-0201 |
| The text of comment S-E-0202 was the same as that of S-E-0004. This comment was submitted by Nina Monasevitch of Lihue, HI. | S-E-0202 |
| The text of comment S-E-0203 was the same as that of S-E-0004. This comment was submitted by Jeffrey Lagrimas of Hilo, HI. | S-E-0203 |
| The text of comment S-E-0204 was the same as that of S-E-0004. This comment was submitted by Jamie Oshiro of Honolulu, HI. | S-E-0204 |

**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0205 was the same as that of S-E-0004. This comment was submitted by Kevin Nesnow of Honolulu, HI. | S-E-0205 |
| The text of comment S-E-0206 was the same as that of S-E-0004. This comment was submitted by Mikel Athon of Cedar Hill, TX. | S-E-0206 |
| The text of comment S-E-0207 was the same as that of S-E-0004. This comment was submitted by Mary Martin of Honolulu, HI. | S-E-0207 |

| | COMMENT NUMBER |
|---|---|
| The text of comment S-E-0214 was the same as that of S-E-0004. This comment was submitted by Leita Kaldi of Bradenton, FL. | S-E-0214 |
| The text of comment S-E-0215 was the same as that of S-E-0004. This comment was submitted by Lori Ferrell_Lori of Kailua-Kona, HI. | S-E-0215 |
| The text of comment S-E-0216 was the same as that of S-E-0004. This comment was submitted by Debbie Burack of New York, NY. | S-E-0216 |
| The text of comment S-E-0217 was the same as that of S-E-0004. This comment was submitted by Christina Gauen of Kailua, HI. | S-E-0217 |
| The text of comment S-E-0219 was the same as that of S-E-0004. This comment was submitted by Bryan Matsumoto of Temple City, CA. | S-E-0219 |
| The text of comment S-E-0220 was the same as that of S-E-0004. This comment was submitted by Donna Cussac of Cleveland, TN. | S-E-0220 |
| The text of comment S-E-0221 was the same as that of S-E-0004. This comment was submitted by Faith Willcox of Westport, ME. | S-E-0221 |
| The text of comment S-E-0222 was the same as that of S-E-0004. This comment was submitted by Lacie Whitten of Honolulu, HI. | S-E-0222 |
| The text of comment S-E-0223 was the same as that of S-E-0004. This comment was submitted by David Burns of Keaau, HI. | S-E-0223 |
| The text of comment S-E-0224 was the same as that of S-E-0004. This comment was submitted by Carolyn Moore of Mesa, AZ. | S-E-0224 |



**Exhibit 14.4.2-1. Copy of Email Documents - Supplement to the Draft EIS/OEIS (Continued)**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Stu Burley | S-E-0001-1 | Program | 2.2.2.4.1 | The figure showing relative missile size has been updated. |
| Joel Fischer<br>University of Hawai'i | S-E-0002-1 | Mitigation Measures | 1.3.2, 4.1.2, 6.0 | It is critical for the Navy to be able to conduct training in a variety of environmental and bathymetric conditions, which may overlap with marine mammal areas. Mitigation measures proposed in Chapter 6.0 should ensure that marine mammals would not be injured by Navy training activities.<br><br>As discussed in 4.1.2, the analytical methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals, the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions. |
| Michael Jones<br>University of Hawaii | S-E-0003-1 | Miscellaneous | 10.0 | Your name has been added to the Chapter 10.0 distribution list of the Final EIS/OEIS. The University of Hawaii, Hamilton Library has been added to the list of libraries in Chapter 10.0 of the Final EIS/OEIS. Indicating which references are and are not available is not required under NEPA; however, those references that are available, or a referral to a repository where the item is housed, will become part of the EIS/OEIS Administrative Record. |
| Janice Palma-Glennie | S-E-0004-1 | Program | 2.0 | The Navy is not proposing to establish a live fire training range encompassing the entire Hawaiian Archipelago. Only a fraction of the Papahanaumokuakea Marine National Monument is within the Navy's Hawaiian Islands Operating Area on its western boundary near the northern border. Current and proposed live fire training takes place in the Hawaiian Islands Operating Area; however, these activities will not affect resources in the Hawaiian Islands Marine Refuge, Papahanaumokuakea Marine National Monument, or the Hawaiian Islands Humpback Whale Sanctuary. We understand and respect the value and importance of Hawaii's marine sanctuaries to many people. We also recognize that the primary philosophy of these sanctuaries is protection and preservation and we share that philosophy. The Navy takes precautions to minimize harm to these areas. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Janice Palma-Glennie | S-E-0004-2 | Land Use - CZMA | 4.1.2.4; 4.1.2.5.4 | The Navy is in coordination with Hawaii's Office of Planning as it relates to CZMA compliance. Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |
| | S-E-0004-3 | Land Use - CZMA | 6 | While the Navy does consider effects to State listed species, federal agencies are not subject to the State's permitting process. The Navy will ensure that its activities are consistent with the State's CZMP enforceable policies to the maximum extent practicable. To achieve this, the Navy considers the use of mitigation measures (see Section 6.0), such as avoidance, as necessary in consultations with the state. In addition, the Navy is fully complying with requirements of the ESA and MMPA which also address the majority of state listed species coincident with federal listings. |
| | S-E-0004-4 | Land Use - CZMA | 3.6.2.1.4, 4.3.2.1.7.2., 4.8 | The objective of Section 205A-2 (6) of the Hawaii Coastal Zone Management Program (CZMP) is to reduce hazards to life and property from tsunami, storm waters, stream flooding, erosion, subsidence, and pollution. No direct or indirect effects associated with coastal hazards, specifically pollution, would occur as a result of the Proposed Action. The top three preferred stimulant chemicals would be TBP, glyceryl tributyrate, and propylene glycol; none of the proposed stimulant chemicals are considered hazardous substances or constituents (Section 4.3.2.1.7.2). Fragments of expended training materials, e.g. ammunition, bombs and missiles, targets, sonobuoys, chaff, and flares, could be deposited on the ocean floor. The widely dispersed, intermittent, minute size of the material minimizes the impact. Wave energy and currents will further disperse the material. The density of debris deposits would be too low to be toxic. Regarding depleted uranium (DU), as detailed in Section 3.6.2.1.4, the U.S. Army is developing guidance to fully address the existence of depleted uranium at the PTA. Navy will follow this guidance for their proposed training activities at PTA and at Makua Military Reservation, if applicable. Thus, the Proposed Action is consistent to the maximum extent practicable with the applicable and enforceable CZMP Coastal Hazards policies. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Janice Palma-Glennie | S-E-0004-5 | Land Use - CZMA | 3.2, 4.1.2, 4.1.4, 4.2 | The requirements for the Navy are laid out by the laws that created these Federal and state designated areas. Sections 3.2 and 4.2 of the EIS/OEIS reviewed the Papahanaumokuakea Marine National Monument. The Presidential Proclamation 8031 (71 FR 36443, June 26, 2006) establishing the Papahanaumokuakea Marine National Monument exempted "activities and exercises of the Armed Forces" from the prohibitions on activities in the Monument, in recognition of the importance of on-going missile testing over and within Monument boundaries. However, the Proclamation does require that all activities and exercises of the Armed Forces shall be carried out in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on monument resources and qualities. As discussed in 4.2, due to the infrequency and short duration of tests, the large ocean areas in which testing would occur, and the relatively small number of boosters or large debris that could impact Monument waters, it is highly unlikely that harm to marine mammals or other sensitive marine life or resources would occur. Sections 4.1.2, Biological Resources - Open Ocean, 4.1.4, Hazardous Materials & Waste - Open Ocean, and 4.2, Northwestern Hawaiian Islands, include details regarding missile intercept and the debris associated with these intercepts. |
| | S-E-0004-6 | Land Use - CZMA | 6.0 | Navy is conducting their active sonar training consistent with the objectives of marine protection required by the Hawaii's CZMP. Mid-frequency sonar hours for current training, No-Action Alternative, and for the preferred alternative, Alternative 3, would be at the same. Chapter 6.0 of the EIS/OEIS presents the Navy's protective measures, outlining steps that would be implemented to protect marine mammals and Federally listed species during sonar training events. It should be noted that these protective measures have been standard operating procedures for unit level antisubmarine warfare training since 2004. In addition, the Navy's current mitigation measures reflect the use of the best available science balanced with the National Marine Fisheries Service (NMFS) approach and the requirements of the Navy to train. |
| | S-E-0004-7 | Land Use - CZMA | 3.2, 4.2 | The Navy's Coastal Consistency Determination, in accordance with Hawaii's Coastal Zone Management Program, reviewed the activities proposed to be conducted internal or external to coastal ecosystems. The NWHI, the Hawaiian Islands Humpback Whale Sanctuary, and many locations throughout the HRC provide habitat for several special-status species. The Ecosystem Reserve, National Wildlife Refuge, and Monument designations will regulate human interaction with these geographic areas including those areas within the Coastal Zone. Navy's active sonar training may affect marine mammals; thus the Navy is continuing to consult with NMFS under Section 7 of the ESA, and is working with NMFS pursuant to the MMPA to mitigate these affects. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Janice Palma-Glennie | S-E-0004-8 | Land Use - CZMA | 6.1.4, Appendix F | As the state defines promoting public participation in coastal management, the Navy's Proposed Action is consistent. This EIS/OEIS provides full disclosure of Navy's activities. In addition, the U.S. Navy participates in the Hawaii Islands Humpback Whale National Marine Sanctuary Advisory Council, the Northwest Hawaiian Islands Coral Reef Ecosystem Reserve working group (now the Papahanaumokuakea Marine National Monument), Coastal America, the Hawaii Ocean and Coastal Council, the Kauai Invasive Species Committee, and numerous other advisory bodies. Regarding published reports, the Navy provides NMFS an After Action Report for USWEX and RIMPAC within 120 days of the training. Information from the RIMPAC 2006 After Action Report is provided in Appendix F of the Final EIS/OEIS (see Sections 6.1.4 and Appendix F of the Final EIS/OEIS). |
| Mark Wichar | S-E-0005-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0005-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0005-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0005-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0005-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0005-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0005-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0005-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Donna Lee Cussac | S-E-0006-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0006-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0006-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0006-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0006-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0006-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0006-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0006-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Michael Swerdlow | S-E-0007-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0007-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0007-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Michael Swerdlow | S-E-0007-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0007-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0007-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0007-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0007-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jill Morgyn | S-E-0008-1 | Program | | See response to comment S-E-0004-1. |
| | S-E-0008-2 | Land Use - CZMA | 3.3.2.1.8, 4.1.4, 4.8 | The Navy has determined that in light of the applicable enforceable policies in the State of Hawaiiõs Coastal Zone Management Program(CZMP), there are no adverse direct or indirect (cumulative or secondary) effects on coastal uses or resources and the Proposed Action and its Alternatives are consistent to the maximum extent practicable with the enforceable policies of Hawaiiõs Coastal Zone Management Program.<br>Inert bombs are used for land-based bombing exercises; these exercises would increase from 165 (current training, or the No-action Alternative) to 250 (Alternatives 2 and 3) events per year. Bombing exercise at sea use non -explosive rounds and inert bombs; these exercises would increase from 35 (No-action Alternative or current training) to 38 (Alternatives 2 and 3) annual events.<br>Mid-frequency sonar hours for the preferred alternative, Alternative 3, would be at the same level as identified for the No-action Alternative (current training). The SDEIS presented the refined methodology as applied to the adjusted sonar-use hours.<br>Some current flight trajectories could result in missiles such as the Terminal High Altitude Area Defense (THAAD) flying over portions of the PapahŪnaumokuŪkea Marine National Monument, but the EIS/OEIS noted that twelve or less potential annual missile flight trajectories may cross Monument airspace. Preliminary results of debris analysis indicate that debris is not expected to severely harm threatened, endangered, migratory, or other endemic species on or offshore of Nihoa and Necker Islands. The probability for debris to hit birds, seals, or other wildlife will be extremely low. Quantities of falling debris will be very low and widely scattered so as not to present a toxicity issue. Falling debris will also have cooled down sufficiently so as not to present a fire hazard for vegetation and habitat. If feasible, consideration will be given to alterations in the missile flight trajectory, to further minimize the potential for debris impacts. |
| | S-E-0008-3 | Policy/NEPA Process | | Thank you for your comment. |
| Fern Holland | S-E-0009-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0009-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Fern Holland | S-E-0009-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0009-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0009-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0009-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0009-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0009-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lisa Galloway | S-E-0010-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0010-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0010-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0010-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0010-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0010-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0010-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0010-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jamesy Gonsalves | S-E-0011-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0011-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0011-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0011-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0011-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0011-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0011-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0011-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jody Smith | S-E-0012-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0012-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0012-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0012-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Jody Smith | S-E-0012-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0012-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0012-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0012-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Tutabelle Ojeda | S-E-0013-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0013-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0013-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0013-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0013-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0013-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0013-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0013-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Miguel Godinez | S-E-0014-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0014-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0014-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0014-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0014-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0014-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0014-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0014-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Carolyn Moore | S-E-0015-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0015-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0015-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0015-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0015-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0015-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Carolyn Moore | S-E-0015-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0015-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Ellen Okuma | S-E-0016-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0016-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0016-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0016-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0016-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0016-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0016-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0016-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kanoe Kapu | S-E-0017-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0017-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0017-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0017-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0017-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0017-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0017-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0017-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Bobby McClintock | S-E-0018-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0018-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0018-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0018-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0018-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0018-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0018-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0018-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Shannan Chan | S-E-0019-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0019-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0019-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0019-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0019-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0019-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0019-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0019-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Earlene Alexiou | S-E-0020-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0020-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0020-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0020-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0020-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0020-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0020-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0020-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Dave Kisor | S-E-0021-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0021-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0021-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0021-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0021-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0021-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0021-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0021-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Dinda Evans | S-E-0022-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0022-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Dinda Evans | S-E-0022-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0022-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0022-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0022-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0022-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0022-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Marie Le Boeuf | S-E-0023-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0023-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0023-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0023-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0023-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0023-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0023-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0023-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Healani Trembath | S-E-0024-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0024-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0024-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0024-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0024-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0024-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0024-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0024-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Nadine Apo | S-E-0025-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0025-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0025-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0025-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nadine Apo | S-E-0025-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0025-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0025-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0025-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Scott Jarvis | S-E-0026-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0026-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0026-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0026-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0026-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0026-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0026-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0026-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lisa Marshall | S-E-0027-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0027-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0027-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0027-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0027-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0027-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0027-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0027-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Briana Wagner | S-E-0028-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0028-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0028-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0028-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0028-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0028-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Briana Wagner | S-E-0028-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0028-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Patricia Blair | S-E-0029-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0029-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0029-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0029-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0029-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0029-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0029-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0029-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Raquel Esparza | S-E-0030-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0030-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0030-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0030-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0030-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0030-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0030-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0030-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Annalia Russell | S-E-0031-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0031-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0031-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0031-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0031-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0031-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0031-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0031-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Kathy-Lyn Allen | S-E-0032-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0032-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0032-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0032-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0032-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0032-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0032-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0032-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Ravi Grover | S-E-0033-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0033-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0033-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0033-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0033-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0033-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0033-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0033-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Katy Fogg | S-E-0034-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0034-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0034-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0034-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0034-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0034-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0034-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0034-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Katie Leinweber | S-E-0035-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0035-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Katie Leinweber | S-E-0035-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0035-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0035-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0035-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0035-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0035-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Meghan Au | S-E-0036-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0036-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0036-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0036-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0036-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0036-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0036-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0036-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jonah Jensen | S-E-0037-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0037-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0037-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0037-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0037-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0037-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0037-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0037-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Mike Moran | S-E-0038-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0038-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0038-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0038-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Mike Moran | S-E-0038-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0038-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0038-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0038-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Gail Richard | S-E-0039-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0039-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0039-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0039-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0039-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0039-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0039-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0039-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lauren Pomerantz | S-E-0040-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0040-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0040-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0040-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0040-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0040-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0040-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0040-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Constance Rocse | S-E-0041-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0041-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0041-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0041-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0041-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0041-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Constance Rocse | S-E-0041-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0041-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Steve LaFleur | S-E-0042-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0042-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0042-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0042-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0042-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0042-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0042-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0042-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Naia Kelly | S-E-0043-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0043-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0043-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0043-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0043-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0043-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0043-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0043-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Joy Perfetti | S-E-0044-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0044-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0044-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0044-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0044-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0044-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0044-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0044-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Ron Whitmore | S-E-0045-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0045-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0045-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0045-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0045-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0045-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0045-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0045-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Teri Lawrence | S-E-0046-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0046-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0046-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0046-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0046-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0046-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0046-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0046-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Nancy Davlantes | S-E-0047-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0047-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0047-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0047-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0047-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0047-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0047-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0047-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Nola Conn | S-E-0048-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0048-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nola Conn | S-E-0048-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0048-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0048-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0048-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0048-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0048-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Stephen Skogman | S-E-0049-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0049-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0049-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0049-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0049-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0049-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0049-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0049-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Anita Wintner | S-E-0050-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0050-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0050-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0050-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0050-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0050-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0050-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0050-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Bill Lewis | S-E-0051-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0051-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0051-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0051-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Bill Lewis | S-E-0051-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0051-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0051-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0051-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Brooke Porter | S-E-0052-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0052-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0052-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0052-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0052-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0052-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0052-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0052-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Faith Wilcox | S-E-0053-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0053-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0053-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0053-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0053-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0053-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0053-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0053-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| John Lyons | S-E-0054-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0054-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0054-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0054-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0054-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0054-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| John Lyons | S-E-0054-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0054-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Laura and Andrew Binstock | S-E-0055-1 | Biological Resources - Marine | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| Robin James | S-E-0056-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0056-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0056-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0056-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0056-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0056-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0056-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0056-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Cathy McDuff | S-E-0057-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0057-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0057-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0057-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0057-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0057-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0057-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0057-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Rich Lucas | S-E-0058-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0058-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0058-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0058-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Rich Lucas | S-E-0058-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0058-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0058-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0058-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Steve Slater | S-E-0059-1 | Hazardous Materials and Waste | | The Navy recognizes that past practices conducted decades ago resulted in contamination of certain sites. Since that time, Congress has created and funded programs to identify those sites in need of remediation and proceed with the available funds. The island of Kahoolawe is one site that received priority funding in excess of $400 million and its own special legislation which resulted in a 10-year cleanup conducted in consultation with the State of Hawaii. |
| | S-E-0059-2 | Biological Resources - Marine | 3.2, 4.2 | Sections 3.2 and 4.2 of the EIS/OEIS reviewed the PapahŪnaumokuŪkea Marine National Monument, The Navy complies with the Presidential Proclamation 8031 (71 FR 36443, June 26, 2006) which states that all "activities and exercises of the Armed Forces shall be carried out in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on monument resources and qualities." |
| Mary Groode | S-E-0060-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0060-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0060-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0060-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0060-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0060-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0060-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0060-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Madeleine Migenes | S-E-0061-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0061-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0061-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0061-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0061-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0061-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Madeleine Migenes | S-E-0061-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0061-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jay Jones | S-E-0063-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0063-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0063-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0063-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0063-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0063-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0063-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0063-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Elaine Gima | S-E-0064-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0064-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0064-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0064-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0064-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0064-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0064-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0064-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Ann Engerman | S-E-0065-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0065-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0065-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0065-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0065-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0065-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0065-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0065-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Barbara Kranichfeld | S-E-0066-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0066-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0066-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0066-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0066-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0066-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0066-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0066-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Adrianna Grace | S-E-0067-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0067-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0067-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0067-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0067-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0067-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0067-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0067-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Carole Burstein | S-E-0068-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0068-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0068-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0068-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0068-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0068-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0068-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0068-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kelly Prince | S-E-0069-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0069-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Kelly Prince | S-E-0069-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0069-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0069-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0069-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0069-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0069-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Bobbi Leung | S-E-0071-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0071-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0071-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0071-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0071-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0071-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0071-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0071-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Emailer- Sylvia | S-E-0072-1 | Alternatives | | Thank you for your comment. |
| John Dwork | S-E-0073-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0073-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0073-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0073-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0073-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0073-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0073-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0073-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Katy Rose | S-E-0074-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0074-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0074-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Katy Rose | S-E-0074-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0074-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0074-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0074-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0074-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Carl Berg | S-E-0075-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0075-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0075-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0075-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0075-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0075-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0075-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0075-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Sharon Goodwin | S-E-0076-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0076-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0076-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0076-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0076-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0076-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0076-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0076-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Andrea Brower | S-E-0077-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0077-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0077-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0077-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0077-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Andrea Brower | S-E-0077-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0077-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0077-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Steve Colon<br>Honolulu Council of the Navy League | S-E-0078-1 | Miscellaneous | | Thank you for your comment. |
| Barbara Best | S-E-0079-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0079-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0079-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0079-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0079-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0079-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0079-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0079-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| John Barnett | S-E-0080-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0080-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0080-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0080-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0080-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0080-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0080-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0080-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Janos Samu | S-E-0081-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0081-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0081-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0081-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0081-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Janos Samu | S-E-0081-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0081-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0081-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Helena Lake | S-E-0082-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0082-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0082-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0082-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0082-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0082-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0082-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0082-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Noyita Saravia | S-E-0083-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0083-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0083-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0083-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0083-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0083-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0083-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0083-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lily Kempf | S-E-0084-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0084-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0084-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0084-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0084-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0084-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0084-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Lily Kempf | S-E-0084-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Tanya Eldridge | S-E-0085-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0085-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0085-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0085-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0085-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0085-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0085-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0085-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Ernest Jepson | S-E-0086-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0086-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0086-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0086-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0086-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0086-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0086-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0086-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Sandra Herndon | S-E-0087-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0087-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0087-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0087-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0087-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0087-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0087-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0087-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Caren Diamond | S-E-0088-1 | Program | | See Comment ID S-E-0004-1 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Caren Diamond | S-E-0088-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0088-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0088-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0088-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0088-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0088-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0088-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Richard Owen | S-E-0089-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0089-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0089-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0089-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0089-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0089-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0089-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0089-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Sophie Foulkes-Taylor | S-E-0090-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0090-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0090-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0090-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0090-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0090-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0090-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0090-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jennifer Graybill | S-E-0091-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0091-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0091-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Jennifer Graybill | S-E-0091-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0091-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0091-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0091-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0091-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Puanani Rogers | S-E-0092-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0092-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0092-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0092-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0092-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0092-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0092-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0092-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Gordon LaBedz | S-E-0093-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0093-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0093-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0093-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0093-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0093-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0093-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0093-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Peggy LeDoux | S-E-0094-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0094-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0094-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0094-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0094-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Peggy LeDoux | S-E-0094-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0094-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0094-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Whitney Stolman | S-E-0095-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0095-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0095-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0095-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0095-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0095-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0095-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0095-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| John Rumbaugh | S-E-0096-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0096-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0096-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0096-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0096-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0096-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0096-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0096-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Trudy and Larry Blow | S-E-0097-1 | Alternatives | 4.1.5.1.1, 6.2.1 | As discussed in Section 6.2.1, seasonal avoidance, as a mitigation measure, is based on speculative findings from other areas of the world that do not have direct application to the unique environment present in Hawaii. Lacking any scientific basis for seasonal avoidance in Hawaii and lacking any evidence in Hawaii that there has ever been an impact resulting from the lack of these measures, there is no evidence that this mitigation measure would increase the protection of marine mammals. Because year-round deployment is critical for Navy operations, implementation of seasonal avoidance would, however, unacceptably impact the effectiveness of the training.<br><br>Regarding divers, As stated in Section 4.1.5.1.1, research was conducted for mid-frequency active (MFA) sonar at the Naval Submarine Medical Research Laboratory and the Navy Experimental Diving Unit to determine permissible limits of exposure to MFA sonar. Based on this research, an unprotected diver could safely operate for over 1 hour at a distance of 1,000 yards from the Navy's most powerful sonar. At this distance, the sound pressure level will be approximately 190 dB. At 2,000 yards or approximately 1 nm, this same unprotected diver could operate for over 3 hours. |
| Alan Lott | S-E-0098-1 | Alternatives | | Thank you for your comment. |
| Myron Gerhard | S-E-0099-1 | Alternatives | 6.0 | EIS/OEIS Chapter 6.0, Mitigation Measures, presents the U.S. Navy's protective measures, outlining steps that would be implemented to protect marine mammals and Federally listed species during training events. It should be noted that these protective measures have been standard operating procedures for unit-level antisubmarine warfare training since 2004. In addition, The Navy's current mitigation measures reflect the use of the best available science balanced with the National Marine Fisheries Service (NMFS) approach and the requirements of the Navy to train. |
| Neil Frazer<br>University of Hawaii, Manoa | S-E-0100-1 | Alternatives | 1.3.2, 1.3.3 | As discussed in Section 1.3.2 and 1.3.3, the Navy must use passive and active sonar. |
| Randy Ching | S-E-0101-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0101-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0101-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0101-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0101-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0101-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0101-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0101-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Debbie Friedman | S-E-0102-1 | Alternatives | | Thank you for your comment. |
| | S-E-0102-2 | Alternatives | 4.1.5.1.1, 6.2.1 | As discussed in Section 6.2.1, seasonal avoidance, as a mitigation measure, is based on speculative findings from other areas of the world that do not have direct application to the unique environment present in Hawaii. Lacking any scientific basis for seasonal avoidance in Hawaii and lacking any evidence in Hawaii that there has ever been an impact resulting from the lack of these measures, there is no evidence that this mitigation measure would increase the protection of marine mammals. Because year-round deployment is critical for Navy operations, implementation of seasonal avoidance would, however, unacceptably impact the effectiveness of the training.<br><br>Regarding divers, As stated in Section 4.1.5.1.1, research was conducted for mid-frequency active (MFA) sonar at the Naval Submarine Medical Research Laboratory and the Navy Experimental Diving Unit to determine permissible limits of exposure to MFA sonar. Based on this research, an unprotected diver could safely operate for over 1 hour at a distance of 1,000 yards from the Navy's most powerful sonar. At this distance, the sound pressure level will be approximately 190 dB. At 2,000 yards or approximately 1 nm, this same unprotected diver could operate for over 3 hours. |
| | S-E-0102-3 | Alternatives | | Sonar is currently the best available technology for ASW. |
| | S-E-0102-4 | Alternatives | | The vast majority of sonar use discussed and analyzed in this EIS/OEIS pertains to training not testing. |
| | S-E-0102-5 | Alternatives | 4.1.2.4 | Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |
| | S-E-0102-6 | Alternatives | | Thank you for your comment. |
| Victoria Smith | S-E-0103-1 | Alternatives | 4.1.5.1.1 | As stated in Section 4.1.5.1.1, research was conducted for mid-frequency active (MFA) sonar at the Naval Submarine Medical Research Laboratory and the Navy Experimental Diving Unit to determine permissible limits of exposure to MFA sonar. Based on this research, an unprotected diver could safely operate for over 1 hour at a distance of 1,000 yards from the Navy's most powerful sonar. At this distance, the sound pressure level will be approximately 190 dB. At 2,000 yards or approximately 1 nm, this same unprotected diver could operate for over 3 hours. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Stephanie Fitzgerald | S-E-0104-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0104-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0104-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0104-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0104-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0104-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0104-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0104-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Nina Monasevitch | S-E-0106-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0106-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0106-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0106-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0106-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0106-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0106-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0106-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Janet Taylor | S-E-0107-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0107-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0107-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0107-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0107-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0107-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0107-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0107-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Anne Rivers | S-E-0108-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0108-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Anne Rivers | S-E-0108-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0108-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0108-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0108-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0108-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0108-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Emailer- Kealakai | S-E-0109-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0109-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0109-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0109-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0109-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0109-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0109-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0109-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Richard Macke | S-E-0110-1 | Policy/NEPA Process | | Thank you for your comment. |
| | S-E-0110-2 | Mitigation Measures | | Thank you for your comment. |
| | S-E-0110-3 | Alternatives | | Thank you for your comment. |
| Marina Kuran | S-E-0111-1 | Program | | Thank you for your comment. |
| | S-E-0111-2 | Alternatives | 1.3.2, '4.1.2.4, 4.1.2.4.11 | The use of sonar as presented in the EIS/OEIS does not violate the CZMA. Takes may be authorized as long as negligible impact on marine mammal populations and species occurs. Sonar does not violate NEPA, as this is a process statute. The Navy must use both passive and active sonar, as discussed in Section 1.3.2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Marina Kuran | S-E-0111-3 | Biological Resources - Marine | 3.2, 3.7, 4.2, 4.7, 12 | Navy's activities proposed internal or external to the Humpback Whale National Marine Sanctuary, are allowed by the Sanctuary as indicated in 15 CFR Part 922, Subpart Q. None of the activities have been modified such that they would be likely to destroy, cause the loss of, or injure any Sanctuary resource in a manner significantly greater than what had been previously reviewed by NOAA at the time of the Sanctuary's creation. Under the Sanctuary regulations, military activities are allowed within the sanctuary and not subject to vessel/aircraft approach distances, discharge of materials prohibitions within the sanctuary and consultation requirements if they are "classes of military activities, internal and external to the Sanctuary, conducted prior to 1997" (provided in Exhibit C-1 of the EIS/OEIS). New types of military activity conducted after 1997 is also allowable but subject to prohibited activities such as vessel/aircraft approach to humpback whales and discharge of materials.<br>Sections 3.2 and 4.2 of the EIS/OEIS reviewed the NWHI Marine Monument. Navy notes that Presidential Proclamation 8031 (71 FR 36443, June 26, 2006), which established the Monument under the authority of the Antiquities Act (16 U.S.C. 431), made the prohibitions required in the Proclamation, such as the prohibition on entry into the Monument, inapplicable to activities and exercises of the Armed Forces. Navy acknowledges, as stated in the Proclamation, that it is their obligation to ensure that all "activities and exercises of the Armed Forces shall be carried out in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on monument resources and qualities." |
| Diana Burns | S-E-0112-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0112-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0112-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0112-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0112-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0112-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0112-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0112-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lowell Wes Cummins | S-E-0113-1 | Alternatives | | Thank you for your comment. |
| Jack Aaron | S-E-0114-1 | Alternatives | | Thank you for your comment. |
| John and Joann Breeden | S-E-0115-1 | Alternatives | | Thank you for your comment. |
| Danial Del Monte | S-E-0116-1 | Alternatives | | Thank you for your comment. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Fred & Claire Dauer | S-E-0117-1 | Alternatives | | Thank you for your comment. |
| Flemming Carstensen<br>Navy League | S-E-0118-1 | Cumulative Impacts | | Thank you for your comment. |
| Shirley Chew | S-E-0119-1 | Alternatives | | Thank you for your comment. |
| Patricia S. Port<br>US Dept of Interior | S-E-0121-1 | Miscellaneous | | Thank you for your comment. |
| Donald Wilson | S-E-0122-1 | Alternatives | | Thank you for your comment. |
| | S-E-0122-2 | Cumulative Impacts | | Thank you for your comment. |
| Don Morrison<br>Pacific AquaScapes, Inc. | S-E-0123-1 | Alternatives | | Thank you for your comment. |
| | S-E-0123-2 | Mitigation Measures | | Thank you for your comment. |
| Cindy Lance | S-E-0126-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0126-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0126-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0126-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0126-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0126-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0126-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0126-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Harvey Arkin | S-E-0127-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0127-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0127-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0127-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0127-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0127-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0127-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0127-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Raymond Madigan | S-E-0128-1 | Program | | See Comment ID S-E-0004-1 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Raymond Madigan | S-E-0128-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0128-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0128-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0128-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0128-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0128-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0128-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Patti Hackney | S-E-0130-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0130-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0130-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0130-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0130-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0130-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0130-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0130-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Mike Hendrickson | S-E-0131-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0131-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0131-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0131-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0131-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0131-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0131-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0131-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Den Mark | S-E-0132-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0132-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0132-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Den Mark | S-E-0132-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0132-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0132-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0132-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0132-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Robert Wagner | S-E-0133-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0133-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0133-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0133-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0133-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0133-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0133-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0133-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Bobbie Alicen | S-E-0136-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0136-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0136-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0136-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0136-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0136-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0136-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0136-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Leilani Trocki | S-E-0137-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0137-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0137-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0137-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0137-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Leilani Trocki | S-E-0137-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0137-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0137-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Catherine Okimoto | S-E-0138-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0138-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0138-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0138-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0138-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0138-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0138-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0138-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Forest Shomer | S-E-0139-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0139-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0139-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0139-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0139-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0139-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0139-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0139-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Skye Coe | S-E-0140-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0140-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0140-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0140-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0140-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0140-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0140-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Skye Coe | S-E-0140-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Michele McKay | S-E-0141-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0141-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0141-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0141-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0141-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0141-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0141-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0141-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Angela Kepler | S-E-0142-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0142-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0142-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0142-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0142-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0142-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0142-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0142-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kim Elegado | S-E-0143-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0143-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0143-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0143-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0143-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0143-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0143-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0143-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| David Strauch | S-E-0144-1 | Program | | See Comment ID S-E-0004-1 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| David Strauch | S-E-0144-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0144-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0144-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0144-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0144-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0144-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0144-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Summer Faria | S-E-0145-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0145-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0145-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0145-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0145-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0145-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0145-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0145-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kealakai Hammond | S-E-0147-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0147-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0147-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0147-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0147-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0147-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0147-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0147-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Robert Wahinehookae | S-E-0148-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0148-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0148-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Robert Wahinehookae | S-E-0148-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0148-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0148-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0148-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0148-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Paul Doucette | S-E-0149-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0149-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0149-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0149-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0149-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0149-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0149-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0149-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Dona van Bloemen | S-E-0150-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0150-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0150-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0150-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0150-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0150-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0150-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0150-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Glenn Chapman | S-E-0155-1 | Mitigation Measures | | Thank you for your comment. |
| Lauryn Galindo | S-E-0156-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0156-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0156-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0156-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Lauryn Galindo | S-E-0156-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0156-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0156-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0156-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Aline Larkin | S-E-0157-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0157-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0157-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0157-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0157-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0157-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0157-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0157-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| David Johnston | S-E-0158-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0158-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0158-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0158-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0158-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0158-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0158-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0158-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Royelen Boykie | S-E-0160-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0160-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0160-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0160-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0160-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0160-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Royelen Boykie | S-E-0160-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0160-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Ann Moffat | S-E-0161-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0161-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0161-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0161-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0161-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0161-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0161-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0161-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Janet Codispoti | S-E-0162-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0162-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0162-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0162-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0162-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0162-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0162-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0162-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kathleen Dockett | S-E-0163-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0163-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0163-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0163-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0163-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0163-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0163-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0163-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Bina Robinson | S-E-0165-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0165-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0165-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0165-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0165-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0165-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0165-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0165-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Libbie Hambleton | S-E-0166-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0166-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0166-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0166-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0166-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0166-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0166-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0166-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Duane Choy | S-E-0168-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0168-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0168-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0168-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0168-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0168-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0168-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0168-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Tara Cornelisse | S-E-0169-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0169-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Tara Cornelisse | S-E-0169-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0169-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0169-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0169-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0169-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0169-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jacqueline Remington | S-E-0170-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0170-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0170-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0170-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0170-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0170-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0170-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0170-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Rose Grady | S-E-0171-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0171-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0171-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0171-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0171-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0171-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0171-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0171-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Hilary Harts | S-E-0172-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0172-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0172-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0172-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Hilary Harts | S-E-0172-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0172-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0172-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0172-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Denise Lytle | S-E-0173-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0173-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0173-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0173-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0173-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0173-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0173-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0173-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lisa Diaz | S-E-0174-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0174-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0174-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0174-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0174-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0174-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0174-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0174-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Cathy Robinson | S-E-0175-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0175-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0175-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0175-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0175-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0175-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Cathy Robinson | S-E-0175-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0175-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Brown Kevin | S-E-0178-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0178-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0178-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0178-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0178-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0178-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0178-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0178-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Cornelia Skipton | S-E-0179-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0179-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0179-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0179-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0179-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0179-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0179-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0179-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Dawn Wooten | S-E-0181-1 | Program | | The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment. |
| Kelli Chin | S-E-0182-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0182-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0182-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0182-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0182-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Kelli Chin | S-E-0182-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0182-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0182-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Laura Marsh | S-E-0183-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0183-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0183-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0183-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0183-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0183-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0183-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0183-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Richard Benton | S-E-0184-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0184-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0184-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0184-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0184-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0184-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0184-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0184-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lauri Peacock | S-E-0185-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0185-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0185-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0185-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0185-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0185-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0185-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Lauri Peacock | S-E-0185-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Cory Harden | S-E-0186-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0186-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0186-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0186-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0186-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0186-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0186-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0186-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Paul Moss | S-E-0187-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0187-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0187-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0187-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0187-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0187-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0187-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0187-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Richard Powers | S-E-0188-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0188-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0188-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0188-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0188-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0188-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0188-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0188-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Serena Kaldi | S-E-0189-1 | Program | | See Comment ID S-E-0004-1 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Serena Kaldi | S-E-0189-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0189-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0189-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0189-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0189-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0189-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0189-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Mary Stone | S-E-0190-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0190-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0190-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0190-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0190-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0190-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0190-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0190-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jeff Sacher | S-E-0191-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0191-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0191-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0191-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0191-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0191-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0191-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0191-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Chessa Au | S-E-0192-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0192-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0192-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Chessa Au | S-E-0192-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0192-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0192-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0192-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0192-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Cynthia Hathaway | S-E-0193-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0193-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0193-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0193-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0193-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0193-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0193-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0193-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Christine Ahia | S-E-0194-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0194-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0194-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0194-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0194-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0194-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0194-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0194-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Marjorie Erway | S-E-0196-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0196-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0196-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0196-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0196-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Marjorie Erway | S-E-0196-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0196-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0196-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kyno Ravelo | S-E-0197-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0197-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0197-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0197-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0197-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0197-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0197-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0197-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jill Guillermo-Togawa | S-E-0198-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0198-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0198-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0198-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0198-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0198-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0198-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0198-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| John Broussard | S-E-0199-1 | Biological Resources - Marine | | The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment. The Navy has provided protected haul-out locations for the Hawaiian monk seal, improved nesting habitat for the wedge-tailed shearwater, and organized volunteers to pick-up beach trash while documenting marine debris. The Navy has also participated in a program to remove invasive plants from endangered Hawaiian stilt habitat and has active programs to conserve energy and use renewable resources. |
| Ikaika Hussey | S-E-0201-1 | Program | | See Comment ID S-E-0004-1 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Ikaika Hussey | S-E-0201-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0201-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0201-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0201-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0201-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0201-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0201-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jeffrey Lagrimas | S-E-0203-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0203-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0203-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0203-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0203-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0203-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0203-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0203-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Jamie Oshiro | S-E-0204-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0204-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0204-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0204-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0204-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0204-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0204-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0204-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Kevin Nesnow | S-E-0205-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0205-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0205-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Kevin Nesnow | S-E-0205-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0205-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0205-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0205-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0205-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Mikel Athon | S-E-0206-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0206-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0206-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0206-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0206-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0206-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0206-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0206-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Mary Martin | S-E-0207-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0207-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0207-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0207-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0207-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0207-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0207-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0207-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Tom Norris<br>Bio-Waves Inc. | S-E-0209-1 | Biological Resources - Marine | 4.1.2.5.3 | The presence of minke whales has been noted in Section 4.1.2.5.3; however, as stated in your comment, there is no density information available for minke whales in Hawaiian waters given that they have rarely been seen during surveys. The lack of available data and comparative species makes it unreliable to extrapolate estimates of exposure to Navy sonar. The commenter is correct that it is difficult to estimate densities for species, like minke whales, that are best detected acoustically. However, the modeling effort used density data for all the marine mammal species present in Hawaii provided by NMFS. NMFS is the Federal agency vested with the responsibility for maintaining the most current information about marine mammal species and who has the expertise to evaluate these data. |
| Jane Panju | S-E-0210-1 | Alternatives | 4.1.5.1.1 | Divers will not be located where the active sonar is used. As stated in Section 4.1.5.1.1, research was conducted for mid-frequency active (MFA) sonar at the Naval Submarine Medical Research Laboratory and the Navy Experimental Diving Unit to determine permissible limits of exposure to MFA sonar. Based on this research, an unprotected diver could safely operate for over 1 hour at a distance of 1,000 yards from the Navy's most powerful sonar. At this distance, the sound pressure level will be approximately 190 dB. At 2,000 yards or approximately 1 nm, this same unprotected diver could operate for over 3 hours. |
| Emailer- Sylvia | S-E-0211-1 | Miscellaneous | | Thank you for your comment. |
| Koalani Kaulukukui<br>Earthjustice | S-E-0212-1 | Program | 2.2.2.3 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Chapter 2.0 provides the quantity of additional individual training exercises that the Navy has proposed. Major Exercises (USWEX, RIMPAC, and multiple strike groups training in Hawaii) is an aggregate of existing training events that are captured under the mission of Antisubmarine Warfare (ASW), on Table 2.2.2.3-1. |
| | S-E-0212-2 | Program | 4.1.2.4.3 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the tables in Section 4.1.4.1.1 of the EIS/OEIS provide the training materials information requested (i.e., the percent of change resulting from Navy's proposed actions). |
| | S-E-0212-3 | Program | 2.2.2 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the No-action alternative, or current training, was derived from environmental analysis that pre-dates the noted 2004 consent decree. |
| | S-E-0212-4 | Alternatives | 1.3.3, 2.2 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Section 1.2 of the EIS/OEIS provided background information regarding the EIS/OEIS origins as part of the TAP. Analysis of alternatives in TAP is to be limited in geography to within each range complex. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Koalani Kaulukukui Earthjustice | S-E-0212-5 | Alternatives | 4.1.2.4.3 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, text in Section 4.1.2.4.3 of the EIS/OEIS has been revised to capture the consequences analysis. Navy and NMFS coordinated on the risk function methodology to estimate effects on marine mammals. |
| | S-E-0212-6 | Alternatives | 5 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the synergistic affects of sonar usage is addressed in Chapter 5.0, cumulative affects of Navy activities. |
| | S-E-0212-7 | Hazardous Materials and Waste | 4.1.4., 4.1.7 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Navy training, RDT&E, and munitions debris are discussed in Sections 4.1.4 –Hazardous Waste, Open Ocean and 4.1.7- Water Resources, Open Ocean. The majority of debris would be widely dispersed and accumulate in deep water far away from the coral reef. Therefore, there will be no quantifiable impact on habitat, any natural resource, including coral. A total of about 654 tons per year are expended under the No-action Alternative (see Table 4.1.4.1.1-1). Assuming an ocean floor area of about 235,000 nm2, and making a further conservative assumption that the training materials are concentrated within 20 percent of this area, this is about 5.6 lb per nm2 per year. |
| | S-E-0212-8 | Hazardous Materials and Waste | 3.1.4, 3.1.7, 4.1.4, 4.1.7 | The types of sonobuoys used for the analysis in this EIS/OEIS are those now in the Navy's inventory and in common use; the type of item used is determined by its function, not the training location. San Clemente Island information is used because that is where the Navy's Sonobuoy Quality Assurance testing is done, and detailed information from that program is available. All sonobuoys of a given type are manufactured with the same quantities of constituents. Sections 3.1.4, 3.1.7, 4.1.4, and 4.1.7 of the EIS/OEIS discuss sonobuoys, based on those sonobuoys now in general use by the Navy. |
| | S-E-0212-9 | Hazardous Materials and Waste | 4.1.4.1.1, 4.1.7.1.1 | The comment is beyond the scope of the Supplement. To the extent that a response is required, the components of chaff are discussed in Sections 4.1.4.1.1 and 4.1.7.1.1 of the EIS/OEIS. |
| | S-E-0212-10 | Hazardous Materials and Waste | 4.1.3, '4.1.7 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Sections 4.1.3 and 4.1.7 include discussions of the quantities and types of hazardous materials generated during both training and RDT&E activities. Analysis is based on the type of launch events and activities. Missile and Aerial Target activity impact on water resources is discussed in Section 4.1.7. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Koalani Kaulukukui Earthjustice | S-E-0212-11 | Hazardous Materials and Waste | 2.2.3.6, 4.4.2.2.3 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, none of the enhancements mentioned are expected to generate hazardous substances. The Portable Undersea Tracking Range could be located anywhere within the area shown on Figure 2.2.3.6.3-1 and not necessarily consistently deployed in the same area. According to Section 2.2.3.6.3, the Navy proposes using the system for only 2 days per month. Development of the Acoustic Test Facility involves the addition of pinger equipment at pier S291 on Ford Island, Beckoning Point piers, or on a mobile test site that could operate within the test area. As a result, there would be no disturbance of any contaminated sediments or soils containing PCBs (see Sections 2.2.3.6 and 4.4.2.2.3). An environmental review of the proposed Range Operations Control Building construction was conducted that determined that the effects of the proposed construction on the environment are minimal and a categorical exclusion (CATEX) for the proposed project was approved on 14 May 2004. Hazardous waste discovered during construction will handled in compliance with applicable rules and regulations. |
| | S-E-0212-12 | Hazardous Materials and Waste | 4.1.7.1.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Section 4.1.7.1.1 addresses incidental released of POL. |
| | S-E-0212-13 | Hazardous Materials and Waste | 4.1.4, 4.1.7 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, with regard to the issue of previous contamination by Navy activities in the coastal zone of the HRC, neither good data on the existing contamination levels nor good information on what the Navy previously expended or where it was expended is available. Analysis regarding the coastal zone is found in the offshore sections of the EIS/OEIS (e.g., 4.1.4 and 4.1.7). |
| | S-E-0212-14 | Hazardous Materials and Waste | 4.1.4, 4.1.7 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, Major Exercises are, for the most part, aggregates of the individual training activities, which are addressed quantitatively in Sections 4.1.4 and 4.1.7. |
| | S-E-0212-15 | Hazardous Materials and Waste | 4.1.7, 4.1.4.1.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the analysis presented in Section 4.1.7 assumed that hazardous constituents for each category of expended training material would be expended over only 20% of the training areas. But the probability that the materials would be expended in exactly the same location, given slight differences in the positions of Navy assets and lines of fire, and dispersal of expended materials by currents, is about zero. A total of about 654 tons per year, are expended under the No-action Alternative (see Table 4.1.4.1.1-1). Assuming an ocean floor area of about 235,000 nm2, and making a further conservative assumption that the training materials are concentrated within 20 percent of this area, this is about 5.6 lb per nm2 per year. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Koalani Kaulukukui Earthjustice | S-E-0212-16 | Hazardous Materials and Waste | 3.1.2.1, 4.1.2.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, bioaccumulation of hazardous materials in benthic species and coral is not known to occur as a result of the Proposed Action because: (a) leach rates are very low, (b) leached materials are widely dispersed, so they affect different populations, and (c) the estimated ambient concentrations are generally within the "natural" range of these materials so uptake of these constituents would be similar to natural rates. |
| | S-E-0212-17 | Hazardous Materials and Waste | | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, if the Navy assumes the exercises are in Whisky 188 (35, 632 nm) and not the TOA , Point Mugu (27,183 nm) Marine Mammal density is approximately 1/10 the density of the Point Mugu Range. The probability of debris impact is less than 1 in a million compared to Point Mugu, and will be much less in Whisky 188. |
| | S-E-0212-18 | Hazardous Materials and Waste | 3.1.2.1, 4.1.2.1.1.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, direct strikes on coral reefs, which could be either strikes of missile debris or ordnance on coral reefs. It is unlikely that there will be any physical impact on a reef, as described in 4.2.1.1.1.1. |
| | S-E-0212-19 | Hazardous Materials and Waste | 5.0 | Chapter 5.0 of the EIS/OEIS discusses entanglement, most specifically as it relates to commercial fishing. Sonobuoy parachutes and torpedo air stabilizer canopies could be deposited on the ocean floor. The widely dispersed, intermittent, minute size of the material minimizes the impact. Wave energy and currents will further disperse the materials. |
| | S-E-0212-20 | Biological Resources - Marine | 5 | 'The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, the Navy recognizes that individual fish may be injured or killed as the result of several of the training events; however, these incidents are localized, and would not have a population impact on any individual species. Potential impacts on Essential Fish Habitat (EFH) are discussed and evaluated in Essential Fish Habitat and Coral Reef Assessment for the Hawaii Range Complex EIS/OEIS (U.S. Department of the Navy, 2007b) and a summary for each proposed Navy training activity is provided. Due to the mitigation measures implemented to protect sensitive habitats, and the localized and temporary impacts of the Proposed Action and alternatives, it is concluded that the potential impact of the Proposed Action and alternatives would have no effect on EFH. |
| | S-E-0212-21 | Socioeconomics | 5.5.3.1, 5.5.10 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, reduced fish catch rates and any associated economic effects are not anticipated (see Section 5.3.3.1) |
| | S-E-0212-22 | Environmental Justice | 5.5.3.1, 5.5.10 | 'The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, reduced fish catch rates and any associated economic effects are not anticipated (see Sections 5.5.3.1 and 5.5.10). |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Koalani Kaulukukui<br>Earthjustice | S-E-0212-23 | Air Quality | 4.3.2.1.1 | The comment is beyond the scope of the Supplement to the Draft EIS/OEIS. To the extent that a response is required, your comments regarding the cumulative effects of Navy's proposed action on coral with rising sea levels caused by global warming are noted but are beyond the scope of this EIS/OEIS. Global warming, the degree to which it is occurring, and human activity impacts that may be contributing to global warming, are the subject of intense scientific debate. Assuming for the sake of argument that global warming is occurring and that human activities are the cause, global warming involves the activity of billions of human beings on every continent on Earth. It also involves the consumption of fossil fuels to such a degree and intensity that the intermittent and infrequent training activities presented in this EIS are insignificant when compared to the scale of human activity occurring on a daily basis throughout the world. |
| Michael Jasny<br>Natural Resources<br>Defense Council | S-E-0213-1 | Alternatives | 1.0, 2.0, 6.0 | The Supplement to the DEIS was not written to address these alternatives, does not propose to change the Fleet Response Training Plan (FRTP), and was not prepared to assess mitigation. To the extent that a response is required, the Navy considered the DEIS public comments in the preparation of the Supplement to the DEIS, where applicable. As discussed in Chapters 1.0 and 2.0 of the EIS/OEIS, Navy considers but rejects a reduction in training; does not consider alternate locations because this analysis would not be consistent with the purpose and need of this EIS/OEIS. Although Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. Navy's current mitigation measures and their use of the best available science balanced with the requirements of the Navy to train, results in Navy meeting its mission while being protective of the environment. Discussion of Mitigation measures has been revised in Chapter 6. |
| | S-E-0213-2 | Alternatives | 4.1.2 | A complete discussion of the background for development and application of the risk function curve to analyze the behavioral effects on marine mammals from MFA/HFA sound sources is provided in Section 4.1.2. As stated in this section, the risk function methodology was developed in coordination with NMFS. NMFS and Navy believe that the use of the risk continuum is the better method of applying the best available science to analyze behavioral harassment. The EIS/OEIS does not present the energy flux density results with a threshold of 173dB. |
| | S-E-0213-3 | Alternatives | | Navy, working with NMFS, is using the best available science to assess impacts on mammals. |
| | S-E-0213-4 | Alternatives | | Navy, working with NMFS, is using the best available science to assess impacts on mammals. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Michael Jasny<br>Natural Resources Defense Council | S-E-0213-5 | Alternatives | 4.1.2.4.10.1 | Navy did review the established literature on harbor porpoises, but there are no harbor porpoises in Hawaii. |
| | S-E-0213-6 | Alternatives | 4.1.2 | Section 4.1.2 of the EIS/OEIS discusses how the risk function accounts for physiology as well as social behavior. |
| | S-E-0213-7 | Alternatives | | Thank you for your comment. |
| | S-E-0213-8 | Alternatives | 6.8 | The commenter attached a paper that reached the conclusion that repetition of sonar has long-term behavioral impacts on marine mammals; however, Navy can find no logical tie-in from analysis in this particular paper that would lead to that conclusion. The paper pertains to electrically shocking rats, which does not appear to tie to noise and marine mammals. Navy is studying the long-term population level effects of sonar and is also developing a monitoring plan as part of this EIS/OEIS effort. |
| | S-E-0213-9 | Alternatives | 4.1.2 | The current methodology was developed in extensive consultation with NMFS and does not account for the Navy's mitigation measures to reduce the effects of MFA/HFA sonar on marine mammals. Consequently, the modeling and threshold levels developed for analysis of impacts on marine mammals universally erred on overestimating the number of takes. |
| | S-E-0213-10 | Alternatives | 4.1.2 | The three data sets used to calculate the mid-point of the risk function were weighted equally. As in response to S-E-0213-4, the Haro Strait data were appropriately applied. NMFS and the Navy included the best available and most applicable data in the development of the risk function. See Section 4.1.2.<br>An expanded discussion of the analysis of the data sets used to develop the risk function curve is presented in Section 4.1.2 of the EIS/OEIS. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals, NMFS and the Navy closely coordinated the development of the risk function to represent the best available science. The cutoff for the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient during some parts of the year in Hawaiian waters. |
| Leita Kaldi | S-E-0214-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0214-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0214-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0214-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Leita Kaldi | S-E-0214-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0214-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0214-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0214-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lori Ferrell | S-E-0215-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0215-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0215-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0215-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0215-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0215-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0215-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0215-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Debbie Burack | S-E-0216-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0216-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0216-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0216-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0216-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0216-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0216-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0216-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Christina Gauen | S-E-0217-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0217-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0217-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0217-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0217-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0217-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Christina Gauen | S-E-0217-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0217-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lee Tepley | S-E-0218-1 | Alternatives | 1.3.2, 4.1.2 | The analytical methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals (see Section 4.1.2), the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions. |
| | S-E-0218-2 | Alternatives | 4.1.2 | It has not been established that whales "get the bends." As explained in Section 4.1.2, the issue was raised and other potential hypotheses with regards to causes of marine mammal strandings remain highly speculative. |
| Bryan Matsumoto | S-E-0219-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0219-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0219-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0219-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0219-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0219-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0219-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0219-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Lacie Whitten | S-E-0222-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0222-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0222-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0222-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0222-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0222-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0222-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Lacie Whitten | S-E-0222-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| David Burns | S-E-0223-1 | Program | | See Comment ID S-E-0004-1 |
| | S-E-0223-2 | Land Use - CZMA | | See Comment ID S-E-0004-2 |
| | S-E-0223-3 | Land Use - CZMA | | See Comment ID S-E-0004-3 |
| | S-E-0223-4 | Land Use - CZMA | | See Comment ID S-E-0004-4 |
| | S-E-0223-5 | Land Use - CZMA | | See Comment ID S-E-0004-5 |
| | S-E-0223-6 | Land Use - CZMA | | See Comment ID S-E-0004-6 |
| | S-E-0223-7 | Land Use - CZMA | | See Comment ID S-E-0004-7 |
| | S-E-0223-8 | Land Use - CZMA | | See Comment ID S-E-0004-8 |
| Nova Blazej USEPA | S-E-0225-1 | Alternatives | 4.1.2 | The current methodology was developed in extensive consultation with NMFS and does not account for the Navy's mitigation measures to reduce the effects of MFA/HFA sonar on marine mammals. Consequently, the modeling and threshold levels developed for analysis of impacts on marine mammals universally erred on overestimating the number of takes. |
| | S-E-0225-2 | Alternatives | 4.1.2.4.6 | Additional information regarding the Hawaiian Monk Seal has been added to Section 4.1.2.4.6. |
| | S-E-0225-3 | Biological Resources - Marine | 4.1.2.4.3, 4.1.2.4.4 | Sections 4.1.2.4.3 and 4.1.2.4.4 provide the regulatory framework and history behind the development of the Navy's compliance efforts with various statutes, including the Marine Mammal Protection Act. |
| | S-E-0225-4 | Alternatives | 4.1.2.4.3, 4.1.2.4.4 | See response to Comment S-E-0225-3. |
| | S-E-0225-5 | Alternatives | | Thank you for your comment. |
| | S-E-0225-6 | Alternatives | 7 | Both Navy and NMFS have participated extensively over the past several years in national and international forums and studies under the auspices of the National Research Council and the US Commission on Ocean Policy concerning the effects of anthropogenic ocean noise on marine mammals.<br><br>Part of this collaborative effort was to develop a methodology and/or criteria for assessing the effects of these anthropogenic noises on marine mammals. Further, as your comment indicates, the use of sonar is a controversial issue. Litigation efforts by local and national interest groups around the US were in process during the scoping of this EIS/OEIS.<br><br>These litigation efforts complicate the Navy's capability to engage in meaningful discussion and collaboration for this EIS/OEIS. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nova Blazej<br>USEPA | S-E-0225-7 | Hazardous Materials and Waste | 3.1.7 | Section 3.1.7 describes the contaminants in bottom sediments in Pearl Harbor. However, underwater detonations at Lima Landing (the only underwater detonation training at Pearl Harbor) would not suspend enough materials to be an issue in regards to the potential to disperse polychlorinated biphenyls (PCBs) and heavy metal contamination in Pearl Harbor. |
| | S-E-0225-8 | Alternatives | 4.1.2.4 | Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |
| | S-E-0225-9 | Alternatives | 2.2.1.3 | As noted in Section 2.2.1.3 of the EIS/OEIS, computer simulators and other types of simulation training tools are already used extensively in the Navy's training program. Computer technologies provide excellent tools for implementing a successful, integrated training program while reducing the risk and expense typically associated with training at sea. Although it is an essential component of training, computer simulation cannot substitute for the high-stress environment (such as personnel experience under combat conditions) that would be encountered during an actual non-training situation. At the present state of the art for sonar simulator software, the Navy is unable to produce virtual imaging that equals the complexity and variability of real time, real world MFA sonar. Conducting all Naval training by simulation is deemed inadequate and fails to meet the purpose and need of the Proposed Action. |
| | S-E-0225-10 | Alternatives | 1.3.3, 2.2.1 | Navy's training needs were identified as part of the TAP process described in Section 1.3.3. Training alternatives were developed using different levels of intensity and frequency of training alternatives. These form the basis of the alternatives. Likewise, the levels of intensity and frequency were used when considering and rejecting various alternatives described in Section 2.2.1. Alternative 2 provided the Navy the greatest level of flexibility regarding training activities on the HRC. Based on current evaluations of training involving the use of mid-frequency active in the near future, Navy has requested a letter of authorization for mid-frequency active sonar use using the no action alternative analysis of sonar effects. Other training activities consistent with Alternative 2, including activities not associated with Navy training, may occur if Alternative 3 is implemented by the Navy. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nova Blazej USEPA | S-E-0225-11 | Policy/NEPA Process | | See response to comment S-E-0225-6. |
| | S-E-0225-12 | Alternatives | 2 | The Navy believes that they have identified and analyzed reasonable alternatives for its activities within the HRC. |
| | S-E-0225-13 | Alternatives | 2.2.1.3 | As noted in Section 2.2.1.3 of the EIS/OEIS, computer simulators and other types of simulation training tools are already used extensively in the Navy's training program. Computer technologies provide excellent tools for implementing a successful, integrated training program while reducing the risk and expense typically associated with training at sea. Although it is an essential component of training, computer simulation cannot substitute for the high-stress environment (such as personnel experience under combat conditions) that would be encountered during an actual non-training situation. At the present state of the art for sonar simulator software, the Navy is unable to produce virtual imaging that equals the complexity and variability of real time, real world MFA sonar. Conducting all Naval training by simulation is deemed inadequate and fails to meet the purpose and need of the Proposed Action. |
| | S-E-0225-14 | Policy/NEPA Process | 7 | Both Navy and NMFS have participated extensively over the past several years in national and international forums and studies under the auspices of the National Research Council and the US Commission on Ocean Policy concerning the effects of anthropogenic ocean noise on marine mammals.<br><br>Part of this collaborative effort was to develop a methodology and/or criteria for assessing the effects of these anthropogenic noises on marine mammals. Further, as your comment indicates, the use of sonar is a controversial issue. Litigation efforts by local and national interest groups around the US were in process during the scoping of this EIS/OEIS.<br><br>These litigation efforts complicate the Navy's capability to engage in meaningful discussion and collaboration for this EIS/OEIS. |
| | S-E-0225-15 | Alternatives | 2.2.2.4, 4.1.2 | The original analysis was based on data prepared as part of the program described in Section 1.3 of the final EIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only eighteen months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes. |
| | S-E-0225-16 | Alternatives | 4.1.2.4.9.8 | Additional information about SPORTS has been added to Section 4.1.2.4 of the EIS/OEIS. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nova Blazej<br>USEPA | S-E-0225-17 | Alternatives | 1.3.2, 4.1.2 | The analytical methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals (see Section 4.1.2), the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions. |
| | S-E-0225-18 | Alternatives | 5.2.1 | The modeling undertaken does so, as explained in Appendix J, based on marine mammal densities evenly distributed over the entire area of potential effect. This is conservative since the tendency is to overestimate effects given that marine mammals appearing in pods will be easier to detect and therefore be avoided by use of the Navy's standard operating procedures serving as mitigation measures. Potential indirect effects were discussed in Section 4.1.2.4.12 and Section 5.3.3.2 of the Draft EIS/OEIS. This discussion was expanded in Section 5.2.1 of the EIS/OEIS. |
| | S-E-0225-19 | Policy/NEPA Process | 7 | Both Navy and NMFS have participated extensively over the past several years in national and international forums and studies under the auspices of the National Research Council and the US Commission on Ocean Policy concerning the effects of anthropogenic ocean noise on marine mammals.<br><br>Part of this collaborative effort was to develop a methodology and/or criteria for assessing the effects of these anthropogenic noises on marine mammals. Further, as your comment indicates, the use of sonar is a controversial issue. Litigation efforts by local and national interest groups around the US were in process during the scoping of this EIS/OEIS.<br><br>These litigation efforts complicate the Navy's capability to engage in meaningful discussion and collaboration for this EIS/OEIS. |
| | S-E-0225-20 | Alternatives | 4.1.2.4.6 | Navy used the northern elephant seal threshold because taxonomically, the elephant seal is more closely related to the Hawaiian monk seal than any other seal. A northern elephant seal and the Hawaiian monk seal are in the same sub-family. In addition, the audiogram of the northern elephant seal more closely approximates that of the Hawaiian monk seal. |
| | S-E-0225-21 | Alternatives | 4.1.2.4.6 | Navy used the northern elephant seal threshold because taxonomically, the elephant seal is more closely related to the Hawaiian monk seal than any other seal. A northern elephant seal and the Hawaiian monk seal are in the same sub-family. In addition, the audiogram of the northern elephant seal more closely approximates that of the Hawaiian monk seal. |

**Table 14.4.2-2. Responses to Email Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Nova Blazej<br>USEPA | S-E-0225-22 | Biological Resources - Marine | 3.3.1, 3.3.4, 3.4.1, 3.4.2 | Sections 3.3.1, 3.3.4, 3.4.1, and 3.4.2 of the Supplement to the Draft EIS/OEIS have been reviewed for accuracy and revised as appropriate. |

THIS PAGE INTENTIONALLY LEFT BLANK

## 14.4.3 PUBLIC HEARING COMMENTS

Twenty-eight people testified at the public hearings held in Hawaii for the Supplement to the Draft EIS/OEIS.

Table 14.4.3-1 presents individuals who testified at the hearings with their respective commenter identification number. This number can be used to find their testimony in the four transcripts prepared for hearings in Kauai, Oahu, Maui, and the Island of Hawaii and to locate the corresponding table on which responses to each comment are provided.

Exhibit 14.4.3-1 presents reproductions of the hearing transcripts for the Supplement to the Draft EIS/OEIS. Transcripts are identified by commenter ID number, and each statement or question that was categorized as addressing a separate environmental issue is designated with a sequential comment number.

Table 14.4.3-2 presents the responses to testimony on the Supplement to the Draft EIS/OEIS. Responses to specific comments can be found by locating the corresponding commenter ID number and sequential comment number identifiers.

**Table 14.4.3-1. Commenters on the Supplement to the Draft EIS/OEIS (Public Hearings)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Jim Albertini on behalf of the Maloaina Center for Nonviolent Education in Action | S-T-0017 | Peggy Ledoux | S-T-0020 |
| Chris Bane | S-T-0002 | Nina Monasevitch | S-T-0005 |
| Laurel Brier | S-T-0003 | Mike Moran | S-T-0023 |
| Ray Catania | S-T-0008 | Richard Morris | S-T-0027 |
| Craig Davies | S-T-0009 | Star Newland | S-T-0016 |
| Bruce Douglas | S-T-0025 | Cedar Poivier | S-T-0024 |
| Duane Erway | S-T-0011 | Puanani Rogers | S-T-0006 |
| Neil Frazer | S-T-0021 | Harriet Smith | S-T-0019 |
| Raydiance Gonare | S-T-0018 | Summer Star | S-T-0028 |
| Roberta Goodman (Cetacea Nation) | S-T-0015 | Carl Stepath | S-T-0007 |
| Sharon Goodwin on behalf of the Kauai Alliance for Peace and Social Justice | S-T-0004 | Elizabeth Stone | S-T-0022 |
| Cory Harden on behalf of the Sierra Club | S-T-0013 | Lee Tepley | S-T-0010 |
| Michael Hyson on behalf of the Sirius Institute and Cetacean Commonwealth | S-T-0012 | Dwight Vincente | S-T-0014 |
| Barbara Kranichfeld | S-T-0026 | JoAnn Yukimura on behalf of the Kauai County Council | S-T-0001 |

**THIS PAGE INTENTIONALLY LEFT BLANK**

Hawaii Range Complex Supplement
To The Draft EIS/OEIS
Information And
Oral Comment Session
Kauai Community College
Lihue, Hawaii
Thursday, March 13, 2008
5:00 P.M.

Reporter's Transcript

Before: Elsie Terada, CSR NO. 437
Certified Shorthand Reporter

COMMENT NUMBER



THURSDAY, MARCH 13, 2008; LIHUE, HAWAII
5:00 P.M.

VIDA MOSSMAN: Aloha.

THE AUDIENCE: Aloha.

VIDA MOSSMAN: Thank you very much for coming tonight. I'm Vida Mossman, and I will be the moderator for tonight's hearing on the Navy's Supplement to the Draft Hawaii Range Complex Environmental Impact Statement. Poster stations will remain open until 9:00 p.m. to enable you to engage with members of the team. Here to receive your comments are Captain Cudnohofsky, who is both the Commanding Officer of the Pacific Missile Range Facility and the officer in charge for the Hawaii Range Complex; Ms. Jolie Harrison of the National Marine Fisheries Service in Washington, D.C., and Mr. Lewis Michaelson, who will assist me in moderating this hearing.

To ensure that we get an accurate record of what is said, please help me respect the following ground rules. First, speak clearly and slowly into the microphone, starting with your name and any organization you represent. Second, you will have three minutes to speak. Third, if you have a written statement, you may turn it in, at the registration table located right when you walk in, and/or you may

COMMENT NUMBER



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS**

read it out loud within the time limit. You may also provide additional comments for three minutes at the oral comment station located in that corner of the room. Fourth, please honor any request that I make for you to stop speaking. If you reach the three-minute time limit, to aid you in knowing when your time is almost up, my assistant will hold up a card when you have 30 seconds left. This should allow you to find a comfortable place to wrap up your comments.

Our first speaker for this evening is Councilwoman Joann Yukimura.

COUNCILWOMAN YUKIMURA: Thank you, Vida, Captain Cudnohofsky, and panel members. Thank you for this opportunity to provide some input. I do so with a certain amount of humility. I haven't had a whole lot of time to delve into the subject matter, so I may have blind spots or information lacking, but I want to express my thoughts, so far as I'm able to understand this issue.

I speak as an individual Kauai Councilmember who's deeply concerned about the impacts of high-frequency active sonar and mid-frequency active sonar in Navy training exercises upon ocean mammals. I acknowledge the Navy's need to conduct realistic training in sonar detection technology, but it should

COMMENT NUMBER

S-T-0001

1



not be at the expense of ocean mammals. I also acknowledge the Navy's attempt to mitigate its impacts upon mammals, ocean mammals, through its preferred third alternative, which, as I understand, you know, does reduce the number of sonar hours' exposure, I guess. But I do not believe these mitigation efforts are sufficient.

Your exercise summary states the Navy finds harassment resulting from the proposed use of MFA/HFA sonar may affect endangered Blue Whale, North Pacific Right Whale, Fin Whale, Sei Whale, Humpback Whales, Sperm Whale, and Hawaiian Monk Seals, and, to me, this is unacceptable. At a minimum, it would seem that the training exercises should be conducted in the summer months when whales are much less prevalent in Hawaiian waters, to my understanding.

Secondly, there should be found another way to detect submarines without sonar, which invades the main communication system of ocean mammals, and causes both psychological distress and physical injury to these mammals. Human ingenuity has shown itself to be unlimited. Surely, another method can be found to detect quiet submarines. The ocean is the kuleana of its inhabitants, and humans who enter the ocean should do so without causing harm.

COMMENT NUMBER

2

3

4

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Mahalo for your consideration of this testimony and if there is information I should have, that I'm ignorant of, I am open to learning more. Thank you.

VIDA MOSSMAN: Thank you. Thank you, Councilwoman Yukimura.

Our next speaker will be Craig Davis, followed by Chris Bane.

CRAIG DAVIS: I'm not quite prepared yet. I just got here, and I might come back later, if I could.

VIDA MOSSMAN: Later? Okay.

Chris Bane?

CHRIS BANE: Hi, how you're doing? My name is Chris Bane. I didn't have a lot to time to prepare this, so I'm hoping it's not too scattered out of there. Anyway, I'm just basically going to read what I wrote, so I don't get too out there. Anyway, my name is Chris Bane, like I said. I'm a boat tour captain. I've been working here, on Kauai, for 18 years. I go across the channel of Ni`ihau four days a week. I go across the channel, I see the animals that are out there, and -- anyway, well, I understand there's a need for testing and training of sonar. I also feel that how it's done now and how it's been done for decades needs to change.

COMMENT NUMBER

S-T-0002

1



I think that the sonar has been around -- well, sonar has been around since, what, 1912, but it's a lot different than it was, when it was an echo locator. It's become much more powerful, and we have to basically access what kind of sonar and how powerful we're going to want in the waters around Kauai.

Some things that I looked up, some things that I've read, found on the Internet, which was interesting, was the amount of different incidences have occurred worldwide. Here, around Hawaii, we don't have a lot of people going too far offshore, so there's really a lot of stuff that's going on, out there, we can't really see. Being on the tour boat, going across the channel, it's kind of opened my eyes, as far as what I've been able to see and what I kind of realized what's out there. So far, I've seen Cuvier's Beaked Whales, Blainville's Beaked Whales, there's Pilot Whales, there's Melon-Headed Whales.

I know that Ms. Yukimura said that there's more animals during the winter months and less during the summer. From my experience, the mammals that are most affected by this, are the Tooth Whales and the Odontocetes, and unfortunately I see those more in the summertime than during the winter. So there's actually a higher incidence closer to shore, of these animals.

COMMENT NUMBER

3



Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)

Everybody thinks about the Humpback Whales, but there's a lot more out there. You got Pilot Whales, we just saw Pilot Whales two days ago, hanging out. We see, you know, Melon-Headed Whales three days ago, with some Humpback Whales, but we do see a lot more during the summer months than during the winter. I've been logging these things for the past ten years. I've been logging them in my site, if you would like to see them. If you e-mail me, and I could send them out to you. I got an Excel spreadsheet. Anyway, you know, basically, the biggest problem in having the sonar isn't so much the fact that it kills the animals, as much as what it does to the animals as well, I think, is just a big of a fact.

The study that I read, and I'll try and summarize this, and I'll give you a copy of my sheet here. But to try and summarize, basically, the latest study that came out by John Cannon in "Science Now Daily News" in December 2007, basically refers to the Cuvier's Beaked Whales and how they're dying from the bends. These animals die from the bends from -- they dive to 6-, 7,000 feet, one of the deepest dives and they get the bends. And they're getting the bends because they're going down, coming up, going down, a flight response when they hear the sonar.

COMMENT NUMBER

2



So, basically, what I ask from you guys, you know, is, really -- I know it's inconvenient for the Navy to kind of go on these facts that Judge Ezra and others have asked for, as far as, you know, slowly raising the sound up, doing sonar offshore, really making sure there's no animals in the area, listening with passive sonar, making sure these animals aren't in the area. And basically, like I said, I'm not a far extremist left-wing hippie, tree-hugging kind of a guy, you know. I do understand that we need a strong defense, but I also understand that we need these animals out there, and, you know -- I mean, we don't even --

VIDA MOSSMAN: Mr. Bain? Thank you, your time is up.

Do we have any other speakers who have signed up?

FEMALE SPEAKER: I would like to give him my three minutes.

VIDA MOSSMAN: I'm sorry.

CHRIS BANE: That's all right. I got two more pages, so.

CAPTAIN CUDNOHOFSKY: We can take your written testimony, as well, sir.

CHRIS BANE: Yeah. And I gave the testimony to

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

you guys.
VIDA MOSSMAN: We've got another oral station there, if you want to go for another three minutes, they'll record your statement, if you'd like.
CHRIS BANE: Okay.
VIDA MOSSMAN: We're going to take a short recess and reconvene when we've got more speakers.
CHRIS BANE: Okay. Or I'll wait till everybody talks, then we can discuss if anybody wants to hear what I have to say.
VIDA MOSSMAN: We're going to take a short recess and reconvene when we've got more speakers, okay?
(Pause from 5:43 p.m. to 6:10 p.m.)
VIDA MOSSMAN: Before we proceed with receiving more comments, PMRF Commanding Officer Captain Cudnohofsky would like to say a few words. Skipper?
CAPTAIN CUDNOHOFSKY: Aloha and good evening to all of you. I'm Captain Aaron Cudnohofsky. I'm the Pacific Missile Range Facility Commander and the Hawaii Range Complex Coordinator. Welcome to tonight's public hearing on our Supplemental Draft Environmental Impact Statement for the Hawaii Range Complex. I just have a couple things to say, but I promise to keep my comments short, so that we can maximize your time for comment.
I'd like to acknowledge our elected

COMMENT NUMBER



officials, Joann Yukimura, who was here earlier, I think she had to leave, and then Ron Sakoda was here as well. I think he may be in the other room. But thank you to them for showing up. I know they're very busy and it's good to have them and their comments.
As most of you know, we went through the EIS process and associated Public Hearings this past fall. This effort, the Supplemental EIS, is not a revisit of those EIS issues. It's specifically focused on the use of active sonar here in the Hawaii Range Complex. We ask that you keep your comments focused on the mid-frequency active sonar issues only, as that is what the focus of the hearing is, and it helps keep the comments on target.
As we all learned in grade school, 70 percent of the earth is covered by water. What you may not realize is that 80 percent of the world's population lives on or near the coastline, and 90 percent of the world's trade is carried by the maritime shipping industry. $1.1 trillion worth of goods are imported to and exported from the United States through maritime shipping. Any disruption to the global system caused by instability has a direct impact on our economy and our quality of life.
The training we do here on the Hawaii Range

COMMENT NUMBER



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Complex is of vital importance not only to our military forces, but that of our allies. PMRF is home to the largest underwater instrumented range in the world. Here we train U.S. and allied personnel to operate in the ocean environment, in order to ultimately protect our nation. Our services operate on a full spectrum of operations, to include humanitarian ops, training and engaging with other nation's militaries, protecting the sea lanes and many others. Preventing wars is as important as winning wars, and to do this, we need a strong, well-trained and well-equipped navy.

The greatest threat to our Navy today is the quiet diesel submarine. Over 50 nations have submarines in their inventory and that number is expected to grow as the diesel submarine is relatively inexpensive and very capable. They are extremely difficult to detect, virtually invisible to passive radar or passive sonar, and that is why we need to have well-trained sailors. Consider the investment in training in a sonar operator. A Special Warfare SEAL requires two years of training, a sonar operator, three years of training. An aviator requires about three and a half years of training. That provides some insight into the skill level required to achieve that capability. But it doesn't end there, as it is a

COMMENT NUMBER



perishable skill and requires constant training. Who would want to fly with a pilot who hasn't trained to land the airplane or fly it in the last six months or a year? I certainly wouldn't.

These sonar operators not only protect their own ships from the torpedoes of our enemies, they are charged with protecting the entire fleet, as well as any merchant ships that may be transiting hazardous waters. Who can forget the small frigates escorting the tankers and cargo ships during the Gulf War? PMRF provides vital training for these sonar operators and they depend on this vital training to hone their skills before going into harm's way. They also deserve the best technology our country can provide them, and that is the mid-frequency active sonar.

At the Pacific Missile Range Facility, we employ nearly 800 civilians. These are predominantly Hawaiian people, from families that have provided generations of dedicated and capable people to our workforce.

It is from this talented pool that we entrust our important work, from managing our Range Fleet Training Department to actually conducting military training events like our Hollywood operations, where perspective submarine Commanding Officers and Executive

COMMENT NUMBER

Officers are tested and ultimately certified to command U.S. Navy submarines. You'll find people born and raised in Hawaii involved, some may be your friends and family members. We are the largest high-tech employer here on Kauai.

But what we do is not just about technology and employment. We recognize our responsibility as stewards of a very special place, PMRF and our oceans.

The Navy spends $10-14 million a year on marine mammal research. This may or may not sound like a lot of money to you, but consider this: The U.S. Navy sponsored approximately 70 percent of all the U.S. research on the effects of man-made sound on marine mammals and approximately 50 percent of all such research conducted in the world.

The Navy is sensitive to the need to protect the environment and is proud of its record of environmental stewardship. Hopefully you had a chance to visit our poster stations in the other room.

We take a formal approach to our environmental management, but our success can also be attributed to the input we receive from the community, as I stated before, Hawaii families work here, and they care about their environment and surroundings.

Speaking of input from the community, that's

COMMENT NUMBER



why we're here tonight, and I'll wrap it up, so we can get yours. I can't stress enough how important your involvement is in this process. You have taken time from your busy lives to participate in this democratic process, and we appreciate it. Let's make this a time to share not only our views, but our respect for one another. Mahalo.

VIDA MOSSMAN: Okay. I'd just like to basically go over the ground rules. Please speak clearly and slowly into the microphone, starting with your name and any organization you represent. Each of you will have three minutes to speak. When your three minutes are up, to aid you in knowing when your time is almost up, my assistant will hold up a card when you have 30 seconds left. This should enable you to wrap it up.

Okay. So our next speakers will be, in this order, Laurel Brier, Sharon Goodwin, Nina Monasevitch, Puanani Rogers, and Dr. Carl Stepath.

How about you, Mr. Davis?

CRAIG DAVIS: (Inaudible.)

VIDA MOSSMAN: Okay. Laurel Brier.

LAUREL BRIER: My main point is, is just this. That there needs to be an independent council for mammal research, for marine mammal research, and it's exactly as the Captain said for that reason. Right

COMMENT NUMBER

S-T-0003
1

now, 70 percent of the research is being done by the Navy for the U.S., 50 percent of what's being done worldwide is sponsored, paid for by the Navy, which leads to a correction of the research.

You know, that, of course, you're going to -- so many universities are now dependent on that money, that they're going to give the results that are being asked for. And it has been uncovered and discovered by the Natural Resource Defense Committee in 2002, e-mails that were discovered of the Navy compromising research that was published in the "Environmental Impact" magazine, and it wasn't basically results that the Navy wanted, and so they were threatened with losing their funding. And you can imagine that goes on. That when universities, professors are very dependent on their funding, they are going to -- it's project-driven research, and you tend to get the results that you're looking for.

So I see that as the biggest problem. To me, it's like asking the tobacco company to do the research on lung cancer, that we need an independent council doing this research, if we really want to get credible information.

VIDA MOSSMAN: Thank you. Sharon Goodwin.

SHARON GOODWIN: I'm Sharon Goodwin, and I

COMMENT NUMBER

S-T-0004



represent the Kauai Alliance for Peace and Social Justice. Both state and federal legislation arising from our overwhelming -- both state and federal legislation arising from overwhelming public support to protect the entire Hawaiian archipelago makes it incumbent upon you to require the Navy to abide by Hawaii's coastal protection laws. This means, essentially, that the Navy needs to drastically cut back its operations or move them someplace else. Your responsibility is to protect this valuable marine ecosystem. The Navy's responsibility is to protect America. And if it calls the Hawaiian archipelago part of America, then it will not conduct missile, live-fire, or high-intensive active sonar in the archipelago.

From a larger perspective, why would 700 military bases in over 200 countries, a budget equal to or surpassing the military budget of all other countries combined, a Navy with submarines prowling the earth's oceans, with the capability to extinguish human life many times over, why must the defense department and Navy now intrude upon this very remote, pristine, and delicate archipelago?

VIDA MOSSMAN: Nina?

NINA MONASEVITCH: Aloha. My name is Nina

COMMENT NUMBER

1

2

3

S-T-0005

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Monasevitch. I'm here, representing marine mammals. I do work with the critically endangered Hawaiian monk seal. Their numbers are decreasing at 4 percent a year. Really serious issues in getting these numbers back at a sustainable place. As you probably know, the Hawaiian monk seals are endemic. We are very fortunate to have them here in these islands. The only state in the nation that has the endangered Hawaiian humpback whale, in addition, about 23 other marine mammals.

My concern is, I have read the Draft EIS, the original one and the supplement, and I found some real inadequacies in it. It's almost totally ignoring the three most likely causes of stranding and death caused by sonar, to deep-diving whales, and we do have deep-diving whales. Also, by the way, monk seals are deep-diving mammals. Specifically, it ignores sonar-caused panic reactions, leading to strandings, followed by death, and sonar-caused decompression sickness, the bends, also followed by death. It ignores the bends caused by sonar, even in the absence of panic.

The draft EIS makes the same critical omissions that the Navy made in the draft EIS for low-frequency active sonar prepared in 2005. This is despite the fact that the earlier omissions were

COMMENT NUMBER

1



pointed out by Joel Reynolds, an attorney for NRDC, in his comments on earlier draft EIS.

There are at least four ways in which low-frequency or mid-frequency sonar can injure or kill whales. One, direct tissue damage, including ear damage caused by the intense underwater sound wave. The 116-page Draft Environment Impact Statement concentrates entirely on this point. It almost ignores the following three points. Panic caused by intense sound wave, which can cause whales to strand or die onshore. Panic which can cause deep-diving whales, especially beaked whales, to ascend too rapidly and get decompression sickness, also called the bends.

Whales can and do get the bends. When they ascend too rapidly, bubble sometimes form in their blood, and their blood forms dissolved air. The bubbles can block the flow to the brain and their vital organs.

Four, rapid ascent by deep-diving whales not caused by panic. Fairly rapid ascent can occur, normally, without causing the bends. However, it might cause the bends in the presence of mid-frequency sonar.

In addition, I'd like to point out that what Laurel said, brought up about the research, and there is scientific research by Dr. Potter, that was pointed

COMMENT NUMBER

2

out in 2002, in these hearings, which isn't even covered, it's completely ignored in this EIS. Very disconcerting to me, that you're ignoring scientific research which has been proven and has been funded independently, that it's not being included in this research. So it's really clear that, like Laurel is pointing out, the research that you don't want to see that may be detrimental to your vision because it's kills whales, is not being included, so.

VIDA MOSSMAN: Thank you.

NINA MONOSAVICH: Please listen to your heart. Mahalo.

VIDA MOSSMAN: Thank you. Puanani Rogers.

PUANANI ROGERS: Aloha ahi ahi. Good evening, everybody. Puanani Rogers...(speaks Hawaiian). Born, raised, and still live in the ahupua`a, Kealia, with my children, my grandchildren, and my great granddaughter. I love this `aina, I love this island. This is the only island I can call home. Therefore, it is my kuleana or responsibility that we protect it as much as we can. I'm very questionable about whether what the United States Navy is doing, will not cause harm to our `aina. That was one of my most concerns.

I had a nice conversation, by the way, with the Commander here, and he kind of answered a lot of my

COMMENT NUMBER

S-T-0006



questions already, so. My glasses, it's dirty, I can't see. I'll ask some others, some other questions. The ones I asked was, can they be sure that there would be no harm. And I stand on the universal law that says no harm, no harm be done to any living thing or nonliving thing, anything that has to do with this planet, anything that has to do with any life form, the universal law is, to cause no harm.

My other question was whether they were going to be shooting their missiles over the northwest Hawaiian islands, because of my concern for our kapae `aina, our archipelago. Hawaii is not just these eight islands. We extend north, northwest, up, thousands of miles further north. We, as kanaka maoli, must always remember that we're connected to all of those islands as well, and have just as much concern with those islands as we do for Kauai.

The answer to that, was that you wouldn't be shooting over Necker Island or Nihoa, which is what I had found out, doing some research to prepare for something to speak here. That you were going to go more west, and not be anywhere near the northwest Hawaiian islands, am I right, Commander, you did say that, didn't you?

CAPTAIN CUDNOHOFSKY: You said Ni`ihau.

COMMENT NUMBER

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

PUANANI ROGERS: Not over Ni`ihau, you said? Oh, then you didn't answer my question. So I want to know if you are going to get anywhere close to the northwest Hawaiian islands, in particular, Nihoa and Necker, and if so, what's going to happen, if anything?

I also wanted to remind you that the northwest Hawaiian islands is covered by a Coastal Zone Management Act, and that prohibits, or that protects mauka to makai, like all the ahupua`a on our islands, mauka to makai.

VIDA MOSSMAN: Puanani?

PUANANI ROGERS: Yes.

VIDA MOSSMAN: Mahalo. Thank you very much. Your time is up.

PUANANI ROGERS: One sentence. Oceans are part of a system that runs mauka to makai, so we need to limit Navy activities that may be harming our ocean shores.

VIDA MOSSMAN: Thank you. Mahalo.

PUANANI ROGERS: My last question is, do you still pay one-dollar-a-year rent?

VIDA MOSSMAN: Nani? Nani? If you want to provide more oral comment, please, go seek Kunani right down the hall.

PUANANI ROGERS: Still pay one-dollar rent?

VIDA MOSSMAN: Thank you very much.

COMMENT NUMBER

2

3



PUANANI ROGERS: You're very welcome, Vida.

VIDA MOSSMAN: Dr. Carl Stepath.

DR. CARL STEPATH: Yes. Thank you.

Yeah, I'm sorry, I just heard about this hearing just a few hours ago, so I'm not really prepared to speak. But I have lived on Kauai for many years and recently received my Ph.D. in marine science, and I have done a little bit of reading about some of the research papers associated with this project, and I feel there are significant questions, as some of them have been raised today.

And I feel that, as some of the other speakers have brought up, is that when one group of people is doing the research or sponsoring the research, if can be very questionable whether or not this research is actually accurate. And I'm not saying it's not accurate, but I really feel that we really need to look at this and investigate this matter further because whenever we're in a situation where we're putting these very questionable sonar impulses into the marine environment, it does have effects on other living beings, and I really feel that -- I agree with what Nani said, is that we really have to be very careful that we make our utmost effort to protect other living beings here on the planet, especially in the

COMMENT NUMBER

S-T-0007

1



Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)

ocean, which is where I spend a lot of my time.

I also teach oceanography here on the island, and I have a great deal of love for the ocean, so I really feel it's important that, Commander, that you really do everything that you can to try to minimize any type of risk to any other living being, and I implore you to do that. Thank you very much. Aloha.

VIDA MOSSMAN: Thank you. We've got one more speaker. It's either Ray or Roy. Ray?

RAY CATANIA: Yes.

VIDA MOSSMAN: Catania?

RAY CATANIA: Yes. Just say what you like.

How's it everybody, you guys can hear? Okay. From what I understand, we supposed to be talking in particular about sonar, but for me, it's much bigger than sonar. It's a question of militarism. I going tell you, point-blank, I no care for the military. Okay? I think what we gotta do is spend all this money that we spending on missiles and bombs, and spend 'em on the needs of the people, like medical care, housing, education. It's about time that we start looking at these kinds of things and start reorienting our economy towards the needs of the people, 'cause as far as I concerned, the Navy has done a lousy job, environmentally.

COMMENT NUMBER

2

S-T-0008

1



I was born and raised on Oahu, and I seen what the Navy did to Pearl Harbor, no can even fish over dea anymore. I seen what the Navy or the military had done to Makua, destroyed much of that valley with bombing, and we know what the military done to Kaho`olawe. I think what we gotta do is stop this testing altogether. Aunty Nani is right. We no need screw up our islands anymore. Mahalo.

VIDA MOSSMAN: Okay. We're going to take a recess.

Are you ready, okay? Mr. Craig Davis.

CRAIG DAVIS: Yeah, I just wanted to expound on the last two speakers. I think the northwest Hawaiian islands are really the crux of this, this issue here. I seem to recall not too long ago, President Bush mandating them as a sanctuary. Is that true?

PUANANI ROGERS: There's two of them. It's a national monument.

CRAIG DAVIS: Bush just did something. Wasn't Bush? It was Bush. It was Bush.

PUANANI ROGERS: Clinton was national sanctuary.

CRAIG DAVIS: The first was a conservation zone, all of the northwest Hawaiian islands to be protected.

PUANANI ROGERS: That's right.

CRAIG DAVIS: And what the military has done to

COMMENT NUMBER

2

S-T-0009

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Kaho`olawe, Makua Valley, Kwajalein, and now, but Bush just proclaimed as protected lands, you're going to start bombing on them. Things seem all mixed up. I don't understand. I don't get it, why you give Kaho`olawe back, with a ten-year grace period for cleanup, and it's still not done. Kanaka still getting arrested, when you go to Kaho`olawe.

Kwajalein, we all know that. Maybe we all might know what happened there, but military messed that place, just total disrespect for islands of people, and it seems like it's going that way, here, too. I think there's much more that meets the eye, much more to the story. And the most perplexed thing that I can say is please explain to me how Bush, one minute, proclaims conservation zone and the next minute you're saying you're bombing. That's all I have to say.

VIDA MOSSMAN: We have no more speakers at this time signed up, so we're going to take a recess.

-oOo-

COMMENT NUMBER



STATE OF HAWAII )
) ss.
COUNTY OF HONOLULU )

I, Elsie Terada, Certified Shorthand Reporter, Certificate No. 437, for the State of Hawaii, hereby certify:

I am the person that stenographically recorded the proceedings.

The foregoing transcript is a true record of said proceedings.

Dated this 19th day of March, 2008, in Honolulu, Hawaii.

_____

ELSIE TERADA, CSR NO. 437
Notary Public, State of Hawaii
My Commission Expires: 4-07-2010

COMMENT NUMBER



Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)

HAWAII RANGE COMPLEX

DRAFT ENVIRONMENTAL IMPACT STATEMENT/

OVERSEAS ENVIRONMENTAL IMPACT

STATEMENT (EIS/OEIS)

SUPPLEMENT TO THE DRAFT EIS

March 14, 2008

Maui Waena Intermediate School

795 Onehee Ave, Kahului, Hawaii

BEFORE: SANDRA J. GRAN, CSR NO. 424
Registered Professional Reporter

RALPH ROSENBERG COURT REPORTERS, INC.
1001 Bishop Street, #2460, Honolulu, HI 96813
808-524-2090 courtreporters@hawaii.rr.com

COMMENT NUMBER



Speaker List:

Vida Mossman
Captain Aaron Cudnohufsky
Mike Moran
Bruce Douglas
Cedar Povier
Barbara Kranichfeld
Richard Morris
Summer Starr

RALPH ROSENBERG COURT REPORTERS, INC.
1001 Bishop Street, #2460, Honolulu, HI 96813
808-524-2090 courtreporters@hawaii.rr.com

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

PROCEEDINGS:

MS. MOSSMAN: Aloha and thank you for coming tonight. I'm Vida Mossman and I will be the moderator for tonight's hearing on the Navy's Supplement to the Draft Hawaii Range Complex Environmental Impact Statement.

The poster stations will remain open until 9:00 p.m. to enable you to engage with the members of the team.

Here to receive your comments are Captain Aaron Cudnohufsky, Hawaii Range Complex Coordinator and the officer in charge for the Hawaii Range Complex; Ms. Julie Harrison, in Silver Springs, Maryland; and Mr. Lewis Michaelson, who will assist me in moderating this hearing.

The panel is here to hear your comments and will not engage in dialogue with speakers. If you have questions, our team is ready to address your questions at the poster stations.

To ensure that we get an accurate record of what is said, please help me respect the following ground rules:

First, please start by stating your name and any organization you represent.

Second, each person will have three minutes to speak.

Third, if you have a written statement, you may turn it in at the registration table and/or you may read it out



COMMENT NUMBER



loud within the time limit. You may also provide additional comments for three minutes at the oral comment station located back there.

Four, please honor any request that I make for you stop speaking if you reach the three-minute time limit. To aid you in knowing when your time is almost up, my assistant will hold up a card when you have 30 seconds left. This should allow you to find a comfortable place to wrap up your comments.

Before we start calling the speakers, Captain Cudnohufsky would like to say a few words before we begin.

CAPTAIN CUDNOHUFSKY: Thank you, Vida.

Aloha and good evening to all of you. I'm Captain Aaron Cudnohufsky, Commanding Officer of the Pacific Missile Range Facility and the Hawaii Range Complex Coordinator.

Welcome to tonight's public hearing on our Supplemental Draft Environmental Impact Statement for the Hawaii Range Complex. I have just a couple of things to say, but I will keep my comments short so that we can maximize your time for comment.

As most of you know, we went through the EIS process and associated public hearings last fall. This effort, the Supplemental EIS, is not a revisit of all the EIS issues. It is specifically focused on the employment of mid-frequency active sonar here in the Hawaii Range Complex. We ask that



COMMENT NUMBER



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-200

COMMENT NUMBER



you keep your comments focused on the mid-frequency active sonar issue only, as that is what the focus of this hearing is about.

As we all learned in grade school, 70 percent of the earth is covered by water. What you may not realize is that 80 percent of the world's population lives on or near the coastline and 90 percent of the world's trade is carried by the maritime shipping industry. $1.1 trillion worth of goods are imported to and exported from the US through maritime shipping. Any disruption to the global system caused by instability has a direct impact on our economy and quality of life.

The training we do here on the Hawaii Range Complex is of vital importance to not only our own military forces, but that of our allies. PMRF is home to the largest underwater instrumented range in the world. Here we train US and allied personnel to operate in the ocean environment in order to ultimately protect our nation. Our services operate on a full spectrum of operations, to include humanitarian ops, training and engagement with other nations' militaries, protecting the sea lanes and many others. Preventing wars is as important as winning wars; and to do this we need a strong, well-trained and well-equipped navy.

The greatest threat to our navy today is the quiet diesel submarine. Over 50 nations have submarines in their



COMMENT NUMBER



inventory and that number is expected to grow as the diesel submarine is relatively inexpensive. They are extremely difficult to detect, virtually invisible to passive sonar, and that is why we need to have well-trained sailors.

Consider the investment in training in a sonar operator: A Special Warfare SEAL requires two years of training, a Sonar Operator requires three years of training, and an Aviator requires about three and a half years. That provides some insight into the skill level required to achieve that capability, but it doesn't end there as it is a perishable skill and requires constant training.

These sonar operators not only protect their own ships from the torpedoes of our enemies, they are charged with protecting the entire fleet as well as any merchant ships that may be transiting hazardous waters. PMRF provides vital training for these sonar operators and they depend on the vital training to hone their skills before going into harm's way. They also deserve the best technology our country can provide them, and that is the medium frequency active sonar.

18:08:50 But what we do is not just about training, testing
18:08:50 and technology. We recognize our responsibilities as stewards of a very special place, our oceans and the marine environment. The navy is sensitive to the need to protect the environment and is proud of its record of environmental stewardship.



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Hopefully you had a chance to visit our poster station as you entered where we have people ready to answer all your questions about how we protect the marine resources. If you have not had an opportunity, they'll be open all night.

I can't stress enough how important your involvement is in this process. You have taken time from your busy lives to participate in this democratic process and we appreciate this. Let's make this a time to share not only our views, but our respect for one another.

Mahalo.

MS. MOSSMAN: Okay. The speakers are in this order: Mike Moran, Bruce Douglas, Cedar Povier, Barbara Kranichfeld, Richard Morris and Summer Starr.

Mike.

MR. MORAN: Aloha. My name is Mike Moran from Kihei, Hawaii. Thanks for the opportunity to comment on this topic.

Once again, the navy is failing to offer reasonable protection to our aquatic environment in Hawaii with this Draft EIS, nor offer reasonable explanation why these practice sessions must be held in near shore Hawaiian waters. In spite of overwhelming evidence of injury and death to whales and other marine mammals caused by mid-frequency active sonar use, the navy persists in doing so in the areas of Hawaiian Islands Humpback Whale National Marine Sanctuary where mother whales



COMMENT NUMBER

S-T-0023



are birthing on a regular recurring basis.

Unfortunately, this February 2008 version of the Draft EIS in the exhausting 116 pages is an inadequate analysis by the navy, as was the prior 2005 draft. The navy insists on using selective science to form assumptions that neither do, nor apply in the real world marine environment, and chooses to ignore scientific evidences of injury and death to marine mammals which occur in regions where active sonar use occurs. Further, the navy refuses to make available after action reports to the public, thus hiding specifically where the sonar use occurs to make it impossible to verify cause and effect relationships between sonar use and marine mammals injury and death, including, but not limited to strandings.

There are numerous ways active sonar can injure or kill marine mammals: Ear and other tissue damage caused by the sonic waves; induced panic from the sonic waves causing strandings on shore; induced panic on deep diving whales to ascend too quickly, causing the bends; and even naturally occurring fairly rapid ascent combined with the sonic wave also causing the bends or decompression sickness.

The navy acknowledges that, quote, "Sonar exposure has been identified as a contributing cause or factor in five specific mass strandings: Greece in 1996; the Bahamas in March 2000; Madeira, Portugal in 2000; the Canary Islands in 2002; and Spain in 2006." This is you, the navy, stating



COMMENT NUMBER

1

2

3



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

this, but you then choose to ignore this problem. Also ignored is Hawaii's own July 11, 2004, mass strandings of 200 melon-headed whales in the Hanalei Bay area of Kauai during naval exercises in that area. Since again the navy refuses to offer after action reports of sonar use relating to date, time or location, scientists are prohibited from being able to prove the likely cause and effect relationship there.

As objective federal judges in courts in California and just 2/29/2008 right here in Hawaii are issuing rulings calling for further mitigations by the navy in use of active sonar, the navy chooses to ignore the court rulings. Judge David Ezra ruled that the navy cannot conduct exercises within 12 nautical miles of Hawaii's shorelines, which is where marine mammals that are particularly sensitive to sonar are found.

MS. MOSSMAN: Mr. Moran, your time is up.

Bruce Douglas.

MR. DOUGLAS: A couple of ideas. One is: What about using sounds in an area of, you know, non-harmful sounds to scare animals away from the area before any testing is done? Playing head-jammer music or something in the water to send them away and scare the animals off. That's one idea and comment.

The other is the use of sonar, low-frequency sonar or low-power sonar to look for animals in the water



COMMENT NUMBER

4

5

S-T-0025

1



beforehand. I have seen no mention of this in any of the statements or anything else. Actually, so far all I've seen is looking with binoculars seeing if any animals are in the area. We have this incredible sonar, we should be able to use low power levels and ping and listen in the area and see if there's any animals in the water. We should be able to use lesser sounds in order to scare those animals away and drive whales and other fishes away from the area.

Those are my two suggestions. That's all. Thank you.

MS. MOSSMAN: Thank you very much.

Cedar Povier.

MS. POVIER: Hello. I have traveled here today 6,000 miles from Newport, Rhode Island, to help lend a voice to those cannot speak on their own behalf, the whales.

We as individuals and Americans have come forth to protect the rights of our environment and the species within. I would like to believe some day we can look to our government for not only our own protection, but also the protection and best interests of all our species, as that is beneficial to our entire nation. We look to you now to set an example by doing what's right by ending the suffering of whales from the harmful effects of sonar testing.

Furthermore, I feel that if the navy truly believed they were doing all they could do to protect the whales, they



COMMENT NUMBER

S-T-0024

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

18:08:56 would not be appealing a lawsuit that held against them
18:08:56 requiring keep them to keep 12 nautical miles offshore.
18:08:56 Thank you.
18:08:56 MS. MOSSMAN: Thank you very much.
18:08:56 Please state your name before you provide your
18:08:56 testimony.
18:08:56 Barbara Kranichfeld.
18:08:56 MS. KRANICHFELD: My name is Barbara Kranichfeld and
18:08:56 I'm from Haiku, Hawaii. I'm going to finish what Mike Moran
18:08:56 started speaking about. Okay.
18:08:56 There are numerous ways active sonar can injure or
kill marine mammals: Ear and other tissue damage caused by
the sonic waves; induced panic from the sonic waves causing
strandings on shore; induced panic on deep diving whales to
ascend too quickly, causing the bends; and even naturally
occurring fairly rapid ascent combined with the sonic wave
also causing the bends or decompression sickness.
The navy acknowledges that, quote, "Sonar exposure
has been identified as a contributing cause or factor in five
specific mass strandings: Greece in 1996; the Bahamas in
March 2000; Madeira, Portugal in 2000; the Canary Islands in
2002; and Spain in 2006." This is you, the navy, stating
this, but you then choose to ignore this problem. Also
ignored is Hawaii's own July 11, 2004, mass strandings of 200
melon-headed whales in the Hanalei Bay area of Kauai during



COMMENT NUMBER

S-T-0026

1

2



naval exercises in that area.
18:08:57 Use of sonar in this area of Kauai during naval
18:08:57 exercises in that area is unconscionable. These whales were
18:08:57 so freaked out they had to go into a bay to try to escape this
18:08:57 noise. They -- It was horrific to see these whales trying to
18:08:57 find a place of sanctuary.
Since again the navy refuses to offer after action
reports of sonar use relating to date, time or location,
scientists are prohibited from being able to prove the likely
cause and effect relationship there.
As objective federal judges in courts in California
18:08:58 and just in February 29, '08, right here in Hawaii are issuing
rulings calling for further mitigations by the navy in use of
active sonar, the navy chooses to ignore the court rulings.
Judge David Ezra ruled that the navy cannot conduct exercises
within 12 nautical miles of Hawaii's shorelines, which is
where marine mammals that are particularly sensitive to sonar
are found. He also ruled that the navy must look for marine
mammals for one hour each day before using sonar, and employ
three lookouts exclusively to spot the animals before sonar
18:08:58 use. However, it was just reported by the Associated Press on
March 12, "The navy says it will go ahead with the planned
anti-submarine warfare exercises this month, and then
determine whether to seek additional clarifications and
modifications from the judge." Let's just do it first and



COMMENT NUMBER

3

4



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-204



then ask if this is what the ruling meant.

So the bottom line is I don't feel as if the navy is really considering our environment or what's right or has consciousness about protecting the oceans and the whales and is thinking about control and power. And I think we need to be -- we need to all work together to try to save the oceans and the marine environment. Mahalo.

MS. MOSSMAN: Thank you, Barbara.

Richard Morris.

MR. MORRIS: Aloha. My name is Richard Morris. And I'm here, I guess, as a representative of the brothers and sisters that I consider to be -- the whales and the dolphins, who I consider to be kin to me, to my heart. And, also, I'm here as a representative of the peoples of Hawaii, although I am not Hawaiian myself.

I have had a very deep -- I wasn't intending to speak today, but listening to this gentleman in white over here speaking about all the war exercises that are going on in Hawaii, the stolen land that was stolen -- And even the president of the United States issued an apology for this land being stolen. Not only is the land being stolen, but now excessive war games are happening all around. This area just from being educated in these past couple minutes is being used as a quadrant for some of the most intensive war games that are going on in the world. And those war games are affecting



COMMENT NUMBER

S-T-0027



my brothers and my sisters to the point that they can kill them. It can murder them.

Now, I don't know if you, sir, in the white uniform have ever swam with the dolphins and looked a dolphin eye to eye or if you've ever swum with a humpback whale and looked into their eye, which is about -- bigger than this, as big as a softball. When you have that communication, you transcend time. It's like coming into contact with a dinosaur. The whales are the record keepers for this land, for this world. Everyone knows the joy of the dolphin.

I can't imagine you going into the ocean with sounds that can actually rupture their hearing, that can actually just send them into panic to have them ascend too quickly to get the bends, to die on beaches. You know, we're all here -- I understand your concern for defending this country and defending the ocean ways, but like Bruce said, how about -- We have really exquisite sonars, old-time sonars that have been used. How about using those to check if whales are around? Because you can't -- Whales are under the surface for 20 minutes, 25 minutes. You might see them on the surface and then they go under and you may think they're not there, but they're there under the water. And you're blasting them and their babies in our waters.

I strongly encourage you having to do these cautions -- precautionary not only -- Sighting is really not



COMMENT NUMBER

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

18:09:01 1 enough. They're mainly underwater and especially if they hear
18:09:01 2 sounds.
18:09:01 3 MS. MOSSMAN: Mr. Morris, your time is up. Thank
18:09:01 4 you.
18:09:01 5 MR. MORRIS: Like I say, I congratulate you for your
18:09:02 6 efforts. And I see you have a sincere job and your dedication
18:09:02 7 to protecting this country. Thank you for your work, sir.
18:09:02 8 MS. MOSSMAN: Thank you, Mr. Morris.
18:09:02 9 Summer Starr.
18:09:02 10 MS. STARR: Summer Starr from Olinda. Aloha,
18:09:02 11 everyone. Thank you for coming out on your Aloha Friday. I
18:09:02 12 know there's lots of traffic.
18:09:02 13 I commemorate you folks yet again for coming out and
18:09:02 14 having a public forum and volunteering to be the object of
18:09:02 15 great frustration, dissent and quite often insults. Must be
18:09:02 16 hard.
18:09:02 17 On that note, what more can we as a community do to
18:09:02 18 make ourselves more clear? It is assumed that we, the people,
18:09:02 19 don't have the resources, the amount of resources the US
18:09:02 20 military has to do the extensive propaganda equal to what we
18:09:02 21 have here tonight. We do not have the money the
18:09:02 22 decision-makers do. With full-time jobs and mouths to feed,
18:09:02 23 we do not have the time or an entire office of individuals
18:09:02 24 dedicated to generating propaganda to convince the public that
18:09:02 25 our opinion is what's just. With that in mind, how do you



COMMENT NUMBER

S-T-0028



18:09:02 1 suggest that we the community get our voices heard in a fair
18:09:02 2 arena where we are guaranteed that our voices will not be in
18:09:02 3 vein?
18:09:02 4 With a World War II ace pilot grandfather, another
18:09:02 5 served as a Representative Republican in the Territorial
18:09:03 6 Government of Hawaii, and a father who served in the National
18:09:03 7 Guard; I am still a true believer that our United States
18:09:03 8 military -- paid with my hard-earned taxes -- isn't an entity
18:09:03 9 able to protect our well being. Honestly. We have been
18:09:03 10 warned by our own great leader, "Beware the military
18:09:03 11 industrial complex." We all know this.
18:09:03 12 What is happening here is colonialism. We in Hawaii
18:09:03 13 have suffered from such arrogance for too long. This is salt
18:09:03 14 in a fresh wound. (Statement in Hawaiian.) The list goes on.
18:09:03 15 With the community in such opposition to this project, is it
18:09:03 16 truly worth it to extend this imperialist arm of the United
18:09:03 17 States military at the expense of our trust and corporation?
18:09:03 18 Please keep us in your best interests. That means
18:09:03 19 the entire ao from the heavens all the way down to the bottom
18:09:03 20 of the oceans. They are vital to the success and survival of
18:09:03 21 this island state, this island nation. Mahalo.
18:09:03 22 MS. MOSSMAN: Mahalo, Summer.
18:09:03 23 We will now take a recess. We have no more speakers
18:09:03 24 signed up. Thank you very much.
18:09:03 25 (Pause in Proceedings: 6:09-9:01)



COMMENT NUMBER

1

2



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-206



C E R T I F I C A T E

STATE OF HAWAII )
)
CITY AND COUNTY OF MAUI ) SS.

I, Sandra J. Gran, Certified Shorthand Reporter for the State of Hawaii, hereby certify that the proceedings were taken down by me in machine shorthand and was thereafter reduced to typewritten form under my supervision; that the foregoing represents to the best of my ability, a true and correct transcript of the proceedings had in the foregoing matter.

I further certify that I am not attorney for any of the parties hereto, nor in any way concerned with the cause.

DATED this 21st day of March, 2008, in Maui, Hawaii.

_____

Sandra J. Gran
Hawaii CSR 424
Notary Public for Hawaii
My Commission Expires: 5/14/08

RALPH ROSENBERG COURT REPORTERS, INC.
1001 Bishop Street, #2460, Honolulu, HI 96813
808-524-2090 courtreporters@hawaii.rr.com

COMMENT NUMBER

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Public Hearing on the
Navy's Supplement to the Draft
Hawaii Complex Environmental Impact Statement

Held at the Disabled American Veterans Hall
2685 North Nimitz Highway
Honolulu, Hawaii
On March 17, 2008
5:00 - 9:00 p.m.



COMMENT NUMBER



MS. MOSSMAN: Aloha, and thank you for coming tonight. I am Vida Mossman, and I will be the moderator for tonight's hearing on the Navy's Supplement to the Draft Hawaii Complex Environmental Impact Statement. Poster stations will remain open until 9:00 p.m. to enable you to engage with members of the team. Here to receive your comments are Captain Cudnohufsky, who is both the commanding officer of the Pacific Missile Range Facility and the officer in charge for the Hawaii Range Complex; Ms. Jolie Harrison of the National Marine Fisheries Service in Silver Springs, Maryland; and Mr. Louis Michaelson, who will assist me in moderating this hearing.

The panel is here to hear your comments and will not engage in dialogue with speakers. To ensure that we get an accurate record of what is said, please help me respect the following rules: First, please speak clearly and slowly into the microphone starting with your name and any organization you represent. Second, you will have three minutes to speak. Third, if you have a written statement, you may turn it in at the registration table and/or you may read it out loud within the time limit. You may also provide additional comments for three minutes at



COMMENT NUMBER



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-208



the oral comment station. Fourth, please honor any requests that I make for you to stop speaking if you reach the three-minute time limit. To aid you in knowing when your time is almost up, my assistant will hold up a card when you have 30 seconds left. This should allow you to find a comfortable place to wrap up.

We have one speaker signed up this evening, and that's Mr. Neal Frasier.

MR. FRASIER: Thank you. Am I live here? Can you hear me? Okay. So three minutes, I guess I will just make some general remarks, and my first general remark will be that from everything I know about Navy sonars, I would say they're a very, very old technology. The second thing I would say is that that technology is probably not going to be improved until we hold the Navy's feet to the fire a little bit, which has started to happen recently.

And when I say they're a very old technology, I mean that they use source wave forms that are very unnatural sounding, and they're high power, kind of a compressed wave form, so it's kind of like a kid beating a drum. There are better ways to do this. But like I say, progress in this area only happens when we require an agency to make less noise



COMMENT NUMBER

S-T-0021

1



in the water. So even though I've been a Navy contractor for the last 30 years and working with whales and underwater sounds and stuff like that, I've noticed that in the last few years we've made enormous strides in knowing more about whales, and the only reason for that is we said, hey, stop making so much noise. So I'd like to say we have to keep doing that.

For example, just so you understand that I'm not making this up. 20 to 30 years ago we could have done good playback experiments, and what I mean by a good playback experiment is where you take a sound of biological significance and play it back to the animal at very low volume or great distance and keep reducing your distance or increasing your volume until you see a behavioral change that indicates the animal has heard you.

Now, if you do this with a sound that has no biological significance, you have to get pretty near the pain level before you get a reaction. Just like with human beings, if there was a construction site near your home, you don't sell your home and move away because you know eventually they're going to finish the building.

So the kind of thing you want to do -- thank you -- is use a predator sound, for example, an



COMMENT NUMBER

2

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

orca sound. If you want to know whether a whale is hearing you, play him an orca sound. When you do that, you find that there's like a 28 to 30 dB difference between the levels that you start to get a reaction.

What my point is, and I'll wrap up here because I'm out of time, is that we don't know anything about how whales hear. We could have been doing these experiments 30 years ago. We're just starting to do them now. And the reason we're starting to do them now is because we've started to say to the Navy and the oil industry, cut it out. So my suggestion is we should continue to say that.

In this case, what I would like to say to the Navy is, how about putting out a passive array? How about giving us some better sonars? I don't have a security clearance and I know I can design a better sonar than what's going to be used in these exercises. Thank you.

MS. MOSSMAN: Thank you, sir. We have no more speakers at this time. We'll take a recess. Thank you.

(End of proceedings.)



COMMENT NUMBER

3



C E R T I F I C A T E

STATE OF HAWAII )
) SS.
CITY AND COUNTY OF HONOLULU )

I, Jessica R. Perry, Certified Shorthand Reporter for the State of Hawaii, hereby certify that the proceedings were taken down by me in machine shorthand and was thereafter reduced to typewritten form under my supervision; that the foregoing represents to the best of my ability, a true and correct transcript of the proceedings had in the foregoing matter.

I further certify that I am not attorney for any of the parties hereto, nor in any way concerned with the cause.

DATED this 25th day of March, 2008, in Honolulu, Hawaii.

_____

Jessica R. Perry
Hawaii CSR 404
Notary Public for Hawaii
My Commission Expires: 5/11/09



COMMENT NUMBER

14-210

COMMENT NUMBER



INFORMATION AND ORAL COMMENT SESSION

HAWAII RANGE COMPLEX

SUPPLEMENT TO THE DRAFT EIS/OEIS

Held on Tuesday, March 18th, 2008
5:00 to 9:00 p.m.
At the Hilo Hawaiian Hotel
Hilo, Hawaii

Before:
Vida Mossman, Moderator
Captain Aaron Cudnohufsky, PMRF
Lewis Michaelson, Hearing Assistant
Jolie Harrison, National Marine Fisheries Service

REPORTED BY: Kathy Pearson, RPR, CRR, CSR No. 313
Notary Public, State of Hawaii

COMMENT NUMBER



VIDA MOSSMAN: We're ready to take oral comments at this time. So we're looking at Mr. Duane Erway, Mr. Lee Tepley, Dr. Michael Hyson, and Cory Harden.

Aloha, and thank you for coming tonight. I'm Vida Mossman, and I will be the moderator for tonight's hearing on the Navy's supplement to the draft Hawaii Range Complex environmental impact statement. Poster stations will remain open until nine p.m. to enable you to engage with members of the team.

Here to receive your comments are Captain Cudnohufsky, who is both the commanding officer of the Pacific Missile Range Facility and the officer in charge for the Hawaii Range Complex; Ms. Jolie Harrison of the National Marine Fisheries Service in Silver Springs, Maryland; and Mr. Lewis Michaelson, who will assist me in moderating this hearing.

The panel is here to hear your comments, and will not engage in dialogue with speakers. To ensure that we get an accurate record of what is said, please help me respect the following ground rules.

First, speak clearly and slowly into the microphone, starting with your name and any organization you represent.

Second, you will have three minutes to speak.

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

COMMENT NUMBER



Third, if you have a written statement, you may turn it in at the registration table and/or you may read it out loud within a time limit. You may also provide additional comments for three minutes at the oral comments station.

Fourth, please honor any request that I make for you to stop speaking if you reach the three minute time limit. To aid you in knowing when your time is almost up, my assistant will hold up a card when you have thirty seconds left. This should allow you to find a comfortable place to wrap up your comments.

We are now ready to begin. Our first speaker -- excuse me. Captain Cudnohufsky would like to say a few words.

CAPTAIN CUDNOHUFSKY: Aloha and good evening to you all. Just as a reminder, just like I had, please turn off your cell phones so we don't disrupt this meeting.

I'm Captain Aaron Cudnohufsky. I am the commanding officer of the Pacific Missile Range Facility as well as the Hawaii Range Complex coordinator.

Welcome to tonight's public hearing on our supplement to the draft environmental impact statement for Hawaii Range Complex.

COMMENT NUMBER



As most of you know, we went through the draft EIS process associated with public hearings this past August. This current effort, the supplement to the draft EIS, is not a revisiting of all the EIS issues. It is specifically focused on the use of mid-frequency active sonar here in the Hawaii Range Complex. We ask that you keep your comments focused on the mid-frequency active sonar issues only tonight.

As we all learned in grade school, seventy percent of the earth is covered by water. What you may not realize is that eighty percent of the world's population lives on or near the coastline, and ninety percent of the world's trade is carried by the maritime shipping industry. 1.1 trillion dollars' worth of goods are imported to and exported from the United States through maritime shipping. Any disruption to the global shipping system caused by instability has a direct impact on our nation and the quality of our life.

The training we do here at the Hawaii Range Complex is of vital importance to not only our own military forces, but that of our allies. PMRF is home to the largest underwater instrumented range in the world. Here we train U.S. and allied personnel to operate in the ocean environment in order to,



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

ultimately, protect our nation. Our services support a full spectrum of operations, including humanitarian assistance, training, and coordination with other nations' militaries in protecting the sea lanes.

The greatest threat to our Navy today is the quiet diesel submarine. Over fifty nations currently have these submarines, and that number is expected to grow dramatically, especially given that diesel submarines are relatively inexpensive and very, very capable. These submarines are extremely difficult to detect and virtually invisible to the passive sonar, and that is why we need to have sailors who are well trained in operating mid-frequency active sonar.

Consider the investment in training a sonar operator. A sonar operator requires three years of training. An aviator requires three and a half years of training. That provides some insight into the skill level required to achieve that capability, but it doesn't end there. It's a perishable skill and requires constant training.

These sonar operators not only protect their own ships from the torpedoes of our enemies; they are charged with protecting the entire fleet, as well as any merchant ships that may be transiting hazardous waters. PMRF provides vital training for these sonar

COMMENT NUMBER



operators, and they depend on this vital training to hone their skills before going into harm's way. They also deserve the best technology our country can provide them, and that is the mid-frequency active sonar.

What we do is not just about training, testing, and technology. We recognize our responsibilities as stewards of a very special place -- our oceans and the marine environment. The Navy is sensitive to the need to protect the environment, and is proud of its record of environmental stewardship.

Hopefully, you had a chance to visit our poster stations in the back here when you entered, and we have plenty of people ready to answer any of your questions. And if you didn't get to get to the poster stations, they'll be open all night, until nine p.m., and I highly encourage you to go visit.

I can't stress enough how important your involvement in this process is. You have taken time from your busy lives to participate in this democratic process, and we appreciate that. Let's make this time a time to share not only our views, but our respect for one another. Mahalo.

VIDA MOSSMAN: Okay, our first four speakers are Duane Erway, followed by Lee Tepley, Dr. Michael

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Hyson, and Cory Harden.

LEE TEPLEY: My name is Lee Tepley, and I have a Ph.D. in physics.

Almost ten years ago I got heavily involved in the protest movement against LFA sonar. I did a lot of research on both LFA and mid-frequency sonar, and in 1992, I even got invited to give a paper at a National Marine Fisheries meeting near Washington, D.C.

It turned out to be a rather important meeting. I participated in an informal debate on different ways that sonar could harm deep diving whales, and especially beaked whales. The concept of whales getting decompression sickness, which is the same as the bends, from sonar had been proposed many years earlier, but was advanced at this meeting, especially by Dr. John Potter, who is a brilliant scientist. And John came up with a new approach that is now pretty well accepted.

In fact, the last section of the draft EIS we're talking about tonight had three references to beaked whales getting the bends, probably from sonar. But in the main part of the EIS, this fact is not even considered, and I think this is the greatest single defect of the EIS. It doesn't consider the possibility of whales getting bends from sonar at all.

COMMENT NUMBER

S-T-0010

1



In an earlier version of the draft EIS, it was stated that deep diving whales are more likely to be killed by sonar than other cetaceans, and that the Navy was considering adding a one percent increase in mortality to its complex dose function in circumstances that might increase the probability of beaked whale stranding. Later the dose function apparently changed into the risk function.

But anyhow, in the earlier version of the draft EIS, that didn't mention the possibility that stranding could result from the bends either. In the current version of the EIS, the Navy changed its mind and did not even mention this one percent increased mortality due to sonar, and of course did not mention beaked whales dying from the bends.

So the Navy seems to hate the fact that there's a possibility of beaked whales getting the bends. They just won't own up to that possibility at all.

Realistically, if deep diving whales do get the bends from sonar, they will die, maybe every time. The circumstances which lead to stranding will also lead to death. So this one percent increase in mortality that the Navy no longer even considered should initially be a very much larger percentage,

COMMENT NUMBER

2



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-214



maybe even approaching a hundred percent.

The Navy also ignored beaked whales getting the bends in an EIS on LFA sonar in 2006. This is LFA sonar. Mid-frequency and LFA sonar are not all that much different. In comments on this earlier EIS, Joel Reynolds, an attorney for NRDC, commented that this happen, but his comments were, of course, ignored. So the Navy continues to ignore this.

And I'll make a few more quick comments here.

The complex 110 page draft EIS is based on data from sonar tests of a few beluga whales and bottlenose dolphins in a tank and on right whales and killer whales in the ocean, and the results are extrapolated to all the whales and dolphins in Hawaiian waters. But in the draft EIS that we're talking about tonight, the Navy admits that none of this data is reliable and --

VIDA MOSSMAN: Mr. Tepley, your time is up. Mr. Tepley, sir, you can turn your comments in at the written comments. Sir, your time is up.

Duane Erway?

DUANE ERWAY: Aloha, and thank you for listening to my comments this evening.

I'm generally, in fact quite supportive of Lee Tepley and his work. I first encountered some of

COMMENT NUMBER

3

S-T-0011



the work when on the May 1996 stranding of twelve beaked whales in Greece. I read about that and was interested at the time in what was the probable cause. And the hearing was thought of, but they dismissed because they didn't hear very well at the -- the beaked whales don't hear all that well at the frequency of the sonars.

In March 2000, seventeen cetaceans stranded in the Bahamas, and that, they ended up looking at the ears and examining the ears for damage, and found blood, but didn't, didn't look for possible decompression sickness.

The April 2002 workshop that Dr. Tepley mentioned was where Dr. Potter advanced a theory of decompression sickness for whales based on, expanding on the work of Kromenhau (phonetic) and others. But so far no one has ever seen any evidence of that.

But then -- that was in April 2002. But then in May 2005, solid experimental evidence of DCS in whales, and there's an excellent report by a veterinarian, especially dealing with marine mammals, in the UK; Acute and Chronic Gas Bubble Lesions in Cetaceans Stranded in the United Kingdom. There were ten authors, and their very excellent work, I'd commend to you.

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

I would close -- and I guess there's a number of strandings, of course, with beaked whales, and I'd close with the strandings that are all too familiar, including 111 beaked whales in Japan.

But I guess I'd close with a question, and that is, given that the decompression sickness is real and occurs at a lower received level than level B harassment, how many beaked whales will be injured or killed in each of the alternatives described in the draft EIS. That's my question.

VIDA MOSSMAN: Thank you, sir.

Dr. Michael Hyson?

MICHAEL HYSON: Aloha. My name is Dr. Michael Hyson. I'm here on behalf of the Sirius Institute and the Cetacean Commonwealth, which is the commonwealth of cetacean nations and the humans that support them.

It is Navy policy to steward environmental and cultural aspects of their operations, and when possible, to preserve cultural values and environmental values. The Cetacea as a whole, as individuals, are a cultural treasure. They've aided humans for millennia. They have language, cultural transmission, the largest brains on the planet. And when we establish communication, which the Navy may have already done,

COMMENT NUMBER

1

S-T-0012



they could tell us some thirty million years of our own history.

On this basis, they're entitled to rights under human law, which we have yet to accord them, and they're definitely entitled to our full protection. The current EIS, as far as I can tell, pretty much ignores this. I mean, with something like 47,000 to 67,000 possible harassments per year, plus an unknown number of deaths caused by bubble formation, which has been ignored, as has already been covered.

It seems to me, the main thing I would like to say is, can we go back to square one? The people that we have interacted with at Barking Sands have been very kind and honorable people, and we're proud to have them as personal relationship. But somewhere between that and the policy in the Navy, there's a disconnect that has to be remedied, because we as a people, as a species, have to have a functioning planet. And to ignore and harm the oldest, biggest brains on the planet that can benefit us so much in terms of birth, therapy, communication, and knowledge, is just -- we have to stop this.

It seems to me we could use look-down radars, magnetic detection, passive sonar, something else, you know, something that's safe for everybody, so that

COMMENT NUMBER

everybody can reach their goals while making the Cetacea safe.

The main thing then is I would like to pursue a policy or get a policy in place where the whales are part of the cultural treasures that are protected, just like you would protect Seattle or San Francisco or Honolulu. They're part of what must be protected. They're part of why the Navy exists, you know, to protect those things that need to be protected. 1

So I would like to call for the conference that was suggested by the PMRF of all concerned parties to come together and talk about all these issues in a straightforward way, because the EIS is a somewhat flawed document and needs to be reworked seriously. Thank you. 2

VIDA MOSSMAN: Thank you.

Cory Harden.

CORY HARDEN: Aloha, and thanks for coming to listen. I'm speaking for Sierra Club Mokolua group. S-T-0013

I'm disappointed by two things in this meeting. One, it's kind of a rolling public meeting, so you can't, everyone cannot really hear the comments of others. The other is, I did not get a separate three minutes to read comments from a UH professor, whose schedule changed at the last minute and cannot

COMMENT NUMBER



come. There needs to be a public participation, by law, and that's real important.

Comments from the professor, Jason Turner with marine science, associate professor at UH:

He says that Robin Baird, who's been studying toothed whales for the past six years, is not even mentioned in the EIS, and most of what we know about the toothed whales comes from him. 1

Jason said he did not see anything about pre and post monitoring and subsequent safeguards. 2

He also asks how many animals need to be injured or harassed before operations are halted, modified, or shut down permanently. 3

He asks about expertise of folks preparing the EIS. One seems to be, is a marine mammal biologist, seems to have good credentials. All others appear to be consultants with limited experience with marine mammals, and there's no leading experts from the marine mammal biology field. 4

Comments from Sierra Club:

Evidence appears overwhelming linking sonar to a series of whale strandings recently, and many scientists believe that the animals seen stranded is only a small part of the actual toll, since a lot of the animals don't come to shore.

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

Also, courts have repeatedly struck down Navy plans for sonar. The federal ruling this month in California says sonar used in the Navy plan could harm endangered whales. The mitigation measures the Navy did not want to take would not compromise the Navy's ability to train.

The court also said President Bush's January 15th order to except sonar use from environmental laws claimed an emergency that did not exist, and may have been an unconstitutional use of power.

There's also a federal ruling this month in Hawaii. The Navy's harm threshold, the ruling said, contradicts the best available science, and casts into serious doubt the Navy's assertion that marine mammals will not be jeopardized. The court also said the Navy did not analyze reasonable alternatives.

As far as the supplement, I'm not a scientist, because the basic formula used doesn't seem to be based on a lot of data or very good data. There's three data sets based on responses from only four species, not based on experiments designed for behavioral observation, and there's a lot of variables that are not taken into account.

Bottom line, I hope that the Navy will find ways to protect, not only those who live on land, sonar

COMMENT NUMBER

5

6

7



is a defense for those on land, but if you live under the sea, it's more of an attack and --

VIDA MOSSMAN: Cory, your time is up. Ms. Harden, thank you very much. We have two more speakers.

Mr. Dwight Vicente.

DWIGHT VICENTE: Good evening. My name is Dwight Vicente, and I'm here to object to the Navy being here in the Hawaiian islands because of the history.

If you look at the history dealing with the kingdom, they were here by way of treaty. The Bayonet Treaty, or Bayonet Constitution, the 1877 Bayonet Constitution, which most people refer to, was a reciprocity treaty where they had Pearl Harbor, which is in violation of the United States Constitution, Article 1, Section 8, Clause 17. Harbors is only in the United States. They got to use Pearl Harbor up until 1897.

But prior to that happening, what did happen was the queen signed the lottery bill into law, which would eliminate the foreign voters, which mostly were Americans. And because she did that on January 13th, 1893, that caused Americans to use, to take up arms, to include the United States Navy with the illegal land

COMMENT NUMBER

S-T-0014

1

14-218



forces attached to the Navy, the blue coats, and that became the overthrow. She signed them on the 13th January. The 17th, they took actual action. Sanford B. Dole, U.S. citizen, resigned his chief justice position in the Supreme Court of the Hawaiian Kingdom on the 13th of January.

So you can see the history of the United States Navy. It's not a good one here. They acted illegally.

And in 1897, the treaties that were signed in 1887 by Kalakaua ended, and they had to do something. The Americans that took over couldn't sign treaties. They were Americans. So what they did was carry over the, by way of agreement with the treaty nations, that the provisionary republic would continue the treaties, which they were not signature party to the treaty.

Now, since the treaties ended, United States Navy has no business here. Being that they have no business here in the islands, they have no need for an EIS, because they can't be here. They're trespassing. It's all because of their illegal acts. So what they need to do is to leave, until the kingdom is reestablished and treaties are established again.

So the Navy is not here for a good purpose. They're here for illegal purposes.

COMMENT NUMBER

1



And by way of the U.S. Constitution, the Navy is only here, their creation was only to prosecute piracy on the high seas. Nothing else. Not to invade another country, not bombing another country. Only to prosecute piracy. And piracy is limited.

So they need to leave. They have no title to the land.

In fact, the queen mentioned about Pearl Harbor in Section 8 of the lottery law she signed on January 13th. And you won't find them in the 1893 session laws. It's in the 1892 on page 334. She mentioned about Pearl Harbor. If the reciprocity treaty was to discontinue, they would use the monies from the lottery to fix up Pearl Harbor for a regular port.

Until today we have no lottery, because the U.S. Navy had stopped the lottery from happening, and that lottery was to end the sale of crown and government lands.

VIDA MOSSMAN: Thank you, Dwight. Thank you very much.

DWIGHT VICENTE: It's under protest. I reserve all my rights.

VIDA MOSSMAN: Thank you.

Roberta Goodman.

COMMENT NUMBER

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

ROBERTA GOODMAN: My name is Roberta Goodman. I'm cofounder of Cetacea Nation with Dr. John C. Lilly. I'd like to reiterate some of the comments made by Dr. Lee Tepley, as I think they're very important, and he didn't get to finish his comment.

In the draft EIS there are three references to beaked whales getting bends from the sonar. In the main part of the EIS, this fact is not even considered. This is the greatest single defect of the EIS.

The earlier version of the draft EIS did not mention the possibility that strandings could result from the bends. Realistically, if deep diving whales get the bends from sonar, they will die almost every time. Circumstances which lead to stranding also will lead to death. The Navy's ignored beaked whales getting the bends in this EIS on LFA sonar in 2006. LFA sonar and mid-frequency sonar are not that much different.

The complex 110 page draft EIS is based on data from sonar tests of a few beluga whales and bottlenose dolphins in a tank, probably less than twenty feet deep, and on right whales and killer whales in the ocean, which do not occur in Hawaiian waters, because rarely do killer whales ever come here.

The results are extrapolated to all whales

COMMENT NUMBER

S-T-0015

1

2

3



and dolphins in the Hawaiian waters, but in the draft EIS the Navy admits that none of this data is reliable. Still, the Navy says that it's the best available data, and it leads to this incredibly complex 110 page draft EIS.

Based on such unreliable data, the DEIS should not even have been written. The Navy should start over. Thank you very much.

Lee Tepley has a wonderful page on sonar up on his web site. He's a doctor of physics. And I'd be glad to read this out if that's important for the record.

And you can click on a "Link to Sonar HRC DEIS page," on his web page, web.mac.com/leetepley/Site/Introduction.html. Thank you.

VIDA MOSSMAN: Thank you.

Star Newland.

STAR NEWLAND: Welcome back. Aloha. Okay. Thank you. I've had a very intense, full day here, so I finally got to this.

While reading the document draft HRC EIS, tears came to my eyes. As I read the numbers listed so casually with regard to how many takes or harassment incidents, the situation per exercise per species, and

COMMENT NUMBER

S-T-0016



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

14-220

21

the alternatives, one, two, three, zero change, et cetera. This is done with numbers on paper except for those very limited studies reported, like Roberta spoke of, or simulations on computers with zero apparent regard for the true effects on living beings, the largest, most ancient of mammals, our forebears and record keepers for the planet.

In a recent article this was said. A three day meeting called by the International Whaling Commission, IWC, came to an end this weekend. Although no country changed its mind, there is a willingness of various governments to at least talk about the issues and, quote, We are seeing the willingness of governments to say, just a minute, can we work this out.

In my prior encounters with the Navy and the people at PMRF through this government process, there has always been an intention and desire to seek common ground, that which we can agree upon, a willingness to say can we work this out.

This day we seek, on behalf of ourselves and the Cetacean Commonwealth, a further commitment to come to common ground on the issue of this new request for further testing and readiness for troop training.

Further to that, I'm enclosing a progress

COMMENT NUMBER

1

22

report for the Hawaii state sustainability 2050 submitted 2007, from the committee on the cetacean human species sustainable community, and which can be found at www.planetpuna.com -- pardon me, I am a little bit nervous. Excuse me. Anyway, I submit that.

And then the dolphins, the dolphins helped America and Russia get past the Cold War. It would be a worthy outcome of this project to accomplish the same for modern times and help restore harmony to the planet, and it is this to which we aspire on behalf of Cetacea and humans. We ask for commitment to do more than mitigate, but to find ways to stop this perceived need to keep going with this kind of war-based world and come to another, a world in harmony.

As we seek to protect and enhance the well-being of Cetacea, what we learn can help us to live better with each other. It is this to which we are dedicated.

Now, in Section 3.52, line 16, how is it the monk seals are exposed to up to 224 decibels or DBs and the other species are listed as being exposed to up to only 115. I wonder how they can have another level of exposure beyond all the others. And then I realize what's in place to respond to incidents.

Lastly, imagine one of the new acoustic

COMMENT NUMBER

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

weapons brought into your personal home environment, into your neighborhood and home itself. Wherever you are, the sound would be there intimately, perhaps at random times blasting you from your efforts, like feeding or playing or suckling your new babe, certainly rattling badly your home and windows. Imagine there's no way to get away.

VIDA MOSSMAN: Star? Thank you, Star.

We have no more speakers signed up, so we will take a recess at this time. Thank you.

(Recess)

VIDA MOSSMAN: Aloha, and thank you for coming tonight. I'm Vida Mossman, and I will be the moderator for tonight's hearing on the Navy supplement to the draft Hawaii Range Complex environmental statement. Poster stations will remain open until nine p.m. to enable you to engage with members of the team.

Here to receive your comments are Captain Cudnohufsky, who is both a commanding officer of the Pacific Missile Range Facility and the officer in charge for the Hawaii Range Complex; Ms. Jolie Harrison of the National Marine Fisheries Service in Silver Springs, Maryland; and Mr. Lewis Michaelson, who will assist me in moderating this hearing.

The panel is here to hear your comments, and

COMMENT NUMBER



will not engage in dialogue with speakers. To ensure that we get an accurate record of what is said, please help me respect the following ground rules.

First, speak clearly and slowly into the microphone, starting with your name and any organization you represent.

Second, you will have three minutes to speak.

Third, if you have a written statement, you may turn it in at the registration table and/or you may read it out loud within the time limit. You may also provide additional comments for three minutes at the oral comment station.

Fourth, please honor any requests that I make for you to stop speaking if you reach the three minute time limit. To aid you in knowing when your time is almost up, my assistant will hold up a card when you have thirty seconds left. This should allow you to find a comfortable place to wrap up your comments.

Our first speaker -- well, actually our eighth speaker will be Mr. Jim Albertini.

JIM ALBERTINI: Aloha. I'm Jim Albertini of, president of Maloaina Center for Nonviolent Education in Action, a nonprofit peace farm located in Kurtistown, where we work for justice, peace in the environment, and grow food to share with people in

COMMENT NUMBER

S-T-0017



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

need.

One comment on the process of this, the rolling public testimony. It seems the Navy goes to great ends to try and segment and divide the community from hearing one another. First you tried to do away with a public hearing where the community can hear one another. Not only the Navy; it's equal opportunity within the military. The Army as well tried to do that.

But I think the community here needs a time frame when it can come together and hear the comments of the community. I don't know what the first seven speakers had to say. I wasn't informed of when the hearing portion was going to be.

So I dislike that, and I think it's a deliberate effort to segment and divide the community.

Another comment. The Kona side of this island, which is three hours away, is a very important marine resource area. Why is there no hearing on that side of the island?

Another failure, as I look through the preparers of this EIS, is that there's no direct involvement from the marine science programs of the University of Hawaii, Manoa or Hilo. It's a great resource we have here. The people who have a vested

COMMENT NUMBER

1



interest from the studying standpoint ought to be involved in this process. All these people in from Alabama and Arkansas and other areas. Involve the local universities.

One of the points that hits me is that apparently there is no level of killing of marine animals that will result in the permanent shutdown of the Navy sonar. Why is that so? Why is the Navy God? Why is it above all life on land and sea? Why is there no level in which you will not shut down permanently that sonar system?

VIDA MOSSMAN: Thank you, sir. We'll now recess. We have no more speakers at this time. Thank you. Poster stations are now open.

(Recess)

VIDA MOSSMAN: The public comment period is officially over, and the hearing on the Navy supplement of the draft Hawaii Range Complex environmental impact statement is adjourned. Thank you for coming.

(Hearing concluded at 9:00 p.m.)

COMMENT NUMBER

2

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

C E R T I F I C A T E

STATE OF HAWAII )
)
COUNTY OF HAWAII )

I, Kathy Pearson, CSR, a Notary Public in and for the State of Hawaii, do hereby certify:

That on Tuesday, the 18th of March, 2008, commencing at 5:00 p.m., that the above proceedings were taken by me in machine shorthand and thereafter reduced to print under my supervision; that the foregoing represents, to the best of my ability, a true and correct transcript of the proceedings had in the foregoing matter.

I further certify that I am not an attorney for any of the parties hereto, nor in any way interested in the outcome of the cause named in the caption.

DATED: _____

_____

Kathy Pearson, CSR No. 313
Notary Public, State of Hawaii

My commission expires:
July 12, 2010

COMMENT NUMBER

COMMENT NUMBER

S-T-0016

RECORDED COMMENT – Star Newland
Recorded at Island of Hawaii Public Hearing

HAWAII RANGE COMPLEX
SUPPLEMENT TO THE DRAFT EIS/OEIS
TRANSCRIPT OF COMMENT RECORDED BY STAR NEWLAND
HILO HAWAIIAN HOTEL, ISLAND OF HAWAII, HILO, HAWAII
RECORDED MARCH 18, 2008

This is a progress report for the Hawaii State Sustainability 2050 Plan of 2007 and the committee on cetacean interspecies sustainable community which can be found at www.planetpuna.com.

December 17, 2007. I think we'd be comfortable in saying "where are the special - - - - "that it's OK, Tom Clements" looking back from 2050 and what we have to do today to achieve that future that we have called the PAO, Tom Clements about at PMRC regarding a motion picture. Here is the future we envision and are working toward to our contribution to the State of Hawaii 2050 Sustainability Plan of 2007. We are expecting to enter into agreements, needing help along with Cetacean Commonwealth, that will enable us to proceed with a few projects, like the R and R, or retirement plan for veteran dolphins, retiring from their tours of duty and able to work with rehabilitating [veterans] and to participate with our interspecies cohorts - - - - - - - - and part of dolphin life developing

14-224

RECORDED COMMENT – Star Newland
Recorded at Island of Hawaii Public Hearing

intercommunication [breakthrough]. - - - - this kind of research develops consistent communications between our species and a whole new kind of world view and reality becomes possible. We have, especially in the last year since this committee has formed, made contact and are working with a number of partners, associates, and helpers with parts to play in the design and running of such a place. A global sense of harmony comes about through our deepening relation relationship with cetacean and the waters which we regenerate and repopulate, as well as keep clean and quiet and, except for some people who are now being [birthed gently in a] human and dolphin pod environment and the ain'a which is - - - - sustainable with ample fresh water provided by our own technology, renewable energy - - - - and other needed advances. We are looking at more potential customers on the island to break ground in creating this community. We are working with - - - - of the Hawaiian culture to perpetuate this - - - - and be more connected to the water - - - -. Much ground work has already been laid, funds are coming together to acquire land and to create the community. A major picture now in pre-production depicting this progression is a perfect way to create the program, accomplish what we can, and educate the world of this connection between our people, human and [cetaceans]. All of this can come about and be facilitated through this new level of cooperation and collaboration



COMMENT NUMBER

RECORDED COMMENT – Star Newland
Recorded at Island of Hawaii Public Hearing

between us and the Navy. - - - - in people's minds - - - - . Somewhere along the way, we would be able to ultimately put an end to the sonar issue and maybe even war. What could make us more sustainable than that of - - - - resources could be turned to good use, or people living well and thriving because they are raised - - - - - - - - the dolphins help America and us to get past the Cold War. It would be a worthy outcome of this project to accomplish the same for modern times and help restore harmony to the - - - -. In the spirit of Aloha - - - - and on behalf of the Cetacean Commonwealth, Puna, Hawaii, September 21, 2007.

- - - on behalf of cetacea and humans, we ask for commitment to be more than mitigate, but to find ways to stop - - - - the kind of war-based world and come to another, a world in harmony. As we seek to protect and enhance the well-being of cetacea, what we learn can help us to live better with each other and the - - - - we are dedicated. Thank you very much.

Transcript of Recorded Comment from
Star Newland

Pahoa, Hawaii



COMMENT NUMBER

RECORDED COMMENT – Raydiance Gonare
Recorded at Island of Hawaii Public Hearing

HAWAII RANGE COMPLEX
SUPPLEMENT TO THE DRAFT EIS/OEIS
TRANSCRIPT OF COMMENT RECORDED BY
RAYDIANCE GONARE
HILO HAWAIIAN HOTEL, ISLAND OF HAWAII, HILO, HAWAII
RECORDED MARCH 18, 2008

I've read a little bit of research you've done to determine whether, how much and whether this sonar technology will, ah, damage the dolphins in the wild, and I don't think that you've even begun to do what's necessary, I don't even know if it's possible without really damaging the dolphins and whales to find out the extent of this kind of sonar on a creature whose perceptions are so sound oriented. And I don't, my basic stance on the dolphins and whales is that they are as intelligent, intelligent as we are, they have, they are, there is at least one other intelligent being on the planet and it is the dolphins and whales and maybe more, ah, and that killing them and harming them is just like killing and harming human beings and we don't have a right to do it. Ah, I don't feel that this whole military build-up is where the human race needs to go any more. I feel like that we need to stop and back off now, that it's not worth it, ah, and that our energy should be in educating and enlightening and making peace and de-arming.



COMMENT NUMBER

S-T-0018

1

RECORDED COMMENT – Raydiance Gonare
Recorded at Island of Hawaii Public Hearing

Ah, this whole process is difficult because, in truth, I've come to the point that I don't have any confidence in the military and the government and what you have to say and what you say about what you do. I basically don't, no longer trust you. And so this makes this whole process difficult for me, ah, and I don't know how to re-establish that trust. But I still haven't given up and I still, I mean we can't give up, but I think that what you're doing is too dangerous to be worth anything that you think that you're going to accomplish by it and it's time to stop where we are and turn in a different direction, ah, and I hope that you'll do that.

Transcript of Recorded Comment from
Raydiance Gonare



COMMENT NUMBER

2

RECORDED COMMENT – Harriet Smith
Recorded at Island of Hawaii Public Hearing

HAWAII RANGE COMPLEX
SUPPLEMENT TO THE DRAFT EIS/OEIS
TRANSCRIPT OF COMMENT RECORDED BY HARRIET SMITH
HILO HAWAIIAN HOTEL, ISLAND OF HAWAII, HILO, HAWAII
RECORDED MARCH 18, 2008

I've, ah, been a resident of, ah, the Big Island for 15 years and I have swum with dolphins and whales here and also Maui and I have a special reverence to the animals and I know how sensitive they are and just being in the water with them or being on a boat close to them and I'm concerned because, ah, there's many conflicting stories about sonar hurting the animals and not hurting the animals and I may not passionately be able to give you a definition, but intuitively I think any loud noises even though there's already loud noises in the ocean, adding additional loud noises, ah, to the extent of electronic loud noises that they have no research on really, they're just trying to use them, ah, I think would affect the animals. I know how sensitive I am to loud electronic noises in my own home and environment, or any noises for that matter of fact, but particularly ah sonar, I mean, excuse me, particularly electronic noises, so are you showing concern for all the animals in the fact that introducing something that we really don't know that much about, there hasn't been a lot of tests done



COMMENT NUMBER

S-T-0019

RECORDED COMMENT – Harriet Smith
Recorded at Island of Hawaii Public Hearing

on it, there's conflicting opinions about what it's doing or not doing, who you believe - - - -it's not a good thing, and I would like to protect our animals in the ocean as much as I possibly can. So I would like to put it out there, that I personally, ah, there has to be another strategy for the Navy, ah, and, other military, ah, organizations to train their troops other than dangerous loud noises that are disturbing our plant and life forms because again they don't really have any long term, ah, research on it and until we know exactly what it's doing, so it's all kind of guesswork actually, and again, depending on who you read, you'll hear one - - - - and then you know you think of course the Navy's not going to say they're hurting anything, so, um, I just would, I think that I would like us to - - - - the Navy not doing sonar testing until they can actually 100 percent prove to all sides that there's no harm, they're not hurting any animals or plant life in the ocean.

Transcript of Recorded Comment from
Harriet Smith

Pahoa, Hawaii



COMMENT NUMBER

1

**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

ORAL COMMENT – Elizabeth Stone
Voicemail Box at Phone Number (866) 767-3347

HAWAII RANGE COMPLEX

SUPPLEMENT TO THE DRAFT EIS/OEIS

TRANSCRIPT OF ORAL COMMENT BY ELIZABETH STONE

RECEIVED MARCH 19, 2008 – 12:40AM

My name is Elizabeth Stone, General Delivery Naalehu and I was missed, I was unable to attend the hearing tonight so I was asking if besides finding oil spills, if they could find atomic, legal atomics that's destroying all our marine life in the ocean. And some of the civilians are attacking everyone and taking their skulls…arms and legs and skulls…and even the police have been, been, ah, injured. Mahalo.



COMMENT NUMBER

S-T-0022

1

COMMENT NUMBER



**Exhibit 14.4.3-1. Copy of Public Hearing Documents - Supplement to the Draft EIS/OEIS (Continued)**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| JoAnn Yukimura<br>Kauai County Council | S-T-0001-1 | Alternatives | 4.1.2.4 | Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |
| | S-T-0001-2 | Mitigation Measures | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| | S-T-0001-3 | Mitigation Measures | 6.2.1 | Avoidance of the seasonal presence of migrating marine mammals fails to take into account the fact that the Navy's current mitigation measures apply to all detected marine mammals no matter the season. Advance planning to avoid the seasonal presence of migrating marine mammals is not possible given the start of any "season" is variable (dependent on largely unknown environmental factors). To the degree possible, however, Navy already has taken a proactive step in this regard by specifically informing all naval vessels to increase vigilance when the first humpback whales have been sighted around the Hawaiian Islands. Otherwise, limiting training operations to the remaining six months of the year would not only concentrate all annual training and testing activities into a shorter six-month time period, but would also not meet the readiness requirements of the Navy's to deploy trained forces. |
| | S-T-0001-4 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| Chris Bane | S-T-0002-1 | Alternatives | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Chris Bane | S-T-0002-2 | Alternatives | 4.1.2.4, 4.1.2.4.7 | Section 4.1.2.4.7 of the EIS/OEIS contains a discussion of the "bends-like" issue raised in your comment. It has not been demonstrated that sonar causes the effects noted. Also, see response to comment S-T-0001-1. |
| | S-T-0002-3 | Biological Resources - Marine | 4.1.2.4, 4.1.2.4.10 | See response to comment S-T-0001-1. In addition, the Navy believes that years of site fidelity by individual toothed whales is an indicator that the species has coexisted with sonar operations without long term detriment to populations. Residency demonstrates that the animals are remaining in the area despite sonar exercises (see EIS/OEIS Sections 4.1.2.4 and 4.1.2.4.10). |
| Laurel Brier | S-T-0003-1 | Biological Resources - Marine | 4.1.2, 6.0 | The Navy cannot determine the reference to which the commenter refers. The Navy's assessment of potential impacts on marine mammals reflects the use of the best available science and the requirements of the Navy to train. Information concerning the scientific data used is provided in EIS/OEIS Sections 4.1.2 and 6.0. |
| Sharon Goodwin Kauai Alliance for Peace and Social Justice | S-T-0004-1 | Biological Resources - Marine | 4.1.2.4; 4.1.2.5.4 | The Navy is in coordination with Hawaii's Office of Planning as it relates to CZMA compliance. Section 4.1.2.4 of the EIS/OEIS discusses the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar training in the HRC. This training has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Sharon Goodwin<br>Kauai Alliance for Peace and Social Justice | S-T-0004-2 | Program | 3.3.2.1.8, 4.1.4, 4.8 | The Navy has determined that in light of the applicable enforceable policies in the State of Hawaiiôs Coastal Zone Management Program (CZMP), there are no adverse direct or indirect (cumulative or secondary) effects on coastal uses or resources and the Proposed Action and its Alternatives are consistent to the maximum extent practicable with the enforceable policies of Hawaiiôs Coastal Zone Management Program.<br>Inert bombs are used for land-based bombing exercises; these exercises would increase from 165 (current training, or the No-action Alternative) to 250 (Alternatives 2 and 3) events per year. Bombing exercise at sea use non-explosive rounds and inert bombs; these exercises would increase from 35 (No-action Alternative or current training) to 38 (Alternatives 2 and 3) annual events.<br>Mid-frequency sonar hours for the preferred alternative, Alternative 3, would be at the same level as identified for the No-action Alternative (current training). The SDEIS presented the refined methodology as applied to the adjusted sonar-use hours.<br>Some current flight trajectories could result in missiles such as the Terminal High Altitude Area Defense (THAAD) flying over portions of the PapahŪnaumokuŪkea Marine National Monument, but the EIS/OEIS noted that twelve or less potential annual missile flight trajectories may cross Monument airspace. Preliminary results of debris analysis indicate that debris is not expected to severely harm threatened, endangered, migratory, or other endemic species on or offshore of Nihoa and Necker Islands. The probability for debris to hit birds, seals, or other wildlife will be extremely low. Quantities of falling debris will be very low and widely scattered so as not to present a toxicity issue. Falling debris will also have cooled down sufficiently so as not to present a fire hazard for vegetation and habitat. If feasible, consideration will be given to alterations in the missile flight trajectory, to further minimize the potential for debris impacts. |
| | S-T-0004-3 | Alternatives | | The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment. |
| Nina Monasevitch | S-T-0005-1 | Alternatives | 4.1.2.4, 4.1.2.4.7 | Section 4.1.2.4.7 of the EIS/OEIS contains a discussion of the "bends-like" issue raised in your comment. It has not been demonstrated that sonar causes the effects noted. Also, see response to comment S-T-0001-1. |
| | S-T-0005-2 | Alternatives | 4.1.2, 6.0 | The Navy cannot determine the reference to which the commenter refers. The Navy's assessment of potential impacts on marine mammals reflects the use of the best available science and the requirements of the Navy to train. Information concerning the scientific data used is provided in EIS/OEIS Sections 4.1.2 and 6.0. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Puanani Rogers | S-T-0006-1 | Program | 3.2, 4.2 | Sections 3.2 and 4.2 of the EIS/OEIS reviewed the NWHI Marine National Monument. These activities were first analyzed in the Pacific Missile Range Facility Environmental Impact Statement finalized in 1998. Missile defense testing activities predate the existence of the of NWHI Marine National Monument. The impact of these activities is captured in Sections 4.2 |
| | S-T-0006-2 | Biological Resources - Marine | | The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment. |
| | S-T-0006-3 | Miscellaneous | | The commenter's reference to the amount of rent paid is unclear; however, the amount paid for rent would be outside the scope of this EIS/OEIS. |
| Carl Stepath | S-T-0007-1 | Alternatives | 4.1.2, 6.0 | See response to Comment S-T-0003-1. |
| | S-T-0007-2 | Biological Resources - Marine | | Thank you for your comment. |
| Ray Catania | S-T-0008-1 | Policy/NEPA Process | | Thank you for your comment. |
| | S-T-0008-2 | Program | | Thank you for your comment. |
| Craig Davies | S-T-0009-1 | Program | 3.2, 4.2 | Sections 3.2 and 4.2 of the EIS/OEIS reviewed the NWHI Marine National Monument. These activities were first analyzed in the Pacific Missile Range Facility Environmental Impact Statement finalized in 1998. Missile defense testing activities predate the existence of the of NWHI Marine National Monument. The impact of these activities is captured in Sections 4.2. |
| Lee Tepley | S-T-0010-1 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-T-0010-2 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-T-0010-3 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| Duane Erway | S-T-0011-1 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| Michael Hyson Sirius Institute and Cetacean Commonwealth | S-T-0012-1 | Policy/NEPA Process | | The Navy realizes that many marine mammals are significant to the cultural heritage of the Hawaiian people; however, establishing a new policy about whales as cultural treasures is outside the scope of this EIS/OEIS. |
| | S-T-0012-2 | Policy/NEPA Process | | Thank you for your comment. |
| Cory Harden Sierra Club | S-T-0013-1 | Biological Resources - Marine | 4.1.2.4.7, 4.1.2.4.9.8, 4.1.2.4.10.1, 9.0 | Robin Baird is cited in several sections of the EIS/OEIS, including, but not limited to Sections 4.1.2.4.7, 4.1.2.4.9.8, and 4.1.2.4.10.1. Numerous documents and reports prepared by Mr. Baird are cited in Section 9.0 (references). |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Cory Harden<br>Sierra Club | S-T-0013-2 | Mitigation Measures | 6.0 | As described in Section 6.0, the Navy is developing an Integrated Comprehensive Monitoring Plan (ICMP) to determine behavioral and population level changes to marine mammals within Navy ranges. This Plan will also continue or initiate studies of abundance, distribution, habitat utilization, etc. for sensitive species of concern using visual surveys, passive and acoustic monitoring, radar and data logging tags (satellite or radio linked to record data on acoustics, diving and foraging behavior, and movements). The Plan will include the evaluation of Navy lookouts that observe for all objects in or on the water including debris, periscopes, other vessels, and marine animals. As of this EIS/OEIS, the Navy and NMFS are developing an HRC-specific monitoring plan which may include third party monitoring efforts by qualified entities as a component of the ICMP for unit-level exercises. Observations of marine mammals and sea turtles during unit-level training exercises will also be recorded to add to a larger database. |
| | S-T-0013-4 | Biological Resources - Marine | 1.7.1, 13,0, 14.0 | NEPA requires an interdisciplinary approach to analysis. EISs are therefore prepared using a wide range of subject matter experts. Although they may be currently residing in other areas of the United States, the professionals preparing this EIS/OEIS have either lived and worked as environmental scientists in Hawaii or have been conducting environmental projects in Hawaii for many years. The Navy solicited comments and encouraged input from all Agencies, organizations, and individuals in Hawaii throughout the environmental impact analysis process (see Sections 1.7.1, 13.0 and 14.0 of the EIS/OEIS). |
| | S-T-0013-5 | Alternatives | | Thank you for your comment. |
| | S-T-0013-6 | Alternatives | | Thank you for your comment. |
| | S-T-0013-7 | Alternatives | | The Navy in Hawaii takes its commitment to environmental stewardship seriously, providing funds, efforts, and professional staff dedicated to this important matter. The Navy complies with all applicable environmental laws and has established procedures to ensure that programs are protective of Hawaii's environment. |
| Dwight Vincente | S-T-0014-1 | Policy/NEPA Process | | Thank you for your comment. |
| Roberta Goodman<br>Cetacea Nation | S-T-0015-1 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-T-0015-2 | Alternatives | 4.1.2.4, 4.1.2.4.7 | See response to Comment S-T-0005-1. |
| | S-T-0015-3 | Alternatives | | Thank you for your comment. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Star Newland | S-T-0016-1 | Alternatives | 4.1.2.4.6 | Navy used the northern elephant seal threshold because taxonomically, the elephant seal is more closely related to the Hawaiian monk seal than any other seal. A northern elephant seal and the Hawaiian monk seal are in the same sub-family. In addition, the audiogram of the northern elephant seal more closely approximates that of the Hawaiian monk seal. |
| Jim Albertini Maloaina Center for Nonviolent Education in Action | S-T-0017-1 | Policy/NEPA Process | 1.7.1, 13,0, 14.0 | NEPA requires an interdisciplinary approach to analysis. EISs are therefore prepared using a wide range of subject matter experts. Although they may be currently residing in other areas of the United States, the professionals preparing this EIS/OEIS have either lived and worked as environmental scientists in Hawaii or have been conducting environmental projects in Hawaii for many years. The Navy solicited comments and encouraged input from all Agencies, organizations, and individuals in Hawaii throughout the environmental impact analysis process (see Sections 1.7.1, 13.0 and 14.0 of the EIS/OEIS). |
| | S-T-0017-2 | Policy/NEPA Process | 4.1.2.4, 6.0 | The full analysis of effects in the EIS/OEIS indicates that there should be no mortality from Navy training activities. Range clearance procedures and mitigations are intended reduce the possibility of serious injury and mortality. The LOA issued by NMFS will place limits on the number and types of allowable takes (e.g. harassments) for all activities conducted within the HRC (see Sections 4.1.2.4 and 6.0). |
| Raydiance Gonare | S-T-0018-1 | Biological Resources - Marine | | Thank you for your comment. |
| | S-T-0018-2 | Policy/NEPA Process | | Thank you for your comment. |
| Harriet Smith | S-T-0019-1 | Alternatives | 4.1.2.4 | Section 4.1.2.4 of the EIS/OEIS explains the potential effects on marine mammals from Navy mid-frequency active (MFA) sonar in the HRC. MFA sonar use analyzed in the EIS/OEIS has occurred in the HRC using the same basic sonar equipment and output for over 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. The current modeling methodology was developed in extensive consultation with NMFS and does not account for the Navy's mitigation measures to reduce the effects of MFA/HFA sonar on marine mammals. Consequently, the modeling and threshold levels developed for analysis of impacts on marine mammals universally erred on overestimating the number of takes. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Peggy Ledoux | S-T-0020-1 | Alternatives | 1.0 | As discussed in Chapter 1.0 of the EIS/OEIS, Navy does not consider alternate locations because this analysis would not be consistent with the purpose and need of this EIS/OEIS. Although Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. Navy training in the HRC has been going on for the past 60 years. There has been no significant change in the sonar equipment in the last 30 years. Given this history and the scientific evidence, the Navy believes that risk to marine mammals from sonar training is low. Though the Navy works to minimize impacts on marine mammals to the greatest extent practicable, they are not mandated by any statute to alleviate all risk to marine mammals. Over the past 30 years, the numbers of humpback whales around Hawaii appear to be increasing and the Navy believes that sonar has not significantly affected marine mammals in general. Navy's current mitigation measures and their use of the best available science balanced with the requirements of the Navy to train, results in Navy meeting its mission while being protective of the environment. |
| Neil Frazer | S-T-0021-1 | Alternatives | | Thank you for your comment. |
| | S-T-0021-2 | Biological Resources - Marine | | Thank you for your comment. |
| | S-T-0021-3 | Alternatives | | Passive arrays are used to the extent they are appropriate in Navy training. |
| Elizabeth Stone | S-T-0022-1 | Miscellaneous | 2.0 | The proposed activities covered by this EIS/OEIS are described in Chapter 2.0. These activities do not include searches for oil spills or atomic materials. Criminal activities such as those mentioned in your comment are also outside the scope of this EIS/OEIS. |
| Mike Moran | S-T-0023-1 | Alternatives | 4.1.2.4.9.4 | The risk function presented in EIS/OEIS Section 4.1.2.4.9.4 is based on three data sets that NMFS and Navy have determined are the best available and applicable science at this time. Until additional data are available, NMFS and the Navy have determined that these datasets are the most applicable for the direct use in the development of risk function parameters to describe what portion of a population exposed to specific levels of MFA sonar will respond in a manner that NMFS would classify as harassment. |
| | S-T-0023-2 | Mitigation Measures | Appendix F | The Navy does prepare and release After Action Reports. An After Action Report prepared for the 2006 RIMPAC exercises, providing an analysis detailing the reasons for adoption, modification, or rejection of mitigation measures, is provided in Appendix F of the EIS/OEIS. |
| | S-T-0023-3 | Alternatives | 4.1.2.4, 4.1.2.4.7 | Section 4.1.2.4.7 of the EIS/OEIS contains a discussion of the "bends-like" issue raised in your comment. It has not been demonstrated that sonar causes the effects noted. Also, see response to comment S-T-0001-1. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Mike Moran | S-T-0023-4 | Alternatives | Appendix F | The Navy does prepare and release After Action Reports. An After Action Report prepared for the 2006 RIMPAC exercises, providing an analysis detailing the reasons for adoption, modification, or rejection of mitigation measures, is provided in Appendix F of the EIS/OEIS. |
| | S-T-0023-5 | Mitigation Measures | 6.0 | As discussed in Section 6.0, avoiding active sonar use within 12 nm from shore or 15.5 mi from the 200-m isobaths was made part of the RIMPAC 2006 authorization by NMFS and was based on the assumption that avoidance of the North American continental shelf was a prudent mitigation measure given the presence of beaked whales in the Gulf of Mexico. NMFS modified the measure for Hawaii because they had received a public comment during rulemaking for a proposed action taking place elsewhere. This measure lacks any scientific basis when applied to conditions in Hawaii. There is no scientific basis for requiring this mitigation measure in the Pacific and no known basis for the specific metrics. During RIMPAC 2006, this mitigation measure precluded active ASW training in the littoral region, which significantly impacted realism and training effectiveness. This procedure had no observable effect on the protection of marine mammals during RIMPAC 2006 and its value is unclear (there is a lengthy history of sonar use in the Hawaiian Islands without any strandings or apparent effect on marine mammals). However, its effect on realistic training is significant |
| Cedar Poivier | S-T-0024-1 | Mitigation Measures | 6.0 | See response to comment S-T-0023-5 |
| Bruce Douglas | S-T-0025-1 | Mitigation Measures | 6.2.1 | Section 6.0 presents the range of Navy protective measures that would be implemented to protect marine mammals and federally listed species during training events. Among these is the use of passive detection capabilities to alert exercise participants to the presence of marine mammals in an event location. An alert signal for marine mammals would not meet ASW training requirements as it defeats the purpose of the training. |
| Barbara Kranichfeld | S-T-0026-1 | Alternatives | 4.1.2 | See response to Comment S-T-0023-3 |
| | S-T-0026-2 | Alternatives | Appendix F | See response to Comment S-T-0023-4. |
| | S-T-0026-3 | Mitigation Measures | 6.0 | See response to comment S-T-0023-5 |
| | S-T-0026-4 | Mitigation Measures | 6.1.3 | As stated in Section 6.1.3 of the EIS/OEIS, Navy shipboard lookout(s) are highly qualified and experienced observers of the marine environment. Their duties require that they report all objects sighted in the water to the Officer of the Deck (e.g., trash, a periscope, a marine mammal) and all disturbances (e.g., surface disturbance, discoloration) that may be indicative of a threat to the vessel and its crew. There are personnel serving as lookouts on station at all times (day and night) when a ship or surfaced submarine is moving through the water. |
| Richard Morris | S-T-0027-1 | Mitigation Measures | | Thank you for your comment. |
| Summer Star | S-T-0028-1 | Policy/NEPA Process | | Thank you for your comment. |

**Table 14.4.3-2. Responses to Public Hearing Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Summer Star | S-T-0028-2 | Program | | Thank you for your comment. |

THIS PAGE INTENTIONALLY LEFT BLANK

## 14.4.4 WEBMAIL PUBLIC COMMENTS

Nine people commented via the public HRC EIS/OEIS website.

Table 14.4.4-1 presents individuals who commented using the website, with their respective commenter identification number. This number can be used to find the written document that was submitted and to locate the corresponding table on which responses to each comment are provided.

Exhibit 14.4.4-1 presents reproductions of the webmails that were received commenting on the Supplement to the Draft EIS/OEIS. Webmails are identified by commenter ID number, and each statement or question that was categorized as addressing a separate environmental issue is designated with a sequential comment number.

Table 14.4.4-2 presents the responses to webmail comments on the Supplement to the Draft EIS/OEIS. Responses to specific comments can be found by locating the corresponding commenter ID number and sequential comment number identifiers.

**Table 14.4.4-1. Commenters on the Supplement to the Draft EIS/OEIS (Webmail)**

| Commenter | Comment ID | Commenter | Comment ID |
|---|---|---|---|
| Brendan Cummings on behalf of the Center for Biological Diversity | S-N-0007 | Joy Perfetti | S-N-0002 |
| Marsha Green on behalf of the North American Ocean Noise Coalition | S-N-0006 | Brooke Porter on behalf of the Pacific Whale Foundation | S-N-0009 |
| Ian Jenss | S-N-0004 | Stephen Skogman | S-N-0003 |
| Reynolds Kamakawiwoole on behalf of Twin Flames for God | S-N-0005 | Judy Walker | S-N-0008 |
| Brooke Lerch | S-N-0001 | | |

**THIS PAGE INTENTIONALLY LEFT BLANK**

| | | COMMENT NUMBER |
|---|---|---|
| | | S-N-0001 |
| First Name: | Brooke | |
| Last Name: | Lerch | |
| Organization: | | |
| City: | | |
| State: | | |
| Date Submitted: | 2/19/2008 | |
| Comment: | | |
| Your comments about passive sonar are seriously out of date. I worked on an operational passive sonar ranging system (AN/BQG-4 and AN/BQG-2A) in the mid sixties at Pearl Harbor. Mostly on diesel subs but also on the Barb - a nuclear attack sub. Also, I don't believe the US NAvy uses diesel-electrics anymore. | | 1<br>2 |

| | | COMMENT NUMBER |
|---|---|---|
| | | S-N-0002 |
| First Name: | Joy | |
| Last Name: | Perfetti | |
| Organization: | | |
| City: | haiku | |
| State: | hi | |
| Date Submitted: | 3/8/2008 | |
| Comment: | | |
| please , protect the hawaiian marine life - no more sonar ! mahalo. | | 1 |



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS**

| | |
|---|---|
| First Name: | Stephen |
| Last Name: | Skogman |
| Organization: | none |
| City: | Haiku |
| State: | HI |
| Date Submitted: | 3/8/2008 |

Comment:

I realize the concern for national security. Defending our country is very important. I also think our country needs to focus less on destructive activity and more on constructive thinking. I am a Texas born American and believe Hawaii is a very valuable natural resource which needs to be handled delicately. Its time for a change in thinking, "Green not Bomb."

| COMMENT NUMBER |
|---|
| S-N-0003 |
| 1 |

| | |
|---|---|
| First Name: | Ian |
| Last Name: | Jenss |
| Organization: | United States Citizen |
| City: | Lahaina |
| State: | HI |
| Date Submitted: | 3/11/2008 |

Comment:

To our proud and mighty U. S. Navy,
Please Have the common sense and environmental decency to have these upcoming sonar tests when our beloved Humpback Whales are not in the Hawaiian waters. I believe in a strong military with the best technology to defend our nation, however, let's do it in a logical and
respectful manner concerning our ocean mammals that inhabit these waters. Mahalo, Ian Jenss

| COMMENT NUMBER |
|---|
| S-N-0004 |
| 1 |

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

First Name: Reynolds
Last Name: Kamakawiwoole
Organization: Twin Flames for God
City: Honokaa
State: Hi
Date Submitted: 3/20/2008
Comment:
I am a Native Hawaiian and am against any kind of activity which causes any injury or harrasses our animals in the sea.

They are our guardians, and we do not have to harass or injure them in any fashion.

It is wrong for the Navy to continue any sonic or military active which endangers their lives. They
carry the knowledge for mankind when we injure them we injure ourselves..

We must send Love and not Force..

Any questions, i will be willing to answer,

Aloha Ke Akua,

Reynolds Kamakawiwoole

| COMMENT NUMBER |
| --- |
| S-N-0005 |
| 1 |

First Name: Marsha
Last Name: Green
Organization:
City:
State:
Date Submitted: 4/7/2008
Comment:
April 6, 2008

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128, Kekaha, Kauai,
Hawaii 96752-0128

ATTN: HRC EIS/OEIS

Re: Supplement to the Draft Environmental Impact Statement/Overseas Environmental Impact Statement (DEIS/OEIS)
Federal Register Notice January 17, 2008 (Volume 73, Number 12) Pages 3242-3243

On behalf of the International Ocean Noise Coalition and its affiliate the Hawaii Ocean Noise Coalition, we submit the following comments on the Supplement to the Draft Environmental impact Statement/Overseas Environmental Impact Statement (Supplement) for the Hawaii Range Complex (HRC). These comments are in addition to our previous comments dated September 17, 2007.

| COMMENT NUMBER |
| --- |
| S-N-0006 |



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

The Supplement introduces modifications to the analytical methodology used to evaluate the effects of mid-frequency active sonar on marine mammals with regard to behavioral impacts and the use of a proposed risk function methodology; changes to the amount and types of sonar allocated to each of the alternatives; and development of a new alternative.

Risk Function Methodology
Wild animals display wide variety in terms of the five senses, including their capacity to hear. Just like humans, different individuals for the same species can display different reactions to a stimulus. Hearing capabilities among different individuals of different sexes or varying ages in the same species can differ considerably. Among different species the hearing capability may be even more pronounced. The Navy acknowledges these differences in the Supplement, and is therefore looking towards developing a dose-response or risk continuum function to determine the potential behavioral impacts of MFA sonar on marine mammals.

However the data set used in the Navy's dose-response function as described in the Supplement is very small – a few studies on a few captive toothed whales, one survey on wild baleen whales and one modeled prediction of the levels of MFA sonar received by a pod of orcas in the USS Shoup incident of 2003. Apart from being not representative of all marine mammals in the wild, the captive animals were accustomed to noise and responding to it, and the wild animals likely also had some degree of habituation, the North Atlantic right whales living in the congested Eastern Seaboard of the U.S. and the orcas of North West Washington State being accustomed to ship and whale-watching boat noise.
The Navy and NMFS acknowledge this limitation and thus the

| COMMENT NUMBER |
|---|
| S-N-0006 (cont.) |
| 1 |

risk functions are described as an "interim approach." As in our letter of September 17, 2007, we again point out the United States' obligations under Principle 15 of the United Nations Rio Declaration of 1992 to which the U.S. is a signatory that states "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

The Navy should not be using a lack of data as reason to press ahead with its preferred noise levels justifying it as the "best available science." Precaution should prevail, especially given the vastness of the Hawaii Range Complex, the uniqueness of the marine biodiversity in the area and the planned almost 2,000 hours of active sonar use (plus the dipping sonar, sonar buoys and MK-48 runs).

Apart from the limited data set, the risk continuum function approach does not account for non-auditory noise impacts, the impacts of masking or cumulative and synergistic effects of several noise sources. It does not account for long-term impacts on marine mammals. It also does not take into account impacts to individual animals, but populations of animals. This is troublesome given that in any population there could be key individuals which, if negatively impacted by MFA sonar exposure, could result in the population being adversely affected, for example, by following the key individual into a hazardous situation.

Given the limitations of the dose response methodology, once applied the Navy predicts that 50% of marine mammals will be behaviorally impacted at received levels of 165 dB re: 1µPa rms with the other 50% being behaviorally impacted at levels from

| COMMENT NUMBER |
|---|
| S-N-0006 (cont.) |
| 2 |

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

120 to 195 dB re: 1µPa rms.

We still maintain, as stated in our September 17, 2007 letter, that the whales in the Bahamas stranding died when exposed to levels of MFA sonar between 150 and 160 dB – which is still much lower than the levels at which the Supplement says 50% of animals will behaviorally respond.

The fact that the Navy predicts any animals being behaviorally impacted at 120 dB re: 1µPa rms, again should bring in application of a precautionary approach since those animals could be critical to the survival of a marine mammal population.

Reduced Modeled Number of MFA Sonar Hours and the New Alternative

In the Supplement, the Navy has reduced the predicted number of events or hours of active sonar use for the different alternatives presented in the DEIS/OEIS and introduced a new alternative which includes the maximum actions of alternative two, but results in the same number of events or hours of active sonar use as the 'no action alternative'.

1. The 'No action alternative' is a misnomer because it does not mean that the navy will not use MFA sonar or other noise generating sources, but that it will not increase its noise producing activities.

While we are pleased that the Navy's planned active sonar usage is decreased overall, we maintain that the number of hours of active sonar use is still too high and the levels of sonar too intense.

We appreciate the opportunity to submit these comments and look forward to them being

| COMMENT NUMBER |
|---|
| S-N-0006 (cont.) |
| 4 |

addressed in full.

Sincerely,
(signed)
Marsha Green
North American Representative

(signed)
Marti Townsend
Hawaiian Ocean Noise Coalition

| COMMENT NUMBER |
|---|
| S-N-0006 (cont.) |



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

First Name: Brendan
Last Name: Cummings
Organization: Center for Biological Diversity
City: Joshua Tree
State: CA
Date Submitted: 4/7/2008
Comment:
April 7, 2008

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128, Kekaha, Kauai,
Hawaii 96752-0128

ATTN: HRC EIS/OEIS

Re: Supplement to the Draft Environmental Impact Statement/Overseas Environmental Impact Statement (DEIS/OEIS) (73 Fed. Reg. 3242, January 17, 2008).

The Center for Biological Diversity submits the following comments on the Supplement to the Draft Environmental impact Statement/Overseas Environmental Impact Statement (SDEIS) for the Hawaii Range Complex (HRC). The SDEIS introduces modifications to the analytical methodology used to evaluate the effects of mid-frequency active sonar on marine mammals with regard to behavioral impacts and the use of a proposed risk function methodology; changes to the amount and types of sonar allocated to each of the alternatives, and includes a new

COMMENT NUMBER
S-N-0007

1

alternative. However, the SDEIS fails to correct the numerous deficiencies of the original DEIS as pointed out in the comments by numerous organizations and individuals. Of particular importance, the SDEIS fails to address the issues raised by the Marine Mammal Commission in its letter of October 2, 2007. We incorporate and adopt by reference as part of these comments, the issues raised by the Marine Mammal Commission as well as in the comment letters of the International Ocean Noise Coalition. Specific additional concerns with the SDEIS follow.

Alternatives

NEPA requires federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §4332(2)(E). The analysis of alternatives is the “heart” of the environmental review process; the EIS must “rigorously explore and objectively evaluate all reasonable alternatives,” in order to “provid[e] a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14(a). A “reasonable range” of alternatives must be considered, and this must include consideration of full protection of all the resources involved. Because the consideration of an appropriate range of alternatives is so important to the NEPA process, “[t]he existence of a viable but unexamined alternative renders an environmental impact statement inadequate.” Resources Limited Inc. v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1993).

In the SDEIS, the Navy has introduced a new alternative which includes the maximum actions of alternative 2, but results in the same number of events or hours of active sonar use as the “no action alternative.” This alternative is now the “preferred” alternative. While the new preferred alternative is a step in the

COMMENT NUMBER
S-N-0007 (cont.)

1

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

right direction as the Navy is apparently no longer proposing to increase the amount of mid-frequency active sonar used in the Hawaii Range Complex, the addition of this alternative still fails to meet NEPA's mandates.

The "no action" alternative in the SDEIS still proposes the use of mid-frequency active sonar at current levels, levels that will harass tens of thousands of marine mammals and likely result in the injury or death of scores of beaked whales and other sensitive species. The Navy must analyze a true "no action" alternative in which mid-frequency active sonar is not used at all. Doing so is the only way to accurately analyze the full environmental effects of the proposed action. Additionally, beyond the flaws with the "no action" alternative, the SDEIS fails to analyze any alternative that involves a reduction of mid-frequency active sonar from current levels.

Finally, the SDEIS (as well as in the original DEIS) fails to consider alternatives to avoid impacts on the most sensitive species in the action area. For example, the SDEIS should have included an alternative allowing for mid-frequency active sonar only during the portion of the year when humpback whales are absent from Hawaiian waters. Similarly, the SDEIS should have analyzed alternatives that avoid any impacts on the critically endangered Hawaiian monk seal. This unlawful limiting of the scope of alternatives in the SDEIS (as well as in the original DEIS) renders the entire NEPA process inadequate and unlawful.

Mitigation

The SDEIS fails to discuss mitigation entirely. As such it fails to remedy any of the numerous deficiencies in the DEIS with regard to both the actual mitigations proposed, as well as the analysis of the effectiveness (or likely lack thereof) of these

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 3 |
| 4 |
| 5 |

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 6 |
| 7 |

mitigations. The Marine Mammal Commission's critique of the mitigation measures in the DEIS has apparently be completely ignored by the Navy, thereby violating both NEPA and the MMPA.

Estimation of Sonar Exposure

Without proposing any changes in Naval operational in the Hawaii Range Complex, the SDEIS nevertheless substantially reduces the estimated number of hours of mid-frequency active sonar used in each alternative. We obviously support an actual reduction in the number of hours of mid-frequency active sonar used by the Navy in the action area. And we also support the use of the most accurate information in the environmental analysis. However, the SDEIS is so cursory in its explanation of how the new estimates were produced, that it provides no basis for review as to whether these changes are in fact more accurate than the previous estimates. We hope the new estimates do actually reflect a significant reduction in the number of hours of mid-frequency active sonar use, but the SDEIS needs to provide further information to support this conclusion. In any event, as described below, even the new, reduced hours of mid-frequency active sonar proposed are far too high and provide an unacceptably high risk to marine mammals in the Hawaii Range Complex.

Risk Estimation

The core of the SDEIS is the Navy's use of a new risk function to calculate the numbers of marine mammals that will be subjected to harassment. The SDEIS does a poor job of explaining how this function was derived and the reasons for its use. Moreover, the results produced by such a function are only as good as the information plugged into it. Yet in deriving the variables to employ in this new equation, the Navy seems to be selectively choosing data sources that result in the least



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

precautionary conclusions. This is contrary to the spirit and letter of the MMPA. In enacting the MMPA, Congress clearly intended to place the burden on someone seeking to take a marine mammal to demonstrate that the activity would not have a negative impact. In cases, such as this, where, as the SDEIS acknowledges, "there are significant limitations and challenges to any risk function derived to estimate the probability of marine mammal behavioral responses; these are largely attributable to sparse data," (SDEIS 3-8) a precautionary approach is particularly important.

As the House committee report explained, the Act was deliberately designed to permit takings of marine mammals only when it was known that that taking would not be to the disadvantage of the species:

In the teeth of this lack of knowledge of specific causes, and of the certain knowledge that these animals are almost all threatened in some way, it seems elementary common sense to the Committee that legislation should be adopted to require that we act conservatively -- that no steps should be taken regarding these animals that might prove to be adverse or even irreversible in their effects until more is known. As far as could be done, we have endeavored to build such a conservative bias into the legislation here presented.

H.R. Rep. No. 92-707, supra, at 15.

Committee for Humane Legislation, 540 F.2d at 1150, citing H.R. Rep. No. 92-707. (Emphasis in original). Here, where the information on the effects on marine mammals is admittedly "sparse", the Navy must heed this guidance and choose the most precautionary variables to plug into its risk function. Instead the Navy appears to have done the exact opposite.

In choosing the baseline value for risk, the B Parameter, the Navy has chosen 120 dB. This is too high. Numerous studies

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 17 |
| 8 |

and reports document impacts to marine mammals from sounds lower than 120 dB. For example, a study of Canadian belugas showed flight responses from ships at received sound levels as low as 94 dB.

Presumed alarm vocalizations of belugas indicated that they were aware of an approaching ship over 80 km away and they showed strong avoidance reactions to ships approaching at distances of 35-50 km when received noise levels ranged from 94 to 105 dB re 1 uPa in the 20-1000 Hz band. The "flee" response of the beluga involved large herds undertaking long dives close to or beneath the ice edge; pod integrity broke down and diving appeared asynchronous. Belugas were displaced along ice edges by as much as 80 km.

Finley, K. J., G.W. Miller, R.A. Davis, and C.R. Greene. 1990. Reactions of belugas, Delphinapterus leucas, and narwhals, Monodon monoceros, to ice-breaking ships in the Canadian High Arctic, p. 97-117. In T.G. Smith, D.J. St. Aubin, and J.R. Geraci [ed.] Advances in research on the beluga whale, Delphinapterus leucas. Can. Bull. Fish. Aquat. Sci. 224. While beluga whales are obviously not likely to be in the action area here, the Navy relied upon captive studies of beluga showing behavioral thresholds of 180-196 dB in setting the K Parameter. If the beluga is a suitable subject to set such thresholds for one portion of the function, the Navy must consider studies of the beluga that are relevant in other elements of the function as well. A 120 db threshold for the B Parameter is arbitrary. A 94 dB or lower threshold would be more appropriate, both in terms of using the best available science and in keeping with MMPA mandates.

The setting of 165 dB for the K Parameter is similarly set too high. While studies in addition to the three chosen by the Navy in setting the K Parameter exist (see beluga example above),

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 9 |

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

even if the Navy were limited to the three cited studies, it should have chosen the most precautionary number from those studies (133 dB for right whales) rather than the mean of the three studies.

Finally, the setting of the A Parameter is also poorly explained or justified and does not apparently incorporate the precautionary approach embodied in the MMPA.

An overriding problem with the risk function is that the data set used by the Navy is very small – a couple studies on captive bottlenose dolphins and beluga whales, one survey on right whales and one modeled prediction of the levels of MFA sonar received by a pod of orcas in the USS Shoup incident of 2003. Apart from being not representative of all marine mammals in the wild, the captive animals were accustomed to noise and responding to it, and the wild animals likely also had some degree of habituation, the North Atlantic right whales living in the congested Eastern Seaboard of the U.S. and the orcas of North West Washington State being accustomed to ship and whale-watching boat noise. We believe that a larger dataset would have produced lower thresholds for impacts to marine mammals and consequently different and more precautionary inputs into the risk function.

Apart from the limited data set, the risk continuum function approach does not account for non-auditory noise impacts, the impacts of masking or cumulative and synergistic effects of several noise sources. It also does not account for long-term impacts on marine mammals. It also does not take into account impacts to individual animals, but only populations of animals. This is troublesome given that in any population there could be key individuals which, if negatively impacted by MFA sonar exposure, could result in the population being adversely affected, for example, by following the key individual into a

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 10 |
| 11 |
| 12 |

hazardous situation. Given the MMPA is designed to protect not just populations, but individual marine mammals, this approach is particularly problematic See 16 U.S.C. § 1362 (18) (A) (definition of "harassment" expressly applies to acts that affect "a marine mammal or marine mammal stock in the wild.") (emphasis added); see also Natural Resources Defense Council v. Evans, 279 F.Supp.2d 1129, 1157 (N.D. Cal. 2002) ("In expressing concern about harassment to 'a marine mammal,' Congress was concerned about harassment to individual animals.").

Given the above deficiencies with the risk function the Navy's estimates that "only" 39,863 marine mammals will be taken is likely a severe underestimate. This underestimate is compounded by the rather absurd assertion that a marine mammal can be taken only once in a 24 hour period. While perhaps convenient for modeling purposes no rational explanation for how this could comport with reality or biological relevance is given in the SDEIS.

Even accepting the Navy's estimates, the estimated take is unacceptably high and cannot possibly be reconciled with the purposes of the MMPA. Moreover, even if close to 40 thousand episodes of harassment could somehow be determined to have a "negligible impact" on the affected stocks, the number of exposures to sound levels likely to cause physical injury or death are clearly unacceptable.

For example, the SDEIS predicts 228 humpbacks will be exposed to noise between 195 dB and 215 dB. This number in and of itself is unacceptably high. Because the threshold used by the Navy here is well above the 180 dB threshold NMFS has previously determined to injure whales, 228 is likely a gross underestimate. Similar underestimates of the true impacts of the proposed action occur for numerous other species.

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 13 |

Additionally, nowhere in the SDEIS is there an estimate of how many animals will be exposed to acoustic energy levels higher than 180 dB. There is no way for the reader to compare the results of the risk function with NMFS's previous methodology if there is not a take estimate generated under both methodologies. This violates both the review provisions of NEPA as well as the substantive provisions of the MMPA.

Another glaring omission in the SDEIS is any treatment of whether and how the new risk function should be applied to beaked whales. Given mid-frequency active sonar can be fatal to beaked whales at levels below the 165 dB mid-point of the risk function curve, the function obviously does not adequately address impacts to these particularly sensitive species. Similarly, there is no acknowledgement, much less analysis, of the impacts (potentially injurious or fatal) to other species of marine mammals from sound levels far below those that would cause TTS (such as the near-stranding of melon headed whales associated with previous MFA exercises).

Finally, the SDEIS is woefully deficient in its treatment of the critically endangered Hawaiian monk seal. The SDEIS, using studies on other species of pinnepeds, sets an obscenely high threshold for injury to the monk seal of 224 dB and a TTS threshold of 204 dB. The SDEIS concludes that 161 monk seals would be harassed (well over 10% of the population) and three would be subject to exposures between 204 and 224 dB. Given the injury of a single monk seal would not be negligible and would equate to jeopardy under the ESA, the exposure of this number of seals to such sounds levels in wholly unsupportable.

In sum, the SDEIS fails to correct any of the significant deficiencies of the DEIS. The Navy should publish a new DEIS that considers true alternatives and that properly incorporates

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |
| 14 |
| 15 |
| 16 |

the precautionary mandates of the MMPA and ESA into its analysis. Thank you for the opportunity to comment.

Sincerely,
/s/
Brendan Cummings
Center for Biological Diversity
P.O. Box 549
Joshua Tree, CA 92252

| COMMENT NUMBER |
|---|
| S-N-0007 (cont.) |

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

First Name: Judy
Last Name: Walker
Organization:
City: Hilo
State: HI
Date Submitted: 4/7/2008
Comment:

The research and references used to prepare this SEIS are inadequate. Only one paper specifically addresses Hawaii, and that is a survey of Hawaiian cetaceans (Barlow 2005) from one single time period (summer/fall 2002). Surely there must be more information available about the distribution, habits, etc. of marine mammals in Hawaii. The humpback populations wintering in Hawaii have been the focus of much study, but none of this research was consulted in preparing the SEIS. There are ongoing studies of cetacean populations on the west side of Hawaii, but I see no evidence that any of the researchers were consulted. As a comparison, there are only 4 pages of references for the 116-page document Navy SEIS, versus 8 pages of references for a 28-page paper prepared for NATO Military Oceanography Group in October of 2005 on Marine Mammals and Active Sonar. (The United States did not participate in preparing that report.)

The contracted preparers from KAYA Associates, Inc., and SRS Technologies have no expertise in marine mammals, much less marine mammals in Hawaii, and there is no evidence they consulted anyone who does have the requisite experience. The characterization of the contracted preparers' experience (years of experience apparently equals the number of years spent doing anything outside of attending undergraduate or graduate

| COMMENT NUMBER |
|---|
| S-N-0008 |
| 1 |
| 2 |
| 3 |

| COMMENT NUMBER |
|---|
| S-N-0008 (cont.) |
| 4 |
| 5 |

school) is misleading if not downright deceptive. Further KAYA and SRS both advertise their close relationship with the U.S. government, particularly the U.S. military, on their websites. For example, in its own environmental brochure, KAYA describes its "environmental services" as follows:
KAYA personnel have mobilized to support military actions that demand unique solutions from the environmental scientist. We excel at providing the highly specialized services required for complex weapon system acquisition as well as other military actions in remote locations.

Clearly the preparers have a conflict of interest—any results that may inconvenience the Navy could mean the loss of the majority of their contracts, government and private, and the financial collapse of their respective businesses.

From Appendix A, "Consequently, the Feller-adapted risk functions described in this document should be clearly identified by both NMFS and Navy as an interim approach (using the best available science) for Navy MMPA authorizations for major MFAS exercise and operating areas designated to be completed before the end of 2009." The word "interim" does not appear in the Navy SEIS, and I was unable to find any reference, explicit or otherwise, to this NMFS caveat. The implication is that the Navy does not intend to do the additional research to ensure that marine mammals are not harmed, but rather is content to implement what it knows to be a shoddy model in order to push forward its operations.

Also from Appendix A, comments on a curve for pinnipeds were not solicited for this study, with the recommendation from NMFS (absent any provided substantive basis) being to use the odontocete curve. (It appears that the Navy has chosen to use elephant seal TTS data instead, and there is not discussion of this differing from the NMFS recommendation.) Monachus



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

schauinslandi is only found within Hawaii, and almost exclusively within the HRC. It is critically endangered, with an estimated population of 1100-1200 and declining at a rate of 4% per year. Such a deliberate oversight—not even attempting to create a valid model for a critically endangered species—is unconscionable and likely illegal.

| COMMENT NUMBER |
|---|
| S-N-0008 (cont.) |

| COMMENT NUMBER |
|---|
| S-N-0009 |

First Name: Brooke
Last Name: Porter
Organization: Pacific Whale Foundation
City: Wailuku
State: HI
Date Submitted: 4/7/2008
Comment:

We are concerned about the need for a take authorization. The draft EIS/OEIS states the need for a "take" authorization based on the current frequency of strandings. This action, in and of itself, readily admits the direct link of sonar to marine mammal strandings. 1

Previous Hawaii research on the effects of sonar, demonstrated that humpback whales off the Kona coast ceased their song during sonar transmissions. Song resumed in "tens of minutes." Such summaries are vague, non-descript and completely void of necessary quantification. 2

In addition, the majority of the quoted research concerning effects of underwater noise on marine mammals is based on effects seen in humans. Results of long-term exposure to underwater noise pollution on humans can in no way be applied to marine mammals. We are all aware that a deaf whale is a dead whale. 4

The Navy states that the use of sonar during training is invaluable. Active sonar transmissions give away the position of the transmitting vessel. However, it seems in many cases location information is too important to divulge in all "real-time" exercises. 3

**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

| | COMMENT NUMBER | | COMMENT NUMBER |
|---|---|---|---|
| We at Pacific Whale Foundation believe additional research is necessary and are against the destructive use of our oceans for the purposes of military sonar and military training. | S-N-0009 (cont.) | | |



**Exhibit 14.4.4-1. Copy of Webmail Documents - Supplement to the Draft EIS/OEIS (Continued)**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Brooke Lerch | S-N-0001-1 | Alternatives | 1.3.2, 1.3.3 | As discussed in Sections 1.3.2 and 1.3.3, the Navy must use passive and active sonar. |
| | S-N-0001-2 | Miscellaneous | | Thank you for your comment. |
| Joy Perfetti | S-N-0002-1 | Alternatives | | Thank you for your comment. |
| Stephen Skogman | S-N-0003-1 | Program | | Thank you for your comment. |
| Ian Jenss | S-N-0004-1 | Program | 4.1.5.1.1, 6.2.1 | As discussed in Section 6.2.1, seasonal avoidance, as a mitigation measure, is based on speculative findings from other areas of the world that do not have direct application to the unique environment present in Hawaii. Lacking any scientific basis for seasonal avoidance in Hawaii and lacking any evidence in Hawaii that there has ever been an impact resulting from the lack of these measures, there is no evidence that this mitigation measure would increase the protection of marine mammals. Because year-round deployment is critical for Navy operations, implementation of seasonal avoidance would, however, unacceptably impact the effectiveness of the training.<br><br>Regarding divers, As stated in Section 4.1.5.1.1, research was conducted for mid-frequency active (MFA) sonar at the Naval Submarine Medical Research Laboratory and the Navy Experimental Diving Unit to determine permissible limits of exposure to MFA sonar. Based on this research, an unprotected diver could safely operate for over 1 hour at a distance of 1,000 yards from the Navy's most powerful sonar. At this distance, the sound pressure level will be approximately 190 dB. At 2,000 yards or approximately 1 nm, this same unprotected diver could operate for over 3 hours. |
| Reynolds Kamakawiwoole Twin Flames for God | S-N-0005-1 | Program | | Thank you for your comment. |
| Marsha Green North American Ocean Noise Coalition | S-N-0006-1 | Alternatives | | See Response to Comment S-W-0025-1. |
| | S-N-0006-2 | Alternatives | | See Response to Comment S-W-0025-2. |
| | S-N-0006-3 | Alternatives | | See Response to Comment S-W-0025-3. |
| | S-N-0006-4 | Alternatives | | Thank you for your comment. |
| Brendan Cummings Center for Biological Diversity | S-N-0007-1 | Alternatives | 13 | All public comments received by the Navy during the Draft EIS/OEIS public comment period are considered by the Navy. |

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Brendan Cummings Center for Biological Diversity | S-N-0007-2 | Alternatives | 2 | Under NEPA, the choice of alternatives is bounded by some notion of feasibility. Agencies are not required to consider alternatives that are infeasible, ineffective, or inconsistent with its basic policy objectives. |
| | S-N-0007-3 | Policy/NEPA Process | | The choice of alternatives is bounded by some notion of feasibility. Agencies are not required to consider alternatives that are infeasible, ineffective, or inconsistent with its basic policy objectives. ASW personnel must practice using sensors, including electro-optical devices, radar, magnetic anomaly detectors, sonar (including helicopter dipping sonar and both active and passive sonobuoys) in both deep and shallow water environments. This training is not new and has taken place in the HRC over the past 60 years. There has been no significant change in the sonar equipment output being used in the last 30 years. An alternative that would entirely eliminate the use of mid-frequency sonar for training would jeopardize the security of the Nation, and would not be considered a reasonable alternative. |
| | S-N-0007-4 | Alternatives | 1.0, 2.0, 6.0 | The Supplement to the DEIS was not written to address these alternatives, does not propose to change the Fleet Response Training Plan (FRTP), and was not prepared to assess mitigation. To the extent that a response is required, the Navy considered the DEIS public comments in the preparation of the Supplement to the DEIS, where applicable. As discussed in Chapters 1.0 and 2.0 of the EIS/OEIS, Navy considers but rejects a reduction in training; does not consider alternate locations because this analysis would not be consistent with the purpose and need of this EIS/OEIS. Although Navy does do some simulated training, it does not fully develop the skills and capabilities necessary to attain appropriate military readiness. Navy's current mitigation measures and their use of the best available science balanced with the requirements of the Navy to train, results in Navy meeting its mission while being protective of the environment. Discussion of Mitigation measures has been revised in Chapter 6.0. |
| | S-N-0007-5 | Mitigation Measures | 6.0 | See response to comment S-W-0020-2. |
| | S-N-0007-6 | Alternatives | 2.2.2.4, 4.1.2 | The original analysis was based on data prepared as part of the program described in Section 1.3 of the final EIS, which predates the Sonar Positional Reporting System (SPORTS) database. In early 2008, the Navy concluded that SPORTS provided enough information after only eighteen months that it could be used as a partial basis for calculating sonar hours when combined with additional extrapolation for the sonar effects analysis. More information on SPORTS has been provided in sections 2.2.2.4 and 4.1.2 of the EIS/OEIS. The SPORTS database will continue being refined and populated with data and used as the basis for future analysis on sonar use on range complexes. |

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Brendan Cummings Center for Biological Diversity | S-N-0007-7 | Alternatives | 4.1.2 | The Navy does predict that 50% of animals exposed to 165 dB will respond in a manner that NMFS classifies as Level B harassment; however, it is not correct to state that the other 50% are being behaviorally impacted at levels from 120 to 195 dB re: 1µPa rms. Please see Section 4.1.2, Figure 4.1.2.4.9.7-1. Navy and NMFS have used a science-based approach using the best available and most applicable science in assessing exposure effects. Regarding the commenter's concern for the application of the approach, see response to comment S-W-0025-1. |
| | S-N-0007-8 | Alternatives | 4.1.2 | Behavioral responses of marine mammals to sounds is known to be highly context-specific. As such, when the context of sound exposure is such that a strong response is elicited upon simple detection of sounds that may represent specific danger then the avoidance levels are clearly expected to be quite low. The case of ice-breaker noise in the high Arctic is a very specific condition where such sounds are almost exclusively associated with the sounds of humans, who hunt marine mammals (including beluga) in these areas. The response threshold levels there were almost certainly a function of detection; had the background noise levels been lower, the response levels would have concomitantly likely been lower as well. There is no evidence that beluga exhibit such pronounced reactions at detection levels for military sonars and thus it was deemed inappropriate to use this very specific context of a likely anti-predator response to ice-breaking sounds in assessing their responsivity to MFA sonar. |
| | S-N-0007-9 | Alternatives | 4.1.2 | The Navy does predict that 50% of animals exposed to 165 dB will respond in a manner that NMFS classifies as Level B harassment; however, it is not correct to state that the other 50% are being behaviorally impacted at levels from 120 to 195 dB re: 1µPa rms. Please see Section 4.1.2, Figure 4.1.2.4.9.7-1. Navy and NMFS have used a science-based approach using the best available and most applicable science in assessing exposure effects. Regarding the commenter's concern for the application of the approach, see response to comment S-W-0025-1. |
| | S-N-0007-10 | Alternatives | 4.2.4.9.6.3 | See response to Comment S-N-0007-9. Refer to Section 4.2.4.9.6.3 for an expanded explanation of the A Parameter. |

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Brendan Cummings Center for Biological Diversity | S-N-0007-11 | Alternatives | 1.3.2, 4.1.2 | The analytical methodology used in this EIS/OEIS was developed in close coordination with NMFS. This represents the best available and most applicable science with regard to analysis of effects to marine mammals from MFA/HFA sound sources. While recognizing there is incomplete and unavailable information with regard to behavioral impacts on marine mammals (see Section 4.1.2), the risk function curve extends to 120 dB SPL specifically to encompass uncertainty and the potential for behavioral reactions in marine mammal species that may be affected by sounds perceived at levels just above ambient in some areas during some parts of the year in Hawaiian waters. Section 1.3.2 describes why the Navy must train and why Hawaii is the most appropriate place to undertake the proposed actions. |
| | S-N-0007-12 | Alternatives | 4.1.2.4 | See Section 4.1.2.4 for a qualitative analysis of non-auditory noise impacts. NMFS and the Navy do not believe that the risk continuum function results in an underestimate. Please see comment S-W-0025-2. Many marine mammals perform vital functions, such as feeding, resting, traveling, or socializing, on a diel (24-hr) cycle. Consequently, marine mammal responses to noise lasting less than 24 hours and not repeated on subsequent days are not regarded as particularly severe unless they could directly effect survival or reproduction. Accordingly, in the Navy's particular post-modeling calculation intended to better allow for consideration of the maximum number of individuals of a species that could potentially physically be in the vicinity of an exercise to be exposed to a discreet continuous sonar event (which takes into consideration the density of animals, the maximum area that the sonar event could cover and the distance marine mammals can travel in a day), NMFS recommended the Navy utilize a daily restart (or exercise restart – if the exercise is less than 24 hours).<br>NMFS is not suggesting that an animal will never be exposed to levels associated with harassment more than once per day. Rather, we are defining a "take" as something that can only happen to an individual once per day. We acknowledge that in a minority of those "takes", the animal may have been exposed to a level of sound associated with harassment more than once, but because it is within one diel cycle (above), we will only count it as one "take". |

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Brendan Cummings Center for Biological Diversity | S-N-0007-13 | Alternatives | 4.1.2, 4.1.2.5.4, 4.1.2.9 | Please refer to Section 4.1.2 (population level effects discussion). NMFS has never applied a 180 dB injury threshold to tactical mid-frequency or high frequency active sources used in training exercises. Please see Section 4.1.2. for a definition of sound levels that might result in physical injury. The referenced 228 humpback whale exposures to levels between 195 dB and 215 dB, are associated with TTS, which is considered Level B harassment, not injury. Once the mitigation measures are implemented, the Navy anticipates mitigation will significantly reduce this number (see Section 4.1.2.5.4). As described in 4.1.2.5.4, the Navy estimates that no more than three animals total will be exposed to sound levels resulting in physical injury; however, these takes are not anticipated to occur when mitigation measures are implemented. NMFS does not anticipate mortality as a result of the MFA sonar use. Please see Section 4.1.2.9 for a discussion of mortality authorization. |
| | S-N-0007-14 | Alternatives | 4.1.2.4.10.2, 4.1.2.9 | A quantitative analysis that addressed all species has been provided. In addition, Section 4.1.2.4.10.2 specifically provides a qualitative assessment of MFA sonar and its potential effects on beaked whales. For a discussion for the rationale for requesting marine mammal mortality takes, please see Section 4.1.2.9. |
| | S-N-0007-15 | Alternatives | 4.1.2.4.6 | Additional information regarding the Hawaiian Monk Seal has been added to Section 4.1.2.4.6. |
| | S-N-0007-16 | Policy/NEPA Process | | The primary purpose of the Supplement to the Draft EIS/OEIS was to provide additional information regarding the analytical methodology used to evaluate the effects of MFA sonar on marine mammals. A Final EIS/OEIS has been prepared that incorporates comments on both the Supplement to the Draft EIS/OEIS and the Draft EIS/OEIS. The Final EIS/OEIS contains substantial changes. |
| | S-N-0007-17 | Alternatives | 4.1.2 | In 2004, Congress amended MMPA concerning the kinds of behavioral impacts that should be regulated as harassments. These amendments do not require that the NMFS choose the most precautionary variables. Navy and NMFS are currently applying these requirements regarding Military Readiness Activities and biologically significant impacts to marine mammals, a science-based approach. The federal case cited in the comment, Committee for Humane Legislation, Inc. v. Richardson, 510 F.2d 1141, 1150 (D.C. Cir. 1976), is not applicable for the reasons discussed above and because the Richardson case involved a regulatory framework for the commercial fishing industry, not military readiness activities. |
| Judy Walker | S-N-0008-1 | Biological Resources - Marine | 9.0 | A comprehensive list of references is provided in Chapter 9.0 of the EIS/OEIS. The entire list of references was not reproduced in the Supplement to the Draft EIS/OEIS. |

**Table 14.4.4-2. Responses to Webmail Comments - Supplement to the Draft EIS/OEIS (Continued)**

| Commentor | Comment # | Resource | EIS Section | Response Text |
|---|---|---|---|---|
| Judy Walker | S-N-0008-2 | Biological Resources - Marine | 3.0, 4.0 | Information regarding the humpback whale and the Hawaiian Islands Humpback Whale National Marine Sanctuary was provided in Sections 3.0 and 4.0 of the Draft EIS/OEIS and expanded in the Final EIS/OEIS. See response to Comment S-N-0008-1 regarding references in the Supplement to the Draft EIS/OEIS. |
| | S-N-0008-3 | Policy/NEPA Process | 1.7.1, 13.0, 14.0 | NEPA requires an interdisciplinary approach to analysis. EISs are therefore prepared using a wide range of subject matter experts whose expertise may have been acquired either through formal education or years of experience. The professionals preparing this EIS/OEIS (including the marine mammal sections) have either lived and worked as environmental scientists in Hawaii or have been conducting environmental projects in Hawaii for many years. The Navy solicited comments, encouraged input, and sought advice from Agencies, organizations, and individuals in Hawaii, throughout the environmental impact analysis process (see Sections 1.7.1, 13.0 and 14.0 of the EIS/OEIS). Most consultants provide multiple services to their DOD clients. Given the rigorous environment of government contracting, NEPA does not view this as a conflict of interest. |
| | S-N-0008-4 | Alternatives | 4.1.2, 6.0 | Details on the development of the model are provided in Section 4.1.2. As described in Section 6, Navy will continue to fund research in regards to further developing and enhancing marine mammal modeling. |
| | S-N-0008-5 | Alternatives | 4.1.2 | Not enough applicable behavioral response data exists to develop a risk function specifically for pinnipeds and MFA sonar. However, based on the overall body of behavioral data for other sources that do exist and data relating to the received levels associated with pinniped threshold shifts, NMFS believes that pinnipeds will likely behaviorally respond to MFA sonar in a manner NMFS would classify as harassment at slightly higher levels than odontocetes. Therefore, in the absence of representative data, the application of the odontocete curve to pinnipeds is considered a conservative interim approach that is appropriate until more representative data becomes available. The Navy and NMFS developed the Hawaiian Monk Seal data as best available. |
| Brooke Porter Pacific Whale Foundation | S-N-0009-1 | Alternatives | | Takes may be authorized as long as negligible impact occurs. |
| | S-N-0009-2 | Alternatives | 5 | The study referenced was in regard to Low Frequency Active (LFA) sonar, which is not part of Proposed Action. LFA sonar is, however, discussed in Chapter 5.0, Cumulative Impacts. |
| | S-N-0009-3 | Program | | Thank you for your comment. |
| | S-N-0009-4 | Alternatives | | Thank you for your comment. |