behavioral response that could be classified as harassment at relatively low received levels, as a function of the direct application of the Nowack et al. (2004) data than those predicted by the Feller adapted risk function with a steepness parameter of $A = 10$. The derived Feller adapted risk function for MFA5 is based on three datasets, the only mysticete data being that provided in Nowack et al. (2004). Several reviewers also suggested that given variability in species and how they use sound more than one curve might be appropriate. Considering these views, I met with Drs. Southall and Scholik to discuss whether the curve they recommended gave appropriate consideration to the Nowack study. In that discussion, we determined that applying the Feller adapted risk function with a steepness parameter of $A = 8$ for mysticetes would better reflect the sense of the reviewers and the relevance of the Nowack study than a single curve.

Therefore, I have concluded, based on the above, that we should adopt two curves: one for odontocetes and one for mysticetes. Both should be based on the Feller adapted risk function with input parameters of $B = 120$ dB, $K = 45$, $99\%$ point $= 195$ dB, the $50\%$ point $= 165$ dB. Only the steepness parameter should vary, and it should be $A = 10$ for odontocetes and $A = 8$ for mysticetes. We did not solicit comment on a curve for pinnipeds, but based on additional discussions with Dr. Southall, we should use the odontocete curve for pinnipeds.

Finally, NMFS agrees with many of the reviewers that exposure-response functions should be based directly on empirical measurements. However, the data currently available are too limited both in quantity and direct relevance to the situation in question to be used to support such a direct application. 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 MFA5 exercises and operating areas designated to be completed before the end of 2009. In the meanwhile, we expect to continue working with the Navy to fill the indicated data gaps to support the development of exposure-response functions based more directly on empirical measurements.

Thank you for your input regarding the Feller adapted risk function and your assistance convening the scientific reviewers. If you have any questions, please contact me at (301) 713-2332, ext. 127, or Jolie Harrison at (301) 713-2289, ext. 166.

Sincerely,

[Signature]

James H. Lecky
Director
Office of Protected Resources

Enclosure


STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3175
HONOLULU, HI 96823-3175

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 document. 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 send our standard comments on our website at http://www.hawaii.gov/health/environmental/env-planning/landuse/cwb-standardscomments.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).
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)(iii) and 122.26(G)(14)(vi).
   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 area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a single 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 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/joint-index.html.

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 or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/individual-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 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.
If there are any questions about these comments please contact Jiachen Liu with the Environmental Planning Office at 566-4146.

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
   CWB
   WWB

RADM Michael A. Giorgione
Commander, Naval Facilities Engineering Command, Pacific
258 Mokapu Drive Suite 100
Pearl Harbor, HI 96860

Dear Admiral Giorgione:

The National Oceanic and Atmospheric Administration’s National Marine Fisheries Service Pacific Islands Regional Office (NMFS) has reviewed the "Essential Fish Habitat and Coral Reef Assessment for the Hawaii Range Complex EIS/OEIS" prepared in October 2007 and informally submitted to this office in February 2008. The document and supporting EIS describe various activities and potential impacts associated with Navy’s Hawaii Offshore Areas, facilities used by the Navy Undersea Warfare Center Detachment Pacific on west Oahu, the Explosive Ordnance Disposal Shore Area at Pearl Harbor and other Hawaii Offshore Areas.

NMFS Habitat Conservation Division conducted this review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. § 662(a)), the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. § 1852(b)(2)), Coral Reef Executive Order 13089 and the National Environmental Policy Act. Since this project involves essential fish habitat (EFH), the process is guided by the requirements of our EFH regulations (50 C.F.R. §§ 600.905 - 930), which mandate the preparation of EFH Assessments and generally outline each agency’s obligations in this consultation procedure.

Magnuson-Stevens Fishery Conservation and Management Act

Background. Pursuant to the MSA, the Secretary of Commerce, through NMFS, is responsible for the conservation and management of fishery resources found off the coasts of the United States. See 16 U.S.C. 1801 et seq. Section 1855(b)(2) of the MSA requires federal agencies to consult with NMFS, with respect to “any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act.” The statute defines EFH as “those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity.” 16 U.S.C. 1802(10). Adverse effects on EFH are defined further as “any impact that reduces the quality and/or quantity of EFH,” and may include “site-specific or habitat-wide impacts, including individual, cumulative
or synergistic consequences of actions." 50 C.F.R. § 600.810(a). The consultation process allows NMFS to make a determination of the project's effects on EPH and provide Conservation Recommendations to the lead agency on actions that would adversely affect such habitat. See 16 U.S.C. 1855(b)(4)(A).

Essential Fish Habitat
The proposed project site is located in an area that has been identified as essential fish habitat under the following Western Pacific Regional Fishery Management Council (WPRFMC) Fishery Management Plans (FMPs): Pelagics (eggs, larvae, juveniles, adults), Bottomfish (eggs, larvae, juveniles, adults), Crustaceans (eggs, larvae, juveniles, and adults), Coral Reef Ecosystem (eggs, larvae, juveniles and adults) and Precious Corals.

Proposed mitigation measures to minimize impacts to EPH include conducting operations in open ocean away from sensitive EPH, avoiding areas of live coral during inshore operations, and restricting amphibious landing to specific areas of designated beaches.

Conclusions
The document adequately describes the potential impact to EPH resulting from the proposed action. Provided that the proposed mitigation measures are implemented to protect EPH in the area of operation, we concur that it unlikely that proposed project and alternatives would have adverse impacts to EPH for the various WPRFMC FMPs. No further conservation recommendations are necessary at this time. However, individual actions covered under the EIS may require permitting from the U.S. Army Corps of Engineers. We reserve the right to provide additional comments or recommendations during the Corps permit review process.

NMFS appreciates the opportunity to comment on this project. If you have any questions regarding this determination, contact Mr. Alan Everson at 808 944-2212 (alan.everson@noaa.gov).

Sincerely,

William L. Robinson
Regional Administrator

cc: Western Pacific Fishery Management Council
U.S. Fish and Wildlife Service, Environmental Services

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3801

April 10, 2008

Tom Clements
Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, 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 1500-1509), and the 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...
Exhibit 12-1. Consultation Comments and Responses (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 precarious 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(c)). 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 UDEIS 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 Vinlano, the lead reviewer for this project, at 415-947-4178 or kvinlano.karen@epa.gov.

Sincerely,

Nova Blazej, Manager
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions
EPA’s Detailed Comments
cc: Chris Yates, National Marine Fisheries Service
Exhibit 12-1. Consultation Comments and Responses (Continued)

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)).

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.

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.

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.

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
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 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. 67-2) 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 used noise levels that 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 underestimated. 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 pinnipeds. The SDEIS provides very little information regarding this change, which appears to be based on the information from one researcher. We 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.

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\(^3\) 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 1508.7(b) 5)

\(^4\) Western Pacific Regional Fishery Management Council, Pacific Islands Fishery News, Winter 2008