Comments

227), the DEIS states that munitions residues and shell casings are often left on-site for extended periods of time and that these may leach out metals including Pb, Sb, Ni, and Fe into soils and water. Although most other residues (explosives, propellants) associated with these munitions are expected to be incinerated during firing and detonation, it is also possible that minor amounts remain and that these would be introduced into the environment at MMR. The DEIS is straightforward in identifying this potential contamination risk, although it is not quantified. The Army should incorporate within the DEIS any available findings from studies of post-detonation residues. Such information should be used to predict and estimate the levels of these contaminants that would result from the activities proposed by the Army.

I4-43

I4-44

The DEIS notes on page 3-230 (section on Chemicals of Concern Used in Training) a relatively widespread occurrence of compounds associated with explosives (e.g., DNT, TNT, HMX, RDX, etc.). Locations where these substances have been found include the OB/OD area, berms at Objective Deer, the weather station pan burn area, streambed sediments of Makua stream, the demo pit, and Objectives Wolf, Deeds, and Badger, although it is reported that none of the occurrences was at a concentration above the PRG.

Because Pb (and antimony, Sb) is (are) a common component(s) of ammunition rounds, and because mercury (Hg) fulminate is widely used as an initiator for explosives, it is anticipated that these substances might be more abundant at MMR than in other areas where munitions are not used. Backdrops of firing ranges are particularly prone to accumulation of these materials, although the highly volatile nature of Hg and its compounds suggests that it might be transported away (after firing/detonation) from the training site by predominating winds. The other two elements are much less volatile than Hg although both are relatively volatile when compared to elements such as Ni, Fe, and Cu. Therefore vaporization of some Pb and Sb is also anticipated, although impact of rounds on backdrops typically causes partial melting and fragmentation that typically lead to the accumulation of the materials in the soil. As a result of the above and the potential for these materials to subsequently leach and transport from soils, it is imperative that regular maintenance (and monitoring) be performed to ascertain that contamination not become an issue. The DEIS states that the presence of Pb can result in noncompliance with the Safe Drinking Water Act (SDWA) and/or Section 7003 of the Resource Conservation and Recovery Act (RCRA), although it also states that the US Army claims that such environmental authority does not reach active ranges. As a personal opinion, however, I would argue that legality is not an issue here and that the US Army should be obliged to evaluate impacts to the human environment as part of the EIS process. The DEIS also states that it is the position of the US Army that "prevention is the best course of action in an uncertain regulatory environment", and that guidance documents have been developed (USAEC, 1998) to provide "range managers and military and environmental personnel with management practices that minimize adverse effects to human health and the environment from small arms range operations." The DEIS further states that results of the hydrogeologic investigations reveal that the abundance of Pb throughout the MMR area is less than might have been anticipated. **Although this may be true as stated, it should be borne in mind that the sampling**

I4-45

I4-46

9

Responses

I4-43
The Army considered that some explosives would not detonate properly, and explained how unexploded ordnance from training activities is managed. The quantitative estimates of explosives residue take these conditions into account. See Appendix G-2. Minor amounts of explosive may be introduced into the environment, but based on existing studies cited in the Draft EIS, it is unlikely that any additional minor residues would have significant environmental impacts.

I4-44
These studies are cited in the impacts analysis and calculations are presented in Appendix G.

I4-45
This issue is captured by directly sampling the soil for lead and antimony. The results indicate the concentrations were within the acceptable range.

I4-46
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.

Comments

I4-47 **plan for soils/sediments, unsaturated zone water, and groundwater at MMR was inadequate and biased and that results are, therefore, not statistically valid.**

I4-48 **Furthermore, it cannot be ascertained by the aforementioned hydrogeological study that Pb contamination at MMR is indeed not migrating.** A vast body of peer reviewed scientific literature and technical reports describing studies conducted in a wide variety of environments, however, do support the contention that migration of Pb, a highly insoluble and particle-reactive element is unlikely in an environment such as that present at MMR (e.g., Hayes and Leckie, 1986, Irving, 1998; De Carlo and Anthony, 2002; De Carlo et al., 2004, 2005; Beltran and De Carlo, 2005). Should Pb, however, be present as a mobile organic complex, or should the soil be shown to be highly porous and allow

I4-49 penetration of fluids containing colloidal and fine particulate matter, or should erosional transport of particles by surface water be considerable, Pb might be removed from site. The likelihood of any of these possibilities should be considered. The above discussion clearly does not apply to other substances such as propellants and explosives, which have chemical properties that differ substantially from those of Pb.

The DEIS describes the common occurrence of pesticides, primarily herbicides, likely applied by DPW personnel in their efforts to control invasive weeds at MMR. Concentrations of pesticides in analyzed samples, however, are reported to be below the PRG. **Review comments regarding the statistical validity of results, as presented in the paragraph immediately above for heavy metals (e.g., Pb), apply here as well. This is particularly true in light of the report, in the DEIS, of concentrations of pesticides above the PRG in samples collected on 14 February 2003 from Kaiahi Gulch and Punapohaku streams.**

I4-50 On page 3-233, the DEIS refers to the 1994 Haliburton NUS study and the lack of detection in groundwater of a variety of potential pollutants or their detection at levels that were not considered of concern. It should be borne in mind that past review of the Halliburton study has determined that this study was inadequate, and one of the bases upon which the necessity for a full EIS was determined. Hence, although it is acceptable to refer to the study, results of said study cannot be used to support claims that contamination of groundwater does not exist as a result of past activities at MMR. Similarly, reliance on the 1999 Muliwai study conducted by EPA and Hawaii DOH (Baylor 1999) should be avoided, although in this case the study did reveal that concentrations of some metals, notably Cd, Cu and Cr, were above the NOAA Effects Range-low, and Ni, was above the NOAA Effects Range-Medium level. Because concentrations of Cu, Cr, and Ni in the Hawaiian environment are considerably higher than those observed in continental settings where NOAA criteria were developed (e.g., De Carlo and Spencer, 1995, 1997; De Carlo and Anthony, 2002; De Carlo et al., 2004, 2005; and others), the amounts of these metals reported in the Muliwai study are not surprising and have a reasonable probability of being of natural origin and likely pose no significant environmental concern. **The fact that Cd, however, exceeded the NOAA**

I4-51 **Effects Range-low criterion may be of some concern as this element is present in very low concentrations in the uncontaminated Hawaiian environment (e.g., De Carlo et al., 2004; 2005).**

10

Responses

I4-47
Please see response to Comment I4-42.

I4-48
Lead above PRGs was not detected above PRGs or drinking water standards in any of the water samples. If lead were migrating, it would have to show up in at least a few samples collected and analyzed by the laboratory at concentrations of concern. Lead is not a mobile compound in solution, and the EIS' assessment that lead is not a contaminant of concern to off-site receptors is consistent with data from other ranges.

I4-49
Please see response to Comment I4-48.

I4-50
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. The 1994 Halliburton NUS study was used as a reference in the EIS for background information and assessment purposes.

I4-51
The comment refers to the results of an EPA investigation of muliwai sediments described in the Affected Environment section of the EIS, and notes that several metals were found at concentrations above the Effects Range-low (ERL) criteron in reference muliwai sites. The Army performed its own investigation of muliwai sediments, which is described in the EIS. The ERL for cadmium is 1.2 milligrams per kilogram. None of the samples collected in the Army's muliwai sediment investigation exceeded the ERL. In fact, the highest detected cadmium concentration was about one-tenth the ERL. Based on these results, it does not appear that cadmium is a contaminant of concern in muliwai sediments downstream of MMR.

Comments

Page 2-234 of the DEIS describes briefly a more recent (2003) study of Muliwai during which 50 samples were collected and summarizes results of analysis. Of immediate concern is the fact that, although all samples were analyzed for metals and explosives, only a subset of ten (10) samples (and two duplicates) was subjected to a full complement of analyses that included organic compounds. The summarized results indicate that concentrations of metals in the Muliwai samples were within the range observed for samples collected in areas considered to represent background conditions but both As and Cr were present at concentrations above EPA Region IX PRG. The presence of Cr above the PRG latter is likely of no concern, given the high abundance (both absolute and relative) of Cr in the Hawaiian volcanic environment, however, exceedance of the As PRG may be of potential concern. Nearly all samples contained BTEX compounds, and a number of other organic compounds were detected in a significant number of the samples. The origin of the contaminants in question, however, remains quite uncertain.

I4-52

I4-53

I4-54

The DEIS states in Section 4.7.3 Summary of Impacts (to water resources) that there is no anticipated (negative) impact of the project alternatives on surface or ground water although uncertainty exists with respect to tap water PRG for RDX. The DEIS further states that the "Army has adopted a conservative approach to evaluating this impact" and intends to conduct monitoring activities to evaluate surface water quality. **Although this might seem, at first glance, to represent good environmental stewardship on the part of the Army, it should be remembered that the current state of evaluation is quite uncertain and that a statistically valid evaluation of whether RDX and similar compounds are widespread and/or have migrated has not been conducted to date. There is, therefore, no current basis for determining that no significant impact is anticipated from the proposed activity. This should not be interpreted as an opinion on whether a significant impact is likely, but, rather, an opinion that investigations to date have been insufficient to determine whether contamination of water resources is likely on the basis of the potential for compounds such as RDX to migrate.**

I4-55

I4-56

The summary table on page 4-72 indicates that a significant impact, although mitigable to insignificance, may arise from the proposed activities with respect to surface water quality through soil erosion. Although statistical coverage is lacking for both the soil and the water quality sampling programs, the evaluations regarding potential for erosion are likely reasonable. Less than significant impacts to ground water quality are also anticipated under all proposed alternatives according to this summary table**. It is the latter entry, which, in our opinion, is potentially inaccurate, because it remains impossible, to date, to ascertain that certain substances do not or will not migrate to ground water resources and pose a contamination threat. The DEIS further states that, should proposed monitoring activities reveal "significant impacts" (which are not clearly defined), mitigation measures would be undertaken. This statement suggests that the Army remains uncertain as to the potential impacts of their proposed activities on ground water resources. Therefore further study should be undertaken to ascertain whether any significant impact is anticipated.**

I4-57

I4-58

11

Responses

I4-52
All of the samples were analyzed by the laboratory for the most likely chemical constituents of concern (metal and explosives), with a subset that included other possible contaminants of concern. In addition, the surface water sampling and groundwater sampling was analyzed for a full complement of constituents. The data sets (soil, surface water, and groundwater) complement one another, and support the assessment that contamination is not impacting off-site receptors from MMR.

I4-53
Arsenic is not likely to have been introduced as a result of military training. Arsenic concentrations on Oahu are known to be high in agricultural areas, but the source of any introduced arsenic at MMR is not certain. BTEX (benzene, toluene, ethylbenzene, xylene) is likely the result of use of small engines for weed management equipment. The observed concentrations are low and of no environmental significance.

I4-54
Pleas see response to Comment I4-53.

I4-55
Sampling was conducted of soil, surface water, groundwater with no pattern of contamination impacting off-site receptors shown. If there was widespread RDX or any other compound migrating to off-site receptors, some portion of the samples analyzed by the laboratory would have contained levels of these compounds; this is not the case.

I4-56
Please see response to Comment I4-55. The EIS describes the basis for the conclusion that RDX would not have significant impacts on the environment. There are several lines of reasoning used:

Comments	Responses
	(Cont.) I4-56 the quantity of RDX residue remaining after detonation of explosives containing RDX is low; this is supported by the observed lack of detectable RDX in soils or other media; the chemical behavior of RDX (soil water partitioning, low water solubility); the hydrogeologic environment of the site, which is characterized by a thick sequence of fine-grained soils overlying a confined aquifer beneath the impact area; lack of explosives detected in either surface water or groundwater samples; and hydrologic flow and transport modeling results. I4-57 See response to Comment I4-56. The evidence obtained from the baseline studies conducted at MMR, in light of the similarity of past training to future training conditions provides sufficient basis for the conclusions. I4-58 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. Moreover, the evidence available from the hydrogeologic investigation suggests that the impacts would be less than signficant.

Comments

Comments in the DEIS regarding potential for surface water contamination in the event of overland runoff (associated with high rainfall) are only reasonable if it is assumed that material transported and delivered by said runoff has a composition comparable to uncontaminated background soils/sediments. Within the context of MMR as a relatively dry area, where significant runoff events occur at relatively low frequency, the Army appears to reasonably portray the probability of infrequent runoff to streams, streambed sediments, muliwai and the ocean. **Unfortunately, any storm of sufficient intensity to cause widespread erosion and soil runoff at MMR would transport substantial quantities of materials. Therefore it is important to assess accurately the extent of any existing contamination at MMR that might be transported during such an event.**

I4-59

The discussion within Section 4.8.1 of the DEIS describes the methodology used by the US Army to assess impacts. The discussion mentions that PRG assigned by the EPA fall into two categories. One is for residential exposure; the other for industrial exposure. The former assumes that people will be exposed to the given concentrations (in the PRG) over their lifetime (childhood through age 70), while the latter assumes people will be exposed to the given concentrations during their working periods (30 years) only. Although I am not familiar with the numerical values of the given PRG for each category, it seems reasonable to assume that residential PRG would be lower than industrial exposure PRG. Therefore comparison of concentrations of potential contaminants in soils at MMR with PRG for industrial workplace exposure has the potential for painting a more optimistic picture than comparison with residential PRG. This arises because the Army uses the PRG as upper limits and claims that there has been little or no impact from their activities at MMR because the concentrations of potential contaminants observed at MMR fall below the PRG. In summary, comparison of concentrations of potential contaminants present at MMR to PRG for industrial exposure does not seem to be as conservative an approach as the DEIS implies it to be. It is appropriate for the Army to continue monitoring activities in order to ensure that unforeseen impacts do not go undetected. The proposed plan for monitoring activities needs to be carefully assessed, however, to ascertain that it is scientifically valid and of sufficient scope to ensure the detection of unanticipated impacts.

I4-60

I4-61

I4-62

Section 4.8.3 of the DEIS correctly summarizes that unmitigable impacts are likely to result from the various alternatives to proposed activities at MMR relative to soil erosion. It should also be noted that anticipated impacts with respect to soil contamination are reported in the same section to be less than significant. **This claim, in my opinion, cannot be made with reasonable certainty, because the sampling plan for soils was inadequate to evaluate soil contamination and does not allow a statistically valid evaluation of the effect of past activities at MMR or of the potential for future contamination.**

I4-63

The DEIS states that the impacts of fires under the "no action" alternative might be more severe owing to the delayed response to a fire (assuming an absence of personnel at MMR) and that more "fuel" would exist on site (assuming a lack of vegetative

12

Responses

I4-59
The hydrogeologic investigation provides an adequate assessment of the extent of existing contamination, and indicates that only minor quantities of explosives residues would be transported off-site.

I4-60
The residential PRG is not applicable or appropriate for comparison at a military installation in which there is only short-term and intermittent exposure, and no residential use.

I4-61
Please see response to Comment I4-60.

I4-62
The Army thanks you for your comment and appreciates your recommendations and will consider them as it moves forward with the NEPA process. Your comment has been considered and has been included as part of the administrative record for this process.

I4-63
Please see response Comment I4-42.

Comments

I4-64 control), but fails to indicate that the likelihood of a fire is lower under the "no action" option than under any of the other alternatives.

On page 4-95 of the DEIS, a claim is made that concentrations of As and Cr in soils, which exceed the EPA PRG, are likely derived from the occurrence of these elements in natural minerals and that the PRG are therefore inappropriate. Although I agree with this assessment as far as concentrations of Cr are concerned, I disagree with respect to As. **The potential sources of As at MMR should be evaluated further through more carefully and thoroughly carried out investigations.**

I4-65

The potential for impacts to coral reef resources by runoff/introduction of sediment or contaminants from MMR is described beginning on page 4-114. Under the no activity option, reference is made to enhanced runoff potential for soils if a rainstorm occurs after an unattended fire at MMR. It should be kept in mind that the Army's "no action" alternative basically assumes that Makua would be abandoned, with no management regime in place, if no training were to take place. This is unrealistic. If the Army ceased training at Makua, the area would be "excessed," either to U.S. Fish and Wildlife for management as a wildlife refuge or to the State. In any case, active management, including control of fires, would undoubtedly continue.

I4-66

The DEIS correctly indicates that a temporary reduction in coral productivity would occur owing to runoff of soils/sediment from land during/after a rainstorm. Because rainstorms are more likely to occur during the winter months and because wave activity is also greater during this period of the year, impacts from sediment inputs to coral reefs associated with the "no action" alternative are anticipated to be relatively minor as wave activity and the concomitant induced currents would quickly disperse sediments. It is likely that enhanced erosion potential under the other activity alternatives might lead to greater sediment input to the nearshore reefs, but given the infrequent occurrence of runoff events on the leeward coast of Oahu, the potential for impact may be less than significant, excluding major flood events. It is important to remember, however, that major flood events can have substantial impacts on coastal resources, although the extent and duration of impacts are dependent on a variety of parameters. What the impact on living coastal resources would be if a large flood event were combined with extensive contamination in the runoff remains uncharacterized.

I4-67

TIME CONSTRAINTS NECESSITATED STOPPING AT SECTION 4.11 HAZARDOUS WASTES.

REFERENCES

Beltran, V.L. and De Carlo, E.H. Variability of particulate metal concentrations during storm events in streams of a subtropical watershed. Chapter 15 in "Environmental Chemistry", E. Lichtfouse, S. Dudd, S. Robert, Eds. (Springer Verlag), 2005, 153-176.

Responses

I4-64
Section 4.14 of the Draft EIS found the wildfire ignition potential to be less than significant for the No Action Alternative. However, should a fire start, the impacts to environmental resources could be severe. 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. Other human activity in the vicinity of MMR would contribute to the risk of fires. Campfires at the public area on Makua Beach are a significant potential source, as are cigarettes tossed from cars, and arson.

I4-65
Arsenic in soil at or below 20 milligrams per kilogram is considered background by the State of Hawaii Department of Health. Levels of arsenic in soil in all but one samples were below 20 milligrams per kilogram. Arsenic levels in water, also low, with only a few samples above drinking water PRGs. Arsenic is common in the background in Hawaii and many other states; levels reported by the laboratory were not above expected background levels.

I4-66
The Draft EIS represents the level of management that the Army expects to provide in the absence of training at MMR. Because future disposal of the property is not proposed at this time and identifying subsequent uses would be speculative, those actions are not considered components of the No Action Alternative. In addition, any actions beyond those addressed in this EIS would be assessed in a separate NEPA document, as stated on Page 2-8 of the Draft EIS.

I4-67
The model simulates suspended sediment discharge and stream discharge for the 100-year storm event. The EIS identifies soil erosion and sedimentation as a significant impact, that could result from out of control fires.

Comments	Responses
	(Cont.) I4-67 As discussed in response to previous comments, the evidence from the hydrogeologic investigation suggests that there would be no significant impacts from chemical contamination if live-fire training continued.

Comments

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De Carlo, E.H., Beltran, V.L., and Tomlinson, M.S. Composition of water and suspended sediment in streams of urbanized subtropical watersheds in Hawaii. Applied Geochemistry, (2004) 19(7):1011-1037. doi:10.1016/j.apgeochem.2004.01.004

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Hayes, K.F., Leckie, J.O. 1986. Mechanism of lead ion adsorption at the goethite-water interface. In: Davis JA, Hayes KF (eds) Geochemical processes at mineral interfaces. ACS, pp 114-141.

Irving, M.M. 1998. An investigation of reactions among heavy metals and naturally occurring minerals in synthetic and natural stream waters. Ph.D., Dissertation, Department of Chemistry, University of Hawaii at Manoa, Honolulu.

Responses

Letter I5

Comments

FROM: FREDERICK A. DODGE, MD
86-024 GLENMONGER ST.
WAIANAE, HI 96782

TO: ARMY CORPS OF ENGINEERS

RE: MAKUA DRAFT EIS 10-6-05 PAGE 1

I5-1 In spite of all the effort and expense that went into this draft, it is inadequate and fails in at least the following areas.

I5-2 1. You did not adequately explore alternatives to training at Makua. The military's use of Makua is a convenience rather than a necessity. For example Schofield could be used. The expense of setting this up would be offset by the savings in the cost of transportation of troops, equipment, munitions, etc. The EIS lacks adequate cost analyses in general.

I5-3 2. You failed to complete contamination studies required under paragraph 6a of the Settlement Agreement of October 4, 2001. Hydrological investigations are incomplete. There is no testing of biological receptors in the valley, muliwai and ocean. The Makaha Valley aquifer must be tested for the
I5-4 chemicals of concern, including RDX and HMX, Dioxin, PCB's, Thallium, lead, aluminum, chromium (including chromium 6), iron, arsenic, benzene, and pesticides, especially Heptichlor

I5-5 3. You failed to complete the surface and subsurface Archeological surveys as required under the Settlement Agreement—and as requested by the community during scoping.

I5-6 4. The relationship between the Stryker Brigades, transformation, and Makua needs to be elucidated in detail. This must include but is not limited to the effect of the Stryker vehicle on Makua and on our roads.

Responses

I5-1
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.

I5-2
The EIS considered other alternatives in Section 2.5. The EIS now includes evaluation of an alternative in which training proposed for MMR would be conducted at the Pohakuloa Training Area, island of Hawaii (See Chapter 2 for a description of this alternative). This alternative was added in response to public comments received on the Draft EIS. Use of MMR, however, remains the preferred alternative.

I5-3
The Army conducted additional field work in August 2006 and completed the marine resources study in January 2007. A copy of this report is included in the EIS as Appendix G-8. Based on the results in the 2007 report, it does not appear that training activities at MMR contribute to contaminants detected in the marine resources.

I5-4
A review of the results of the hydrogeologic investigation (Appendix G-3) shows that groundwater beneath the training area in Makua Valley is moving to the west, away from Makaha Valley. Because Makaha Valley is not downgradient of the training area, it could not be impacted by activities in Makua Valley.

Comments	Responses
	I5-5 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. 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. I5-6 MMR is important to military training in Hawaii, and thus SBCT forces would use MMR if the ranges were available after completion of the MMR Final EIS and ROD. The SBCT EIS, Chapter 2 (page 2-43), section on Combined Live-Fire Maneuver Training, addresses how SBCT forces would conduct dismounted training to include company-level CALFEXs. The MMR EIS contains an analysis of the potential environmental impacts associated with dismounted CALFEXs for current forces and the SBCT (see Chapter 5).

Comments

TO: Army core of Engineers—page 2

From: Fred Dodge, MD

RE: Makua Draft EIS

DATE: October 6, 2005

I5-7 I5-8 I5-9 I5-10 5. The final report "Cultural Impacts on Traditional Cultural Properties form continued military use of U.S. Army Makua Military Reservation, Wai'anae, Oahu Island, Hawaii" is incorrect and incomplete. The Malama Makua Board was never formally notified, certainly not by letter. Apparently one or two members were informally handed a questionnaire, and responded that the questionnaire was insensitive and the motives behind the questionnaire appeared suspect. We know of no formal written request for us to reword these questions. In addition that is the Army's (or grantee's) responsibility. We are not responsible for a flawed study or miscommunications. As a member of the Board of Malama Makua, I never received any phone calls, e-mails, etc regarding this.

I5-11 6. The same report mentioned under #5 also mentions "…the board of Ka Wahipana O Makua…." Everyone I've talked with has never heard of this name, including Dr. Laurie Lucking. This report is strange to say the least. It needs to be done over again—and done properly.

Responses

I5-7
The Army sent cultural impact assessment survey forms to the public, distributed copies at public meetings, deposited copies at public libraries, and posted notices on public notice boards in the Waianae community. The Army notified interested members of the community that it would consider proposed revisions; however, none were received. The Army will continue to consult with Native Hawaiians having lineal and/or cultural ties to Makua who wish to work with us in the identification, determination of significance and evaluation of sites at Makua.

I5-8
See response to Comment I5-7.

I5-9
See response to Comment I5-7.

I5-10
See response to Comment I5-7.

I5-11
The referenced text could not be found in the Draft EIS.

Comments

Response to the EIS re the Military use of
Makua Valley
Section relating to Socieconomic/ Environmental Justice

The EIS uses Honolulu County data to describe socioeconomic and environmental justice issues. Honolulu County emcompasses the whole island with all its various communities. According to the EIS this was done because this is how data relating to economic activities are collected and compiled (Vol I p. 3-242).

The EIS further goes on to state that the income in the region of influence (ROI) that we are concerned about is $29,000 per capita personal income (PCPI). And that this PCPI exceeds the state and national per capita personal income (Vol I p. 3-242).

I5-12| This is so inappropriate and incorrect that it is outrageous !

In fact, if a serious and concerted effort were made, there is data about the Wai'anae area census tracts in the Census 2000, at the University of Hawaii, and at the Hawaii State Government. There are also private foundations and entities that have relevant data. . There is data about Wai'anae at the Wai'anae Comprehensive Health Center. It's probable that other private nonprofit entities in Wai'anae have data. Wai'anae has been so studied and written up by outside students of various professions that about 10 years ago the community got fed up that it was being studied so much.

Here is some data obtained from the Census 2000 and the State Government of Hawaii relating to Wai'anae that I obtained with the assistance of our state legislator. All of it came from the University of Hawaii website for the Center on the Family. (http://uhfamily.hawaii.edu/Cof-Data/profiles)

The average PCPI in Wai'anae is $13,613. The percent of persons receiving Temporary Assistance to Needy Families (TANF) is 23.4% as compared to 5% for Honolulu County. The percent of persons receiving Food Stamps in the Wai'anae area is 51% as compared to 12.2% in the Honolulu County. Unemployment is nearly 15% as compared to 5% in Honolulu County. Children living in poverty is 32.8% as compared to 13.6 % for Honolulu.

Those of us who live in Wai'anae think these statistics are actually too low. The socioeconomic conditions for many if not a majority, of local Wai'anae people are actually worse. Rents and home prices are so high that many of our friends face homelessness or being forced to live with already crowded families. What's most difficult is the drug epidemic, the violence, and continuing poverty. Those of us who live here don't deny these problems –we work to solve them. But over and above and more importantly than this, is that Wai'anae is still a unique and precious place – with a living Hawaiian culture, aloha, humbleness, generosity, a community that values the hula, the making of leis, the ocean, the mountains, the rocks, our beautiful children and helping

Responses

I5-12
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.

Comments

each other to make something. This is the Wai'anae whose health we are fighting for - whose water, air and environment we want to preserve and to restore.

According to the EIS, the Wai'anae CCD has a poverty level of 21.8%. It also has the highest proportion of Native Hawaiians and other Pacific Islanders in the state at 28.7% vs 9.4%. As such, Wai'anae qualifies for consideration as a "potential Environmental Justice population, subject to the provisions of Executive Order 12898. This Executive Order requires federal programs " to identify and address disproportionately high and adverse health and environmental effects of its programs on minority and low income communities and to identify alternatives"(Vol. p. 3-244).

The EIS looked briefly at alternatives to the use of Makua. There is a short list of alternatives that were considered but eliminated without discussion, in the EIS. There is no explanation why with all the large military landholdings on Oahu alone, none were seriously considered, even when all these holdings except Helemano (which is close) are contiguous to Schofield. This is not to suggest that military training be anywhere in
I5-13 Hawaii—it is only to point out that **no serious attempt** was made to identify an alternative to Makua. Further, Hawaii is but a speck compared to the vastness of the United States continent -- is it justice to rocket bomb, blast, shoot, tear,and burn a
I5-14 sacred valley here in the neighborhood of one of the poorest, yet most native populations in Hawaii ? Here in one of the most beautiful places on earth?

The military first started using Makua Valley with it's emplacements for howitzers in the 1920s. It is now 85 years later ! **Now its own EIS concludes that all of its military alternatives, that is, Alternatives 1, 2, and 3- have significant unmitigable impacts—that is, all are environmentally unjust ! Impacts that will not go away unless there is no military training.**

I5-15 **What's the next step? Find an alternative for military training. Let's us begin the cleaning up and restoration of Makua !**

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Responses

I5-13
The EIS considered other alternatives in Section 2.5. The EIS now includes evaluation of an alternative in which training proposed for MMR would be conducted at the Pohakuloa Training Area, island of Hawaii (See Chapter 2 for a description of this alternative). This alternative was added in response to public comments received on the Draft EIS. Use of MMR, however, remains the preferred alternative.

I5-14
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. In addition, cultural and environmental justice impacts are addressed in Sections 4.10 and 4.12 of the Draft EIS.

I5-15
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.

Comments	Responses