

Comments

Responses

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Honolulu, Hawai'i, February 13, 2006

Comments

Responses

1

IN THE UNITED STATES DISTRICT COURT
DISTRICT OF HAWAII

MALAMA MAKUA, a Hawaii)
non-profit corporation,)
))
Plaintiff,) CIVIL NO. 00-00813
))
vs.))
))
DONALD H. RUMSFELD,)
SECRETARY OF DEFENSE; and)
FRANCIS J. HARVEY,)
Secretary of the United)
States Department of the)
Army,)
))
Defendants.)

COPY

DEPOSITION OF LAURIE LUCKING

Taken on behalf of Plaintiff at the Law Offices of
Earthjustice, 223 South King Street, Suite 400,
Honolulu, Hawaii, commencing at 1:00 p.m. on
December 22, 2005, Pursuant to Notice.

Transcribed by: RITA KING, RPR, CSR #373
Court Reporter, State of Hawaii

ALI'I COURT REPORTING
2355 Ala Wai Boulevard, #306
Honolulu, Hawaii 96813
808.394.ALI'I (2544)

Ali'i Court Reporting
808.394.2544

Comments

Responses

2

council APPEARING:

Attorney for Plaintiff:

DAVID L. HENKIN, ESQ.
Earthjustice Legal Defense Fund
223 South King Street, Suite 400
Honolulu, Hawaii 96813
808.599.2436

Attorney for Defendants:

ROBERT M. LEWIS, ESQ.
Environmental Law Division
U.S. Army Litigation Center
901 North Stuart Street, Suite 400
Arlington, VA 22203
703.696.1567

ELENA J. ONAGA, ESQ.
Stop 126, Building 718
Ft. Shafter, HI 96858
808.438.2291

Also present:

RICHARD W. CARLILE
Assistant District Council
Bldg 230, CEPOH-0C
Ft. Shafter, HI 96858
808.438.7068

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808.394.2544

Comments

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1 Q. I'll hand you a document and see if that
2 refreshes your recollection.

3 A. The document is from the Draft
4 Environmental Impact Statement, Military Training
5 Activities at Makua Military Reservation, Hawaii,
6 dated March, 2005.

7 Q. Do you see the legend on this Figure 3-24
8 where it has a certain color that indicates
9 surveyed areas?

10 A. Yes.

11 Q. What are the areas colored with that that
12 color represents?

13 A. Those are areas in which we have done
14 surface survey, what we call Phase I, presence
15 absence.

16 Q. What's a Phase I, presence absence?

17 A. It's simply you walk across the surface
18 to see if there's any surface indications of an
19 archeological site.

20 Q. And as of what date and time does this
21 reflect the areas that have been surveyed, surface
22 surveyed?

23 A. This would have been early in 2004.

24 Q. Between early 2004 and when the draft
25 Environmental Impact Statement went out for public

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1 review, were there any additional surface surveys
2 that were conducted?

3 A. There are a few small scale surveys that
4 were done by contract archeologists working for the
5 Cultural Resources Program through the Research
6 Council, University of Hawaii. And there was
7 another survey that was done in August of this year
8 after a burn within the South Fire Break Road, and
9 in November there was subsurface testing that was
10 completed within the South Fire Break Road.

11 Q. Did you participate in the preparation of
12 the portion of the Draft Environmental Impact
13 Statement that discusses the cultural resources at
14 Makua?

15 A. I reviewed the document and commented on
16 it.

17 Q. Does the figure that we've labeled as
18 Exhibit 2 accurately reflect the extent of surface
19 surveys that are discussed in the draft
20 Environmental Impact Statement?

21 A. No, it doesn't.

22 Q. What differences would there be
23 between --

24 A. Well, every place where there's a light
25 pink there's been a surface survey.

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1 Q. Any other areas?

2 A. No.

3 Q. Focusing your attention on what is the
4 eastern portion of the area within -- do you know
5 what I mean when I say the South Fire Break Road?

6 A. Yes, I do.

7 Q. Focusing your attention on the eastern
8 portion, are there areas that were unsurveyed as of
9 the time of the Draft Environmental Impact
10 Statement's preparation?

11 A. The southeastern lobe of the fire break,
12 the one that is currently blue, has not been
13 surveyed.

14 Q. Has it been surveyed subsequent to the
15 preparation of the draft EIS?

16 A. No, it has not.

17 Q. Could you please circle in black the
18 portion that you're referring to there.

19 A. (Witness indicating.)

20 Q. And could you draw a line down into a
21 white margin and write "not surveyed," please.

22 A. (Witness indicating.)

23 Q. Thank you.

24 If you look at the northeast corner of
25 the area within the South Fire Break Road, do you

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Comments

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24

1 see an area that appears to be purplish blue?

2 A. That should be Brown.

3 Q. When you say it should be brown, was it
4 surveyed as of the time of the Draft --

5 A. Yes, it was.

6 Q. If you could let me finish the question,
7 it'll insure -- I realize it's not natural, but
8 it's the construct we're operating under.

9 So with reference to the northeast lobe
10 of the South Fire Break Road, was that surveyed as
11 of the time of the preparation of the Draft
12 Environmental Impact Statement?

13 A. Yes, it was.

14 Q. If you could circle that area using the
15 black pen and draw a line to a white portion and
16 write "surveyed."

17 A. (Witness indicating.)

18 Q. Thank you.

19 And immediately to the west of sites
20 number 5587 and 5589 there appears to be a
21 bluish-purple area. Do you see that?

22 A. Yes, I do.

23 Q. Was that surveyed at the time of the
24 Draft Environmental Impact Statement?

25 A. I am unsure about that.

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Comments

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Responses

1 Q. Has it been surveyed since then?

2 A. I am unsure about that, also.

3 Q. I'm going to show you another document.

4 Would you please take a look at this to see if you
5 recognize it. Do you recognize that document?

6 A. Yes, I do.

7 MR. HENKIN: Could we please have that
8 labeled as Exhibit 3.

9 (Exhibit Number 3 was marked for
10 identification.)

11 Q. BY MR. HENKIN: Could you please describe
12 the document you've labeled as Exhibit 3.

13 A. This document is a letter addressed to
14 Malama Makua dated November 17th, 2005 concerning
15 subsurface surveys at Makua Military Reservation.

16 Q. Did you participate in the formulation of
17 the proposal that's reflected in this letter?

18 A. Yes, I did.

19 Q. Could you please refer to enclosure one,
20 which is the first color map in Exhibit 3.

21 A. Yes, I'm looking at it.

22 Q. Do you see the legend where it indicates
23 that areas that are hatch marked in green have been
24 surface surveyed?

25 A. Yes.

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1 STATE OF HAWAII)
2 COUNTY OF HONOLULU) ss.

3
4 BE IT KNOWN that the foregoing deposition
5 was taken before me, RITA KING, a Certified
6 Shorthand Reporter for the State of Hawaii; that
7 the witness before testifying was duly sworn by me
8 to testify to the whole truth; that the questions
9 propounded to the witness and the answers of the
10 witness thereto were taken down by me in shorthand
11 and thereafter reduced to print by computer-aided
12 transcription under my direction; that the witness
13 elected to read and sign; that the foregoing pages
14 are a full, true and accurate transcript of all
15 proceedings and testimony had and adduced upon the
16 taking of said deposition, all done to the best of
17 my skill and ability.

18 I FURTHER CERTIFY that I am in no way
19 related to nor employed by any of the parties
20 hereto nor am I in any way interested in the
21 outcome hereof.

22 DATED at Honolulu, Hawaii, this 26th day
23 of December, 2005.

24 
25 RITA KING, RPR, CSR No. 373

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808.394.2544

Comments

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FINAL REPORT

**ARCHAEOLOGICAL SUBSURFACE TESTING AND SURVEY OF
SITES IN THE COMPANY COMBINED ARMS ASSAULT COURSE,
MAKUA MILITARY RESERVATION, MAKUA AHUPUA'A,
WAI'ANAЕ DISTRICT, O'AHU ISLAND, HAWAII (TMK 8-2-01)**



Prepared for:
U.S. Army Corps of Engineers, Honolulu District
CEPOH-EC-E, Building 252
Fort Shafter HI 96858-5440

Contract DACA83-01-D-0013
Task Order 0010

Prepared By:
Garcia and Associates (GANDA)
146 Hekili St., Suite 101
Kailua, HI 96734

July 2005



Comments

Layer II (20 cm thick) very dark brown (7.5 YR 2.5/3) silt clay loam; lower boundary not reached; compact; medium, platy to crumb structure; cobbles and saprolitic bedrock, culturally sterile.

Feature 4 wall was embedded in Layer I, a culturally darkened soil matrix. Layer I yielded one piece of coral, 2 volcanic glass flakes, 4 basalt flakes, 0.9 g of weathered unidentified marine shell, and 1.7 g charcoal.

Both subsurface features (Feature 4.1 and 4.2) were associated with Layer I. The base of Feature 4.2 in the upper portion of Layer II suggests the feature – a possible post mold – was likely excavated into the underlying, non-cultural soil layer. Feature 4.1 (Figure 30) is a probable *imu* based on the inclusion of fire-affected cobbles and abundant charcoal. The feature was 24 cm thick and 56 cm (N/S) by 40 cm (E/W) in plan; it expanded outside the excavation units to the east and south of TU 11. Cultural material was recovered from the feature fill, including one volcanic glass flake, 0.5 g of echinoderm, a piece of coral (Art. 76.1), and 73.1 g of charcoal. Wood charcoal collected from Feature 4.1 produced a conventional radiocarbon age of 350 ± 50 , calibrated (2 sigma) to AD 1440-1650.

Feature 4.2 is a probable post-mold based on its cylinder-shaped profile and absence of cultural material. The feature began at 10 cmbs, was 10-20 cm in diameter and 30 cm deep; the bottom 10-cm of the feature had a weathered matrix and overlapped into Layer II. The post-mold was between two small boulders, possibly supporting the post in the floor of the enclosure.

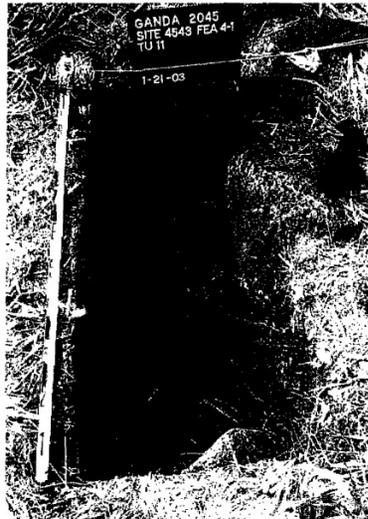


Figure 30. Site 4543, Feature 4.1 *imu* in plan

Responses

Comments

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Excerpts from 12/13/2005 Interview of Major General Benjamin Mixon by Gina Mangieri, KHON2 News (time codes refer to place on tape)

Q: What in your opinion is the long-term horizon for Makua? Will this always be a military training ground?

16:06

A: There certainly are precedents back in the mainland for training areas in the BRAC process to have been turned back.

The agreement on Makua goes out to 2029. That's the current agreement.

16:20 I think there certainly is some room somewhere if the state were to desire to take negotiations, I'm sure the Army would listen.

16:32

16:33 Certainly in the foreseeable future, the next 3 to 5 years, I see Makua as being a very valuable training area until we complete all the improvements here at Schofield Barracks for the training. 16:45

Q: To revisit that, you're saying for the next 3 to 5 years, Makua would be critical, but beyond that it's foreseeable the training could shift elsewhere?

16:53

A: I think it could. But once again, that's something that the state government needs to take on and determine. If they want to take the responsibility for expending \$8 million to \$12 million a year in sustaining the cultural and natural preserve that we do at Makua. 17:07

Q: But you think possibly 5 years or more down the line, you think the area here (at Schofield and Pohakuloa) would be to the point that you'd have the room to be out of Makua?

A: We'll have to do the analysis and see, but certainly we should take a look at that. From our perspective, 2029 is the (longest-term) day. But it's always worth revisiting.

Once we get all of the things in place we have going on at Schofield and Pohakuloa, it would be reasonable to me to think we could take another look at it.

* * *

21:43

Q: What you discussed today is not common knowledge yet -- that you're looking for alternatives to Makua in the 5-plus-year range. Do I understand you right -- no need to hold on to Makua forever if you find

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other alternatives.

22:04

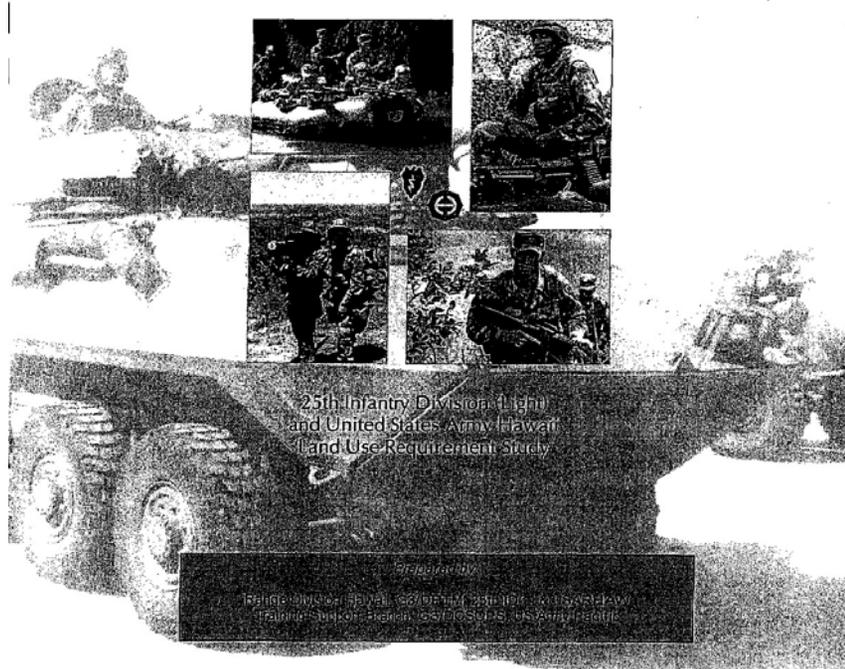
A: I said that once all the projects are finished here at Schofield
22:06 in the next 3-5 years, it would be worthwhile to take a look and
see if Makua is still necessary for the ultimate training for our
forces. 22:15

Comments

Responses

RANGE AND TRAINING LAND PROGRAM

LAND USE REQUIREMENT STUDY



Comments

Responses

RANGE AND TRAINING LAND PROGRAM
LAND USE REQUIREMENT STUDY



25th Infantry Division (Light)
and United States Army Hawaii
Land Use Requirement Study

Final Submittal
April 2003

Prepared by
Range Division Hawaii, G3/DPTM, 25th ID(L) & USARHAW
Training Support Branch, G3/DCSOPS, US Army Pacific

Comments

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PART 1 – EXECUTIVE SUMMARY

There are significant shortfalls in live fire ranges for the 25th ID (L) and USARHAW for virtually all required ranges except for the 10 / 25 meter range and indirect fire facilities. While the existing ranges (except for urban operations facilities) can meet current training requirements they are considered as shortfalls due to a lack of modernization or the inability to support future throughput requirements. The 25th ID (L) and USARHAW RPLP Development Plan provides further analysis and recommendations to resolve these shortfalls.

ES.2.3 Conclusions

There is a significant shortfall in the quantity of training land in Hawaii. There are some workarounds to this training land deficiency. For example, each year, battalion and brigade size task forces of the 25th ID (L) conduct deployment exercises in Australia, Thailand, Japan, and South Korea. In addition, other maneuver areas in Hawaii are obtained on a case-by-case basis from private landowners, estates, United States Air Force (USAF) and United States Marine Corps (USMC) resources, and state owned lands. Rotations to the National Training Center (NTC) and Joint Readiness Training Center (JRTC) also provide added training opportunities. These deployments are part of standard operating procedures for Hawaii-based Army units, but assist to partially compensate for the training land shortfall.

One of the major benefits that are derived from the separation of 25th ID (L) and USARHAW training area between the Islands of Oahu and Hawaii is not clearly conveyed in the land use requirements study (LURS) statistics. The major training area for 25th ID (L) and USARHAW is PTA. This training site is 175 nautical miles from Oahu, the home station for most assigned forces. Generally speaking, an assigned maneuver battalion deploys to PTA once annually for approximately 30 days of training. The movements between these geographically separated islands provide outstanding training opportunities. A light infantry training exercise to PTA is truly a challenge in deployment involving land, sea, and air moves. Most large size cargo is shipped on assigned Army vessels. The balance of a Legacy battalion moves from Hickam Air Force Base to Hilo, Hawaii. Upon arrival on the Island of Hawaii, troops are moved by ground transportation the 40 miles from the airport to PTA. Their equipment is moved over an off-road trail, or by public road, from the seaport of Kawaihae to PTA. This training area is remote and supports most live fire scenarios. On conclusion of the training period, the return to home station is accomplished in the same manner as described for movements to PTA. The deployment / redeployment execution associated with one of these exercises adds to a realistic training scenario based on the units' mission essential task list (METL).

In this era of defense budget cutting and increasing unit training costs, transportation expenses have dramatically escalated. Barge and air travel costs to transport troops and equipment from Oahu to PTA have increased significantly in recent years. To maintain operational readiness of 25th ID (L) and USARHAW units, funding must keep pace with inflation and price increases to meet these transportation requirements.

Letter O3

Comments



**The Chamber of
Commerce of Hawaii**

*Since 1850
Celebrating 155 years of serving the Business Community*

September 20, 2005

Mr. Gary Shirakata
US Army Corps of Engineers
Honolulu Engineer District, Building 230
Fort Shafter, Honolulu 96858-5440

Dear Mr. Shirakata:

O3-1

The Chamber of Commerce of Hawaii commends the U.S. Army for a well-documented Environmental Impact Statement on military training activities at Makua Military Reservation.

We have reviewed the draft report and believe that the Army has completed a fair and complete review of its continued use of Makua Military Reservation as a company-level live fire training range. The report appropriately addresses the potential impacts on the environment and historic cultural artifacts and sites, and offers remedies and practices to ensure that it meets with the requirements of the National Environmental Protection Act.

We are a Nation at war and it is imperative that our troops be the best trained and equipped in the world. The combat troops stationed in Hawaii have been deployed to combat zones in Iraq and Afghanistan, and are scheduled to be deployed again in the coming days and months. We cannot afford to send them in harm's way without the proper training under the most realistic conditions.

The Chamber recommends the EIS be approved and that training be resumed as soon as possible.

Sincerely,

Jim Tollefson
President & CEO

Responses

O3-1

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process.

Letter O4

Comments

From: Vicky Takamine [vicky@hawaii.rr.com]
Sent: Thursday, October 06, 2005 10:27 AM
To: Makua EIS, POH
Subject: Makua EIS

Aloha,

O4-1 | 'Ilio'ulaokalani Coalition submits this testimony in **strong opposition** to the military's use of Makua for military training and bombing exercises.

'Ilio'ulaokalani Coalition is an island wide grassroots organization comprised of *kumu* (master teachers) and *loea* (cultural experts) whose purpose is to link and apply traditional Hawaiian cultural principles, practices and skills to effect educational, social, environmental and economic change for the betterment and advancement of native Hawaiians and the community at large. 'Ilio'ulaokalani is committed to cultural endeavors, political activism, and consensus building.

O4-2 | Your draft EIS clearly indicates and acknowledges that there will be "significant and unmitigable" impacts of fire, loss of native forest and species, release of more toxic chemicals and unexploded munitions, destruction of cultural sites, and obstruction of the community's land use plans. We want these lands returned to our people in pristine condition. This will not be possible if we continue with the attacks on our lands as we have clearly seen at Kaho'olawe and Waiahole. We want these actions stopped now and we want the military to clean up the hazardous materials and ordinances on our 'aina.

O4-4 | This is also a very different proposal that was shared with the community over a year ago. In addition, the Army has not completed the required cultural site surveys. For all of these reasons, we voice our strong opposition to the use of our 'aina and the militarization of our islands.

Thank you,

Vicky Holt Takamine
 Pres. 'Ilio'ulaokalani Coalition
 PO Box 17309
 Honolulu, HI 96817

Responses

O4-1

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process.

O4-2

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process.

O4-3

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process.

O4-4

No proposal for training at MMR was circulated a year ago. While the alternatives have been further developed since scoping was conducted in 2002, it is within the Army's discretion to modify its proposed action as it continues to define its training needs. The EIS was prepared in accordance with the National Environmental Policy Act and with applicable federal and Army regulations. Review of the Draft EIS by the US Environmental Protection Agency found the document to be adequate.

O4-5

Surface surveys have been completed for the entire area within the south firebreak road except for those areas containing improved conventional munitions. Surface surveys have also been undertaken for the majority of the surface danger zone of the 105mm round. Surface surveys have also been undertaken for the Ukanipo Heiau complex, Koiahi Gulch and almost all of Kahanahaiki Valley. This coverage is reflected in Figures 3-24 and 3-25 in the Draft EIS.

Comments

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(Cont.)

O4-5

Subsurface testing has been undertaken in Sites 4243, 4244, 4245 and 4246. This testing showed there is a subsurface component to these sites; however, this limited testing resulted in protests from two Native Hawaiians due to the invasive and destructive nature of the testing.

An additional subsurface archaeological survey was conducted in November and December of 2006. The results of this survey have been incorporated into Section 3.10, and the survey report is included as Appendix G-9.

The Army has completed all surface and subsurface archaeological surveys consistent with NEPA and the settlement agreements with Malama Makua.

Letter O5

Comments



Wild Dolphin Foundation

Wild Dolphin Foundation
87-1286 Farrington Hwy.
Waiʻanae, HI 96792
Tel: 808.306.3968
FAX: 808.668.4075

Oct. 6, 2005

**25th Infantry Division (Light)
US Army, Hawaii**

RE: DEIS MILITARY TRAINING ACTIVITIES AT MĀKUA MILITARY RESERVATION, HAWAII

Items relevant to Marine Life reviewed by Tori Cullins, Wild Dolphin Foundation, Director

The Army has prepared this Environmental Impact Statement (EIS) to address the potential direct, indirect, and cumulative environmental impacts associated with the proposed operational use of Mākuā Military Reservation (MMR) for live-fire military training.

Marine Fauna

Edits:

O5-1 | Pg 3 -737 Fourth paragraph "This side of O'ahu is ~~usually~~ in the lee of prevailing northeasterly trade winds." If the trades are blowing, its in the lee, by definition.

O5-2 | Pg 3 -737 "Humpback whales (*Megaptera novaeangliae*) may occur with an increased frequency as their season progresses from January when their numbers are low, through their peak in mid-February and March, then declining again toward April, when they begin their migration northward." "Whale season (when whales are seen on a predictable, almost-daily basis)" for the Waiʻanae Coast is typically mid-December through mid-January. You may also consider using *novaeangliae* spelling rather *novaeanglia*.

O5-3 | Pg 3 -737 last paragraph, *Stennella* is correctly spelled *Stenella*

O5-4 | Pg 3 -735 Third paragraph, "Spinner dolphins typically come into shallow nearshore waters during early morning and late afternoon periods to rest and socialize, then move further offshore in the late afternoon or early evening to forage." This sentence is contradictory. Dolphins rarely if ever come into the resting grounds in the late afternoons. It is correct that they are usually moving offshore at this time.

Comments: An EIS is specifically a disclosure document. However, while the DEIS document is voluminous there are specific details missing. The most outstanding seem to be on cumulative impacts as required by NEPA and concerning unfinished studies.

O5-5 | While the cumulative impacts of other projects in the area seem to have been addressed (with at least one

Responses

O5-1

This text in Section 3.9.5 of the EIS has been revised to provide clarification.

O5-2

Section 3.9.5 of the EIS has been revised to clarify humpback whale occurrence in Hawaii and in the region of influence as suggested. However, without documentation or systematic surveys done off the Waianae Coast to corroborate this information, this temporal sighting data is considered anecdotal. Also note, there is no discernible difference in the spelling change requested for the Latin name.

O5-3

The EIS has been revised to correct this error.

O5-4

The text in the EIS has been revised to provide clarification.

O5-5

No cumulative impacts from chemicals of concern at MMR are expected based on the results of the hydrogeologic investigation. See Chapter 3, Chapter 5 and Appendix G of the EIS. The Army prepared another study of the marine resources for the muliwai and Makua Beach near shore area, published in 2007. The 2007 report indicates that based on the analytical data, it does not appear that training activities at MMR contribute to contaminants detected in the marine resources.

Comments

- O5-5 | glaring exception), there doesn't appear to be mention of the cumulative impacts of toxins added to the environment. There doesn't appear to have been a study done on the nearshore Region of Influence ROI, while there is there mention of plans *not* to do so
- O5-6 | Although Kelly Benoit-Bird is listed within the Chapter 8 Consultation and Coordination, her name was not found to mentioned either within the document nor in the references. This is unfortunate as a recent study of hers, published on 2001, documents that the prey of the resident spinner dolphins (and other marine mammals) moves not only upwards in their diurnal migration, but that they also move nearshore.
- In fact the fish, shrimp and squid found in this mesopelagic community come within a ½ mile of shore, possibly putting them right into Mākua's ROI. If it cannot be ruled out that this layer is feeding in the Mākua ROI, given the bioaccumulation capacities of marine mammals, it would seem imperative that studies be conducted to determine the toxicity of the food matter there.
- For instance, shrimp feed on detritus and thus have access to heavy metals, polychlorinated biphenyls (PCBs), persistent organic pollutants (POPs) such as heptachlor - believed to be responsible for the decline of several wild bird populations - or other toxins found at the depths of nearshore Mākua. Without knowing what is presently there, how can it be determined not a "significant impact" to add additional loads?
- Appendix G-3 describes the muliwai as breaking through to the ocean with significant rain or flooding. In a dry area, heavy rain delivers a concentrated flush of toxins rather than the slow leaching found elsewhere. By the DEIS's own documentation, the heaviest dose of toxins contained in the ground would go directly into the ocean. Along with this is the toxic ash from MMR fires or explosives blowing over the ocean. Here it is possible for toxins to be taken into the food chain (especially by filter feeders) and bioaccumulated upwards. Not only in marine mammals does this occur but fatty fish, such as prized ahi and aku.
- It is hard to determine if contamination studies done to date have been adequate. Likewise there is not time to look over raw data, rather than reports, for determinations. However since even these studies show that leakage of contaminates has occurred, it is prudent to follow precautionary principals - not to add to the chemical loads already found.
- O5-7 | The endangered sperm whale has recently been found to carry heavy loads of toxins (Sperm Whales Bear Testimony to Worldwide Pollution, Science magazine, Aug. 2005). While Table 3-23 lists sperm whales likely to be found only in deeper waters (and later said not possible to be found in the MMR ROI, pg 3-156), we had a young female visiting our coastline for over 10 days in shallow water during Aug. 2005 (Honolulu Advertiser Aug. 17th, and personal communications). The first reported sighting was nearshore off of Ohikilolo Ranch heading south in less than 40 fathoms of water. If she came from Mākua, which seems likely, she would've at least passed through the ROI.
- We have seen some strange diseases among the spinner dolphin pod these past few years. They may not directly be caused by activities at Mākua. But it may certainly be caused by a cumulative effect of the use of the Wai'anae coastline as a dumping ground for the fly ash of the Kahe Power Plant, smoke from Kahe, oil refineries and cement kilns at Campbell Industrial Park (which has shut down public schools in the area) is designed to disperse over the ocean. However, exudates often blow right up the coastline in Kona weather.
- Pig farms, agriculture, sewage plants, naval weapon magazines, golf courses, ad nauseum, up to global influxes such as contaminated dust from Asia, all contribute to the failure of the ocean to recuperate as it was able to years ago. Likewise, the immune systems of ocean inhabitants become compromised. Here are a few occurrences that we have documented in the past couple of years.

Responses

- O5-6
Citation for references authored by Kelly Benoit have been added to Section 4.9.5 of the EIS. The complete Marine study is found in Appendix G and has been prepared in accordance with NEPA requirements.
- O5-7
Section 3.9 and Appendix H-3 addressed sperm whale strandings, year round acoustic records, and incidental individual sperm whales documented off Oahu. Regular occurrences of sperm whales in the ROI are unlikely, and the individual occurrence that the commentor cited is recognized as an incidental transient.

Comments



Fungal disease



Parasites



Deformities

O5-8 While the DIES reports anecdotal (regular-seasonal in my experience) sightings of monk seal haul outs at Mākuā Beach, the last one I know of was over a year ago, May 2005. While Sea Turtles are not documented to be nesting at Mākuā at this point in time, this does not mean they haven't historically. Dave Gulko, Hawaii State Dept. of Aquatic Resources, reported in an assay of Mākuā Beach that MMR beach area is conducive to turtle nesting and likely was used in the past for these purposes.

Appendix G-5

O5-9 Pg 10 "The 50 percent TM criterion was based on experiments with terrestrial mammals, which had been exposed to detonations (in water). This recognizes that a "TM rupture *per se* is not necessarily a serious or life-threatening injury, but is a useful index of possible injury that is well correlated with measures of permanent hearing loss." The EFD associated with 50 percent TM rupture was established as 1.17 in-lb/in2 (20.44 millijoules/cm2 or about 205 dB re 1 μPa2-s)." Using values extrapolated from air-adapted

Responses

O5-8

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process.

O5-9

The derivation of the 50 percent TM criterion from terrestrial animals was done for the U.S.S. Seawolf and U.S.S. Churchill Ship Shock Trial FEISs, as discussed in Appendix G. These documents have set the standard for underwater explosive criteria that have been approved by NOAA Fisheries, undergone extensive public scrutiny and have remained the standard criteria since about 2000. All US Navy environmental compliance documents that cover underwater explosives/explosions since 2000 have used these criteria. These data (i.e., the terrestrial animal data) are currently the best scientific data that are available for underwater explosive analysis.

Comments

Responses

O5-9 terrestrial mammals to generalize for water-adapted marine mammals seems shaky at best. Sound propagation paths to the middle and inner ear are very different between cetaceans and land mammals. Air-adapted listeners lose around 30 dB of sensitivity underwater. At a minimum, a caveat acknowledging this should be included. Alternatively, a more detailed rationale must be presented to make the case for adopting the 205 dB re 1 μ Pa²-s criterion (Marc Lammers' comments on: "Underwater Acoustic Analysis of Potential Impacts from Covering Live-fire Training and Combined Arms Live-fire Exercises (CALFEX) at the Mākua Military Reservation (MMR). July 2004.")

O5-10 Please see response to Comment O5-9.

O5-10 Pg 11 "A re-evaluation of the results in these studies has produced an as yet unpublished (either in peer reviewed scientific papers or as Regulator/NMFS-reviewed environmental compliance documents) estimate of 190 dB as a threshold for changes in behavior." This is also shaky given that these criteria have not yet been accepted. The most appropriate reference in this case is the work by Finneran et al (2000) who examined the behavioral response of captive bottlenose dolphins and beluga whales to explosion sounds. While they do not provide thresholds in dB, they say that "...disruptions of the animals' trained behaviors began to occur at exposures corresponding to 5 kg at 9.3 km and 5 kg at 1.5 km for the dolphins and 500 kg at 1.9 km for the beluga whale." A conversion of these data into dB threshold values would provide a stronger scientific argument. I would still question whether data obtained for bottlenose or beluga are applicable to spinner dolphins and whether free-ranging animals will have the same threshold as captive animals accustomed to sound exposure, but at a minimum the argument would be based on scientific data rather than on as-of-yet unaccepted criteria. (Marc Lammers' comments on: "Underwater Acoustic Analysis of Potential Impacts from Covering Live-fire Training and Combined Arms Live-fire Exercises (CALFEX) at the Mākua Military Reservation (MMR). July 2004.")

O5-11 The level of management and onsite staff is directly related to the level of activity at MMR. If no training or other activities are planned, there would be no need for permanent staff. In addition, Section 4.14 discusses wildfire impacts under the No Action Alternative.

We look forward to seeing the results of the actual hydrophonic study.

O5-11 *No Action Alternative:* It is unfair to assume that Mākua will be unattended, and hence more prone to fire, if the No Action Alternative is used.

O5-12 The dive survey found no globules in the ocean, but one was found on Makua Beach and examined. It was determined to be material from aluminum cans and not toxic. This was discussed in Section 3.11.4 of the Draft EIS.

O5-12 *Impacts on marine wildlife and coral ecosystems from runoff:* pg 4-123, "The Army's 7th Dive Detachment found no evidence of any contamination on the ocean bottom just off Mākua Beach (Figure 3-27). Divers looked for metal globules reportedly covering the ocean floor in the area but found nothing resembling that description (see related scoping comment in Appendix B- 2, Public Meeting Summaries). Thus, there is no evidence of any contamination on the ocean bottom just off Mākua Beach" One cannot assume that since globules were not found that globules are not present. The DIES notes extensive sandy bottomed areas of the ocean bordering Mākua Valley, sand is known to shift seasonally, also with changing currents and tides.

We at the Wild Dolphin Foundation recommend that complete disclosure be given in the DEIS for MMR training activities in regards to toxicities in the fronting oceanic habitat (ROI) and cumulative effects of historic toxic inputs (ROI), to include the cumulative effects of any toxins that may be affecting the area. Please keep in mind that Dilution is no longer the Solution.

Sincerely,
Tori Cullins
Director, Wild Dolphin Foundation

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