



**SENT VIA ON-LINE COMMENT FORM AND CERTIFIED MAIL**

February 18, 2010

JGPO, c/o NAVFAC Pacific  
258 Makalapa Drive, Suite 100  
Pearl Harbor, HI 96860-3134  
Attention: GMPO  
Online comment form: <http://www.guambuildupeis.us/comments/new>

**Re: Draft Environmental Impact Statement/Overseas Environmental Impact Statement  
Guam and CNMI Military Relocation**

Dear GMPO Officer:

I am pleased to submit the following comments on behalf of the staff and members of the Center for Biological Diversity (“Center”). The Center is a national, nonprofit organization whose mission is to protect and restore endangered species and wild places through science, policy, education, advocacy, and environmental law. The Center has over 255,000 members and on-line activists, some of whom reside and recreate in Guam. We have reviewed the Draft Environmental Impact Statement/Overseas Environmental Impact Statement Guam and CNMI Military Relocation (“DEIS”) and have the following comments.

The proposed action would have considerable effects to the natural environment of Guam, affecting imperiled species and water quality, and would likely have profound and lasting effects on the culture of the residents of Guam. The Navy has a mandatory duty to evaluate the direct, indirect, and cumulative impacts of the proposed action and determine whether there will be unavoidable significant impacts. The Navy has failed to meet the statutory requirements of the National Environmental Policy Act (“NEPA”) and regulations of the Council on Environmental Quality (“CEQ”) because it improperly limited the scope of the DEIS and failed to include sufficient information on alternatives, impacts to cultural resources and social justice issues, and GHG emissions. We are also concerned that the DEIS did not demonstrate the Navy’s ability to come into compliance with the Endangered Species Act and Clean Water Act with regard to the proposed project.

**I. The Navy Improperly Limited the Scope of the DEIS**

CEQ has promulgated regulations to implement NEPA,<sup>1</sup> and they are binding on all federal agencies.<sup>2</sup> NEPA requires agencies to use the criteria for “scope” that is set forth in the CEQ

---

<sup>1</sup> 40 C.F.R. Part 1500.

<sup>2</sup> 40 C.F.R. § 1507.1.

regulations in order to determine “which proposal(s) shall be the subject of a particular statement.”<sup>3</sup> Proposals which are related to each other closely enough to be, in effect, a single course of action, must be evaluated together in a single EIS.

NEPA regulations further define the proper scope of an EIS, and mandate that connected, cumulative, and similar actions be assessed together in a single EIS.<sup>4</sup> Actions are connected if they automatically trigger other actions which may require EISs, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification.<sup>5</sup> Actions are cumulative if they will have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.<sup>6</sup> Therefore, the DEIS should have included some discussion about the contingency of the proposed project on a series of events taking place outside U.S. jurisdiction, in the western Pacific region, namely the relocation of the military base in Okinawa.

NEPA regulations define “direct effects” as those that “are caused by the action and occur at the same time and place.”<sup>7</sup> In this case, “direct effects” include: the taking of endangered species; the destruction of their habitat; the potential destruction of wetlands; the disruption and alterations to the local hydrology; increased sedimentation and runoff effecting local water quality and corals; and direct impacts to the Guam community.

NEPA regulations define “indirect effects” as those that

are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.<sup>8</sup>

In this case, “indirect effects” include the growth-inducing effects of the proposed project, the precedent it sets for future development and destruction of Guam, and the species that rely on habitat there, the longterm affects to already imperiled corals, and the untold affect to water quality. These longterm effects were not sufficiently addressed in the DEIS.

For future projects, only “reasonably foreseeable” projects must be discussed.<sup>9</sup> For the purposes of cumulative impacts, potential projects are reasonably foreseeable if they are “proposed actions.”<sup>10</sup> The DEIS should have treated the development of future training ranges as a

---

<sup>3</sup> 40 C.F.R. § 1502.4(a).

<sup>4</sup> 40 C.F.R. § 1508.25.

<sup>5</sup> 40 C.F.R. § 1508.25(a)(1).

<sup>6</sup> 40 C.F.R. § 1508.25(a)(3).

<sup>7</sup> 40 C.F.R. § 1508.8(a).

<sup>8</sup> 40 C.F.R. 1508.8(b).

<sup>9</sup> 40 C.F.R. § 1508.7.

<sup>10</sup> *Or. Natural Res. Council v. Marsh*, 832 F.2d 1489, 1497-98, (9th cir. 1987), *rev'd on other grounds*, *Marsh v. Or. Natural Res. Council*, 490 U.S. 360 (1989).

reasonably foreseeable project and included them in the DEIS. It also should have included an analysis of the military flight corridor over southern Guam.

## **II. The DEIS Failed to Include Sufficient Information to Satisfy NEPA**

A primary purpose of NEPA is to “guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and implementation of that decision.”<sup>11</sup> “[T]he broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time.”<sup>12</sup> Agencies must make all information regarding environmental consequences available to the public. If the agency fails to circulate this information, then the EIS is insufficient. CEQ regulations state:<sup>13</sup>

The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion.

The DEIS does not provide all available information. For example, the stated purpose of the proposed project lacks specificity with regard to why Guam, rather than Hawaii, California, or some other location, is appropriate. Therefore, there is no basis to determine whether the proposed project would meet the project’s purpose. Another example of not including sufficient information is that the DEIS estimates that the proposed project will generate eight tons of hazardous waste per year, however, the Navy refuses to disclose all of the toxic materials that will be generated and stored by the proposed project.

The CEQ regulations further require:<sup>14</sup>

To the fullest extent possible, agencies shall prepare draft environmental impact statement concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders.

In this case, the Center contacted the Environmental Protection Agency (“EPA”) about its concerns regarding the proposed project. We were informed that the EPA had dozens of experts reviewing the DEIS and that it would not have comments ready for review until the deadline for comment submission. Therefore, it was unable to share its concerns.<sup>15</sup> Similarly, the Navy had not already undergone consultation with the Fish and Wildlife Service (“FWS”) or the National

---

<sup>11</sup> *Robertson v. Methow Valley Citizens*, 490 U.S. 332, 349 (1989).

<sup>12</sup> *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989).

<sup>13</sup> 40 C.F.R. 1502.9(a).

<sup>14</sup> 40 C.F.R. 1502.25(a); *see also* 42 U.S.C. § 4332 (“Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved.”)

<sup>15</sup> Personal Communication with Michael Wolfram Jan. 26, 2010.

Marine Fisheries Service (“NMFS”) so relevant information on impacts to species was not fully available in the DEIS.

The DEIS also does not fully address several concerns raised by the Government Accountability Office (“GAO”). The GAO points out that Guam’s infrastructure is not likely able to meet increased use resulting from the military buildup – including use of roads, fresh water, and sewage treatment – as well as its electric power generation and solid waste collection.<sup>16</sup> Additionally, in May 2008, the Governor of Guam testified before the Senate Committee on Energy and Natural resources that Guam required \$6.1 billion to support the military buildup. Therefore, many of the mitigation measures, and elements of the proposed project itself, are not truly viable options as it is highly unlikely that Guam will be able to cover even a modest portion of these proposed improvements. The DEIS should have provided more information on these issues in order to both provide the reader with information to comment on as well as demonstrate that the decisionmaker will have all the relevant information in making the decision.

#### The DEIS’ Alternatives Section is Inadequate

The alternatives section is the heart of an environmental impact statement.<sup>17</sup> Agencies must therefore rigorously explore and evaluate all reasonable alternatives.<sup>18</sup> An agency may not define a project so narrowly that it forecloses a reasonable consideration of alternatives. The alternatives analysis requires a full examination of a no-action alternative and examination of a spectrum of real options. Section 102 requires agencies to “study, develop, and describe” appropriate alternatives to recommended courses of action. This requirement ensures that the decisionmaker “has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) . . . only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.”<sup>19</sup>

The DEIS does not adequately explore alternatives. For example, the DEIS contemplates limiting training ranges. An alternative of no training ranges on Guam should have been analyzed. Also, in the discussion on noise impacts and mitigation, alternatives should have included limiting training to Monday-Friday from 8am-5pm, as well as building earth berms and other noise blocking devices. Finally, the impacts from Hazardous Materials and Waste for all but the no-action alternative are identical. Providing an alternative with identical impacts defeats the purpose of providing alternatives at all.

#### The DEIS’ Analysis of Impacts to Cultural Resources is Inadequate

The National Historic Preservation Act (“NHPA”) includes provisions that apply to Native American Tribes.<sup>20</sup> Under the NHPA, properties of traditional religious and cultural importance to a Tribe may be determined to be eligible for inclusion on the National Register, and in

---

<sup>16</sup> Letter from Brian Leporte, GAO, to Hon. Jeff Bingamen, Subject: Defense Infrastructure: Guam Needs Timely Information from DOD to Meet Challenges in Planning and Financing Off-Base Projects and Programs to Support a Larger Military Presence. GAO-10-90R Defense Infrastructure.

<sup>17</sup> 40 C.F.R. 1502.14.

<sup>18</sup> 40 C.F.R. 1504.14(a); *see also Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 812-13 (9th Cir. 1999).

<sup>19</sup> *Calvert Cliffs Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109 (D.C. Cir. 1971).

<sup>20</sup> 16 U.S.C. § 470(a)(d)(6).

carrying out its responsibilities under Section 106 of the NHPA, federal agencies must consult with any Native American Tribe that attaches religious and cultural significance to these properties.<sup>21</sup>

It is significant to note here that Congress has not determined the civil rights and political status of the native inhabitants of Guam. Therefore, there is inherent conflict with the underlying assumption that the Navy can even use the base and lands of the Chamorro since their political status has not been decided and they are in essence without a voice. However, the Navy should treat the Chamorro as a Tribe for the purpose of NHPA compliance.

There are numerous inadequacies in the DEIS with regard to cultural resources. First, the use of the Pagat site as a firing range is simply unacceptable. The land is owned by the Chamorro Land Trust, and it is an important archaeological site that contains remains of ancient Chamorro buildings – latte stones. This site is a nationally registered archaeological site. No amount of mitigation will suffice. Also, Mount Jumullong Manglo is considered a holy mountain by the Chamorro and many residents pilgrimage there every year on Good Friday. The proposed project would also destroy hundreds of acres of jungle – an area where Chamorro gather native plants used in traditional medicine. The DEIS did not adequately address these issues.

Further, not all cultural resources are described in the DEIS, such as Cepeda Chamorro family ranch and Taitano Chamorro ranch, and cultural resource surveys have yet to be completed. The DEIS also does not address impacts to Guam’s culturally important species.<sup>22</sup> The Navy has not complied with NEPA or NHPA until it addresses these issues.

<b>List of Guam’s culturally important species Latin name</b>	<b>Chamorro name</b>	<b>English name</b>
Acanthuridae (family)	hugupau	surgeonfishes (many kinds)
<i>Acanthurus guttatus</i>	hamoktan	white-spotted surgeonfish
<i>Acanthurus lineatus</i>	hiyok	striped tang
<i>Acanthurus triostegus</i>	kichu	convict tang
<i>Bulbometopon muricatum</i>	atuhong	large bumphead parrotfish
Carangidae (family)	i' e'	immature skipjacks (< 10 cm)
Carangidae (family)	mamulan	mature skipjacks (> 90 cm)
Carangidae (family)	tarakitu	mature skipjacks (25-90 cm)
<i>Chanos chanos</i>	bangus	milkfish
<i>Cheilinus</i> spp. or Scaridae (family)	palaksi	wrasses or parrotfish < 50 cm

<sup>21</sup> 36 C.F.R. § 800.1.

<sup>22</sup> List of Guam’s culturally important species from Alison Palmer’s *Assessment of Natural Resource Management Needs for Coastal and Littoral Marine Ecosystems (CLME) in Guam*, p. 300, Table 6; List of Medicinal Plants of Northern Guam Limestone Forest and Beach Stand from Hope Cristobal, Adjunct Professor of Guam History at University of Guam.

<i>Cheilinus undulatus</i>	tangison	giant wrasse (humphead)
<i>Coryphaena hippurus</i>	botague, mahimahi	dolphinfish
<i>Elagatis bipinnulatus</i>	achemsom	small rainbow runner
<i>Etelis coruscans</i>	onaga	onaga
<i>Hipposcarus longiceps</i>	gulafi	yellow longnose parrotfish
Holothuroidea (family)	balaté	sea cucumber
<i>Katsuwonis pelamis</i>	bonito	skipjack tuna
Kyphosidae (family)	guili	rudderfishes
Lamniformes (family)	halu'u	sharks
<i>Lethrinus elongatus</i> , <i>L. rubrioperculatus</i> , <i>L. xanthochilus</i>	lililuk	grey emperors
<i>Lethrinus nebulosus</i> , <i>L. harak</i>	mafute'	emperors
<i>Makaira mazara</i>	marlin	marlin
Mugilidae (family)	laiguan	any mullet
Mullidae (family)	ti'ao	immature goatfish (< 10 cm)
<i>Naso lituratus</i>	hangon	orangespine unicornfish
<i>Naso</i> spp.	tátaga'	mature unicornfish
Scaridae (family)	laggua	parrotfishes (> 50 cm)
<i>Selar crumenophthalmus</i>	atulai	small bigeye scad
Serranidae (family)	gadoa	groupers
Siganidae (family)	hiteng	rabbitfish (> 20 cm)
Siganidae (family)	mañahak	immature rabbitfish (< 5 cm)
Siganidae (family)	seyun	rabbitfish (10-20 cm)
<i>Siganus argenteus</i>	mañahak lesu	immature forktail rabbitfish
<i>Siganus spinus</i>	mañahak ha' tang	scribbled rabbitfish (< 5 cm)

Medicinal Plants of Northern Guam Limestone Forests and Beach Stand

CHAMORRO NAME	SCIENTIFIC NAME	COMMON NAME
1. Alalak abubu	<i>Stictocardia tiliifolia</i>	Crimson morning glory
2. Amot haga'	<i>Crataeva speciosa</i>	Crataeva (caper)
3. Agaga	<i>Melothria guamensis</i>	None
4. Agate'lang	<i>Eugenia palumbis</i>	None
5. Ahgao manila	<i>Premna obtusifolia</i>	False elder
6. Akangkang	<i>Caesalpinia major</i>	Hawaii pearls
7. Alaihai	<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>	Beach morning glory
8. Ilangilang	<i>Cananga odorata</i>	Ylang Ylang
9. Atmahayan	<i>Pipturus argenteus</i>	Silvery pipturus
10. Anonas	<i>Annona reticulata</i>	Custard apple
11. Apasoti	<i>Chenopodium ambrosioides</i>	Wormseed

12. Aplokateng	<i>Psychotria mariana</i>	Psychotria
13. Atmagosun halomtano'	<i>Momordica charantia</i>	Bitter melon
14. Alum	<i>Melanolepsi multiglandulosa</i>	None
15. Amot tumaga'	<i>Cassia occidentalis</i>	Ant bush
16. Banalo	<i>Thespesia populnea</i>	Pacific rosewood
17. Batbena	<i>Heliotropium indicum</i>	Wild clary
18. Bayoggon dangkulu	<i>Entada phaseoloides</i>	St. Thomas bean
19. Bayoggon dikiki', gaye'	<i>Mucuna gigantea</i>	Small sea bean
20. Botdologas	<i>Portulaca oleracea</i>	Purslane
21. Chachakchak	<i>Mariscus javanicus</i>	Sedge
22. Da'ok	<i>Calophyllum inophyllum</i>	Palomaria
23. Dadangse'	<i>Urena lobata</i>	Cesar weed
24. Derris	<i>Derris elliptica</i>	Derris
25. Eskobiya	<i>Sida rhombifolia</i>	Broomweed
26. Fofgo	<i>Ipomoea hederacea</i>	Ivy leaf morning-glory
27. Gaogao Uchan	<i>Phyllanthus marianus</i>	Phyllanthus
28. Gagpag	<i>Tacca leontopetaloides</i>	Polynesian arrowroot
29. Gaso'so'	<i>Colubrina asiatica</i>	Asian nakedwood
30. Galak fedda'	<i>Asplenium nidus</i>	Bird's nest fern
31. Hamlak	<i>Callicarpa candicans</i>	Beautyberry
32. Hunek	<i>Tournefortia argentea</i>	Tree heliotrope
33. Ka'mang tasi	<i>Abelmoschus sp.</i>	Muskmallow
34. Katson	<i>Stachytarpheta cayennensis</i>	Blue rat's tail
35. Kahlao	<i>Phymatodes scolopendria</i>	Wart fern
36. Kulales	<i>Abrus precatorius</i>	Coral bead plant
37. Ladda	<i>Morinda citrifolia</i>	Indian mulberry
38. Laso' katu	<i>Achyranthes aspera</i>	Pricky chaff-flower
39. Dokdok	<i>Artocarpus marianensis</i>	Seeded breadfruit
40. Lemmai	<i>Artocarpus altilis</i>	Breadfruit
41. Lodogao	<i>Clerodendrum inerme</i>	Garden quinine
42. Luluhot	<i>Maytenus thompsonii</i>	None
43. Mai'agas	<i>Cassytha filiformis</i>	Love vine
44. Maigo' lalo'	<i>Phyllanthus amarus</i>	Chanca peidra
45. Mango'	<i>Curcuma longa</i>	Turmeric
46. Masiksik	<i>Chromolaena odorata</i>	Bitter bush
47. Masiksik tasi	<i>Wollastonia biflora</i>	None
48. Matbas	<i>Abutilon indicum</i>	Monkeybush
49. Mumutung palao'an	<i>Hyptis pectinata</i>	Comb bushmint
50. Nanason gaifigo'	<i>Scaevola sericeae (taccada)</i>	Half flower
51. Tupun ayuyu	<i>Elastostema calcareum</i>	Elastostema
52. Nonnak	<i>Hernandia Sonora</i>	Lantern tree
53. Nunu	<i>Ficus prolixa</i>	Pacific banyan
54. Pakao	<i>Caesalpinia major</i>	Hawaii pearls
55. Pano	<i>Guettarda speciosa</i>	Beach gardenia
56. Pao de'do'	<i>Hedyotis foetida var. mariannensis</i>	Hedyotis

57. Pao de'do' lahi	Hedyotis sp.	Hedyotis
58. Papayan lahi	Carica papaya	Male papaya
59. Pago	Hibiscus tiliaceus	Hibiscus tree
60. Petchalan	Deeringia amarantoides	None
61. Piga'	Alocasia indica	Giant taro
62. Potpupot	Peperomia mariannensis	None
63. Pугua' matchena	Davallia solida	Solida fern
64. Pupulun aniti	Piper guamensis	Wild pepper
65. Puting	Barringtonia asiatica	Fish Kill tree
66. Sanye'ye'	Taeniophyllum mariannensis	Leafless orchid
67. Sibukao	Caesalpinia sappan	Brazilwood
68. Sumak	Aidia cochinchinensis	None
69. Take'biha	Senna alata (Cassia alata)	Candlebush
70. Titimu	Eclipta prostrata	False daisy
71. Tronkon donne' Sali	Capsicum annuum	Hot pepper
72. Tuba Tuba	Jatropha curcas	Physic-nut
73. Tumates cha'ka	Physalis minima	Sunberry
74. Yetbas Santa Maria	Artemisia vulgaris	Mugwort
75. Yetbas babue	Blechum brownie fo. Puberulum	Blackweed

### The DEIS Does Not Adequately Address Social Justice Issues

There is no doubt that the military buildup will exacerbate existing tension within Guam by furthering the gap between military personnel (who are afforded good jobs, good wages, and good housing), the 40,000-50,000 temporary workers (from nearby Philippines and Micronesia and will likely earn low wages), and the residents of Guam (who have nothing to gain and everything to lose from the proposed project). This profound effect was not adequately addressed in the DEIS. Additionally, the DEIS acknowledges the proposed project will also deprive the public of treasured recreational features such as the Guam International Raceway, Marbo Cave, and Pagat Trail. However, the DEIS failed to put forward legitimate mitigation measures in consultation with the affected communities.

### The DEIS Does Not Adequately Address the Effects of GHG Emissions

#### *Climate Change*

Federal agencies are required to consider the climate change effects of a proposed project during the NEPA process.<sup>23</sup> The Navy should assess and quantify or estimate greenhouse gas (“GHG”) emissions by type and source by analyzing the direct operational impacts of the proposed action, as well as the GHGs associated with the construction. The Navy also has an obligation under NEPA regulations to identify incomplete and unavailable information, obtaining information where the costs of doing so are not exorbitant, and summarizing and evaluating the known information based upon theoretical approaches or research methods generally accepted in the scientific community when it is not possible.<sup>24</sup> NEPA analysis must employ predictive models and other tools where such tools are based on credible science and methodology to assess the impacts of their projects in a changing climate rather than deferring such analysis on grounds of uncertainty. The DEIS provided none of this.

<sup>23</sup> *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9<sup>th</sup> Cir. 2007).

<sup>24</sup> 40 CFR §1402.22.

While the DEIS does include some information about climate change, mere disclosure about the issue is insufficient where the DEIS does not explore the combined effect of global warming and the proposed project.<sup>25</sup> The DEIS explains that GHG producing operations are currently occurring elsewhere in the region, therefore, there will be no significant effects when the operations are moved to a different location within the region. However, to meet NEPA's basic goal, the Navy was required to assess, to the greatest extent possible, how the project will combine with effects of climate change to impact resources in the project area.<sup>26</sup>

The DEIS states that because the military operations already occur in the west Pacific region, relocating them to Guam is unlikely to change significantly the predicted net increase in CO2 emission and therefore will not result in a significant impact to global climate change. This analysis lacks merit and does not comply with NEPA or CEQ regulations. The fact that the proposed project would result in the relocation of ongoing emissions is irrelevant to the analysis. The Navy must instead analyze whether the proposed project will generate GHG emissions that will impact global warming, and whether global warming will impact the resources of the proposed project area, i.e. corals, freshwater availability, and the affects of sea level rise. Sea level rise impacts will occur during the planned future use periods of the proposed coastal developments, including the military haul roads, the CVN berthing facilities and other Apra Harbor proposed activities. In addition to contributing to global warming, and therefore sea level rise, adaptation and mitigation for sea level rise was not addressed in the DEIS. The Navy must also address the carbon footprint of the construction and maintenance of the proposed alternatives, and the impact they will have on corals taking into consideration that fact that the coral will continue to be stressed due to climate change and ocean acidification.

Finally, the EPA recently issued a regulatory action determining that GHGs pose an endangerment to public health, welfare, and the environment,<sup>27</sup> and announced it will reconsider whether GHGs will be regulated under the Clean Air Act. The DEIS does not assess whether these regulatory actions will impact the ability of the base or Guam to obtain environmental permits.

#### *Ocean Acidification*

Atmospheric carbon dioxide rates are also leading to ocean acidification. The ocean absorbs carbon dioxide from the atmosphere, which alters seawater chemistry causing slightly alkaline waters to become more acidic. Ocean acidification is advancing rapidly as humans release carbon dioxide into the atmosphere.<sup>28</sup> By the end of this century, carbon dioxide is predicted to reach 788 ppm and the pH of the ocean will drop by another 0.3-0.4 units, amounting to a 100-150 percent change in acidity.<sup>29</sup>

---

<sup>25</sup> 40 C.F.R. § 1502.1.

<sup>26</sup> *Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975).

<sup>27</sup> 74 Fed. Red. 1886 (Apr. 24, 2009).

<sup>28</sup> Environmental Protection Agency. 2009. Ocean Acidification and Marine pH Water Quality Criteria; 74 Federal Register 17484.

<sup>29</sup> Orr, J. C., et al. 2005. Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. *Nature* 437:681-686; Meehl, G. A., et al. 2007. 2007: Global Climate Projections. in S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and G. H. Miller, editors. *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental

Changing marine pH and carbonate concentrations are fundamentally altering ocean chemistry. Carbonate is an important constituent of seawater because many organisms form their shells and skeletons by complexing calcium and carbonate. Calcium carbonate is present in the ocean in two common forms, calcite and aragonite. When seawaters become undersaturated with respect to calcium carbonate they are corrosive to organisms that produce calcium carbonate shells, liths, and skeleton. Modeling predicts that by the end of the century global aragonite production will be reduced by 29% and total calcium carbonate production by 19% relative to preindustrial levels.<sup>30</sup>

Ocean acidification also decreases the calcification of corals. Calcification rates of reef-building corals are expected to decrease 30-40% with a doubling of atmospheric carbon dioxide.<sup>31</sup> Scientists predict that ocean acidification coupled with increasing ocean temperatures will destroy the world's reefs by mid-century.<sup>32</sup>

A recent survey of the Pacific Coast revealed that the effects of ocean acidification are occurring more rapidly there than predicted.<sup>33</sup> Researchers found seawater undersaturated with respect to aragonite upwelling onto large portions of the continental shelf, reaching shallow depths of 40 to 120 meters.<sup>34</sup> As a result, marine organisms in surface waters, in the water column, and on the sea floor along the West Coast are already being exposed to corrosive water during the upwelling season. The DEIS fails to analyze the proposed project's contribution to ocean acidification or those acidification effects on coral in the project area.

### III. The Proposed Project Will Likely Violate the Endangered Species Act

The Endangered Species Act ("ESA") is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."<sup>35</sup> "The plain intent of Congress in enacting this statute was to halt and reverse the trend towards species extinction, whatever the cost."<sup>36</sup> In enacting the ESA, Congress spoke "in the plainest words, making it abundantly clear that the balance has been struck in affording endangered species the highest of priorities, thereby adopting a policy which it described as 'institutionalized caution.'"<sup>37</sup>

---

Panel on Climate Change. Cambridge University Press, Cambridge University Press, Cambridge, UK, and New York, NY, USA.

<sup>30</sup> Gangstø, R., M. Gehlen, B. Schneider, L. Bopp, O. Aumont, and F. Joos. 2008. Modeling the marine aragonite cycle: changes under rising carbon dioxide and its role in shallow water CaCO<sub>3</sub> dissolution. *Biogeosciences Discuss.* 5:1655–1687.

<sup>31</sup> Kleypas, J.A., et al. 2006. Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers; Hoegh-Guldberg, et al. 2007. Coral Reefs Under Rapid Climate Change and Ocean Acidification, *Science* 318:1737-1742; Guinotte, J.M., Fabry, V.J. 2008. Ocean acidification and its potential effects on marine ecosystems. *Ann. N.Y. Acad. Sci.* 1134: 320–342.

<sup>32</sup> Hoegh-Guldberg, et al. 2007. Coral Reefs Under Rapid Climate Change and Ocean Acidification, *Science* 318:1737-1742.

<sup>33</sup> Feely 2008.

<sup>34</sup> *Id.*

<sup>35</sup> *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978).

<sup>36</sup> *Id.* at 194.

<sup>37</sup> *Id.* at 194.

“One would be hard pressed to find a statutory provision whose terms were any plainer than those in [Section] 7 of the Endangered Species Act.”<sup>38</sup> “Its very words affirmatively command all federal agencies ‘to insure that actions *authorized, funded, or carried out* by them do not *jeopardize* the continued existence’ of an endangered species or ‘*result in the destruction or modification of habitat of such species . . .* This language admits of no exception.”<sup>39</sup>

Thus, pursuant to Section 7 of the ESA, each federal agency must consult with FWS or NMFS to insure that any proposed action is not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of the species’ critical habitat.<sup>40</sup> The ESA therefore mandates that “federal agencies take no action that will result in the ‘destruction or adverse modification’ of designated critical habitat.”<sup>41</sup> “Destruction or adverse modification” of critical habitat is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species.<sup>42</sup> Such alterations include alterations that would adversely modify any of the physical or biological features that were the basis for determining the habitat to be critical.<sup>43</sup> To ensure of species, however, agencies must consider impacts that appreciably diminish the value of critical habitat for *either* survival or recovery.<sup>44</sup>

The Navy’s assessment of the impacts of the proposed action on listed species’ critical habitat must include the project’s impact on the species’ habitat in terms of the species’ recovery as well as its survival, and how the action may impact the physical or biological features that were the basis for the species’ critical habitat determination.<sup>45</sup> In addition, the agencies are not allowed to characterize as “insignificant” the potential impacts on a species’ critical habitat by considering only the broad scale or long-term impacts.<sup>46</sup>

The Navy is responsible for protecting federally listed species and their critical habitat when exercising their jurisdictional authorities. Section 2 of the Endangered Species Act (“ESA”) requires that all Federal agencies “seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.” Section 7 of the ESA requires that all Federal agencies “consult” with the Secretary of the Interior to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species . . . .”

In order to move forward with the proposed alternative, the Navy must first make a finding that the proposed project will not jeopardize the continued existence or adversely modify the critical

---

<sup>38</sup> *Id.* at 173.

<sup>39</sup> *Id.*

<sup>40</sup> 16 U.S.C. § 1536(a)(2).

<sup>41</sup> *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d 917, 933 (9th Cir. 2007) (quoting 16 U.S.C. 1536(a)(2)).

<sup>42</sup> 50 C.F.R. § 402.02.

<sup>43</sup> *Id.*

<sup>44</sup> *National Wildlife Federation*, 524 F.3d at 934; *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059, 1069-71 (9th Cir. 2004).

<sup>45</sup> 50 C.F.R. § 402.02; *National Wildlife Federation*, 524 F.3d at 935; *Gifford Pinchot*, 378 F.3d at 1069.

<sup>46</sup> *National Wildlife Federation*, 524 F.3d at 935; *Gifford Pinchot*, 378 F.3d at 1069.

habitat of any federally listed species.<sup>47</sup> The Navy has an independent duty under § 7 of the ESA to insure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.<sup>48</sup> If a listed species may be present in the area of the proposed action, the action agency must prepare a biological assessment to determine the potential effects of its proposed action on the listed species and its critical habitat.<sup>49</sup> If the action agency determines that the proposed action may adversely affect a listed species, it must consult with the FWS and/or the NMFS.<sup>50</sup>

In addition, Section 9 of the ESA prohibits any person from “taking” a threatened or endangered species.<sup>51</sup> The term “take” is defined broadly, and means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”<sup>52</sup> Furthermore, take need not be intentional. The DEIS states that consultation is currently ongoing and that it will continue throughout the EIS process. Pursuant to NEPA, the Navy should have waited to release the DEIS for public comment until after ESA consultation was completed, to allow the concerned public to know the position of the expert wildlife agencies regarding the proposed project’s impacts on species.<sup>53</sup>

### Terrestrial Species

Because the Navy has not completed its biological assessment, it is difficult to provide meaningful specific comments with regard to impacts to terrestrial species with special status. The Navy must undergo consultation with the FWS for impacts to Mariana crow, Guam Micronesian kingfisher, Guam rail, Mariana common moorhen, Mariana gray swiftlet, Mariana fruit bat, Hayun-lago, and *Tabernaemontana rotensis*. Impacts to Guam’s several species of endangered native tree snails also must be addressed.

In general, it is unclear why only undeveloped land was considered suitable habitat with regard to buffers in the DEIS. Absent scientific explanation or evidence of developed land being unsuitable for these species, the Navy should treat all habitats suitable unless directed otherwise by wildlife management agencies. Also, the DEIS notes which species are considered non-migratory and therefore not covered under the Migratory Bird Treaty Act. However, the DEIS does not describe which species are migratory nor does it detail how it will comply with its 2006 MOU with the FWS to incorporate conservation measures, manage the land so that it is supportive of conservation, and avoid or minimize impacts.<sup>54</sup> Also, the DEIS states that in order to prevent predation on wildlife from escaped domestic pets, the Navy will rely on “pet ownership policies” and “base instructions.” However, the DEIS does not detail what the measures would entail. Mitigation measures should include mandatory spay/neuter program of pets. Also, the DEIS wrongly states that the number of Mariana fruit bats using the proposed project area at Anderson AFB cannot be estimated because the bats are active at night. Certainly

---

<sup>47</sup> 40 CFR § 230.10(b)(3).

<sup>48</sup> 16 USC § 1536.

<sup>49</sup> 16 USC § 1536(c)(1).

<sup>50</sup> 50 CFR § 402.14.

<sup>51</sup> 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 17.31(a).

<sup>52</sup> 16 U.S.C. § 1532(19).

<sup>53</sup> 40 C.F.R. §§ 1502.25(a), 1502.9(a).

<sup>54</sup> EO 13186 *Responsibility of Federal Agencies to Protect Migratory Birds*.

the Navy, with the assistance of wildlife experts, can estimate the number of bats that use the area, and by that measure estimate how many bats will be impacted by the proposed project.

Finally, the DEIS concludes that there will be direct significant impacts to the Mariana fruit bat and Guam Micronesian kingfisher from clearing 254 acres, direct impacts to 704 acres of Overlay Refuge, and indirect effects to the Mariana crow due to loss of habitat. It then concludes that these impacts will not be significant in light of proposed mitigation measures. However, the most common mitigation measure offered is that whenever a species is present, construction, or other activities, will be halted until the species voluntarily leaves. The DEIS should analyze, and offer some logical prediction of how often, between all the special status species present, that might occur and whether this mitigation is feasible and will continue to be carried out. The mitigation measures should include a better system of monitoring this specific mitigation measure as well as a plan for enforcement.

#### Marine Species

As with the terrestrial species, it is difficult to provide meaningful specific comments on each of the marine species likely to be impacted by the proposed project. The Navy must undergo consultation with NMFS and prepare a biological assessment on the impacts to the green sea turtle, hawksbill sea turtle, leatherback sea turtle, and spinner dolphin. The DEIS states that excessive lighting would be prohibited on beaches that have the potential to be used by sea turtles. FWS/NMFS provide guidance for appropriate lighting. The DEIS should have detailed that plan and analyzed the feasibility of implementing it while still achieving the goals of the proposed project. All mitigation measures should include provisions for monitoring and enforcing mitigation.

While not a federally listed endangered or threatened species, the scalloped hammerhead shark is an IUCN endangered species. The DEIS indicates that ship traffic and dredging will create short term impacts on shark birthing areas. Apra Harbor is believed to be the only place these sharks give birth around Guam. The DEIS did not include sufficient mitigation measures to protect this imperiled species.

#### **IV. The Proposed Project Will Likely Violate the Clean Water Act**

The Clean Water Act (“CWA”) is designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.”<sup>55</sup> The goal of the CWA is that the discharge of pollutants into navigable waters be eliminated, and “it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.”<sup>56</sup> Section 301 of the CWA prohibits the discharge of any pollutant into waters of the United States, except as provided by specific statutory authority. The CWA and its implementing regulations define “waters of the United States” to include wetlands and riparian habitats adjacent to waters of the United States.<sup>57</sup> “Pollutant” is defined to include dredged or fill material.<sup>58</sup> Any applicant for a federal permit to conduct any activity which may result in the discharge into the navigable water must provide the

---

<sup>55</sup> 33 U.S.C. § 1251(a).

<sup>56</sup> *Id.*

<sup>57</sup> *Id.* § 1362(7); 33 C.F.R. § 328.3(b).

<sup>58</sup> 33 U.S.C. § 1362(6).

permitting agency with a certification from the State that any such discharge will comply with the CWA and state water quality standards.<sup>59</sup> In addition, the CWA requires federal agencies to comply with state water quality standards.<sup>60</sup>

#### Section 404 of the Clean Water Act

Section 404 of the CWA regulates the discharge fill material into waters of the United States.<sup>61</sup> The Secretary of the Army, acting through the Corps, may issue permits for such activities. The Corps has adopted regulations to implement this permitting process, known as “public interest” factors.<sup>62</sup> Section 404 of the CWA prohibits the filling or dredging of wetlands without first receiving a § 404 permit.<sup>63</sup> The CWA and its implementing regulations express a strong preference for wetlands protection. A § 404 permit may not be issued if (1) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences; (2) the discharge causes or contributes to violations of any applicable state water quality standards; (3) the discharge would result in the likely destruction or adverse modification of critical habitat; (4) the discharge will cause or contribute to significant degradation of waters of the United States; (5) the discharge does not include all appropriate and practicable measures to minimize potential harm; or (6) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Corps’ Guidelines for permit issuance.<sup>64</sup>

For the “practicable alternative” requirement, the Corps must follow a specific two step procedure. First, correct statement of the proposed project’s “basic purpose” is necessary.<sup>65</sup> Second, the Corps must determine if that basic purpose is “water dependent.”<sup>66</sup> “[I]f a dredge or fill permit application does not concern a water-dependent project, the Corps assumes that practicable alternatives exist unless the applicant ‘clearly demonstrates otherwise.’”<sup>67</sup> “This presumption of practicable alternatives is very strong.”<sup>68</sup> “Practicable” is defined as “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”<sup>69</sup> When this presumption applies, the applicant must rebut the presumption by clearly demonstrating that a practicable alternative is not available, and the Corps presumes that all practicable alternatives that do not involve the discharge into a wetland have a less adverse environmental impact.<sup>70</sup> The permit applicant must provide detailed, clear and convincing information proving that an alternative with less adverse impacts is impracticable. In addition, a permit may not be issued “unless appropriate and practicable steps

---

<sup>59</sup> *Id.* § 1341.

<sup>60</sup> *Id.* § 1323(a); *Northwest Indian Cemetery Protective Ass’n v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986).

<sup>61</sup> 33 U.S.C. § 1344(e).

<sup>62</sup> 33 C.F.R. §§ 320 *et seq.*

<sup>63</sup> 33 U.S.C. § 1344(a), (d).

<sup>64</sup> 40 C.F.R. § 230.10-12; see *Bering Strait Citizens for Responsible Resource Dev. V. U.S. Army Corps of Engineers*, 524 F.3d 938, 946-47 (9th Cir. 2008).

<sup>65</sup> See 40 C.F.R. § 230.10(a)(3).

<sup>66</sup> *Id.*

<sup>67</sup> *National Wildlife Federation*, 27 F.3d at 1344.

<sup>68</sup> *Id.*

<sup>69</sup> 40 C.F.R. § 230.10(a)(2).

<sup>70</sup> 40 C.F.R. § 230.10(a)(3).

have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.”<sup>71</sup>

The impacts of four new landing zones at NMS and the proposed foot, wheeled and tracked vehicle traffic throughout the southern portion of NMS have been improperly minimized in the DEIS. This buildup will impact Fena Reservoir, an already stressed major source of drinking water for the island, in the form of silt buildup from erosion. The DEIS does not provide a map of buffer zones. It is not possible to review and comment on these impacts where there is so little information available and the information provided is misleading. Similarly, the proposed alternative of a new sewer outfall is not adequately addressed and the Navy well and well field study is not available. Therefore, analysis and comment by the public is not possible.

#### Section 402 of the Clean Water Act

Section 402 of the CWA authorizes the National Pollutant Discharge Elimination System (NPDES) program. The NPDES “controls water pollution by regulating point sources that discharge pollutants into waters of the United States.”<sup>72</sup> CWA section 301 prohibits any discharge of pollutants except as permitted, section 402 governs permits the point source discharge.<sup>73</sup> Essentially, the NPDES issues “pollutant badges” that allow a water to meet its designated WQS, provided the discharge does not exceed the permit’s allotted amount.<sup>74</sup>

The proposed stormwater disposal at the staging area adjacent to the wharf is wholly inadequate and likely violative of the Clean Water Act. The proposed cyclonic separator would only parse out solids. It would do nothing to remove petroleum or other toxic chemicals before being discharged into a channel between Apra Inner and Outer Harbors. Therefore, as currently envisioned, the Navy would likely violate the Clean Water Act.

#### Coral

Corals are slow to adapt to habitat changes and have a limited ability to reproduce over large distances.<sup>75</sup> Sediment from coastline erosion, runoff, beach renourishment, and coastal development are known to threaten corals.<sup>76</sup> Corals require nutrient-limited, clear waters and runoff from agriculture, sewage, and other land sources increases algal growth impairing the fitness of corals.<sup>77</sup> Additionally, abrasion and breakage from vessels, construction, dredging, and other activities can harm corals and their habitat. The construction and operation of the proposed project as planned will result in harm to the reefs in Apra Harbor.

Studies consistently conclude that proximity to coastal development is a primary factor in the decline of coral reef ecosystems. Around the world, reefs close to population centers, ports, and tourism are either of lower quality than reefs removed from such activities or they have simply

---

<sup>71</sup> 40 C.F.R. §230.10(d).

<sup>72</sup> EPA: National Pollutant Discharge Elimination System (NPDES). <http://cfpub.epa.gov/NPDES/>.

<sup>73</sup> EPA, WATERSHED ACADEMY, *supra* note 364 at 34.

<sup>74</sup> *Id.* at 28.

<sup>75</sup> 73 Fed. Reg. at 6897.

<sup>76</sup> 73 Fed. Reg. at 6902.

<sup>77</sup> *Id.*

disappeared.<sup>78</sup> Coastal development has long been a major problem throughout the Caribbean and is increasingly threatening the Coral Triangle, an area comprising 2% of the global oceans that hosts 75% of coral species and 35% of the world's coral reefs.<sup>79</sup>

Coastal development causes both short and long term damage to corals. During initial development, construction can physically damage reefs through dredging to create and maintain shipping channels, building marinas and docks, and disturbances to the coastline resulting in erosion, sedimentation, and increasing water turbidity. After construction, long-term chronic impacts include pollution from sewage and chemicals associated with the increased human presence and storm run-off from roads.<sup>80</sup> Runoff from developed watersheds tends to carry more sediment and higher concentrations of waste products (including freshwater inputs from wastewater, oil, pesticides and fertilizer, animal excrement, and garbage) than that from undeveloped areas.<sup>81</sup> Sediments tend to accumulate in nearshore areas with gentle slopes and low flushing rates, and wave action typical of reef habitat can continuously re-suspend introduced sediment with subsequent negative impacts on coral communities.<sup>82</sup>

Apra Harbor is the single most popular site for recreational divers and commercial diving operations in Guam. These economic impacts need to be taken into consideration. Moreover, it is the only deep water protected lagoonal area in the Marianas Archipelago. Dredging will encourage the spread of marine invasive species, and sediment plumes will further exacerbate this problem by reducing the fitness of adjacent ecosystems. The classification of the Apra Harbor Shoal system as suited to existing turbidity levels (thereby excusing increased turbidity) is misleading as it is merely better at surviving in this extreme environment compared to other organisms. A more apt description is that the coral there live on the edge of their environmental tolerance.

There are at least 110 species of coral growing in Apra Harbor. Some of these species, such as the *Pectinia paeonia* and *Leptoseris gardineri* apparently do not occur in any other waters under

---

<sup>78</sup> Wilkinson, Clive (ed.). 2008. *Status of Coral Reefs of the World: 2008*. Global Coral Reef Monitoring Network and Reef and Rainforest Research Centre. Townsville, Australia, 296 p.; Waddell, J.E. and A.M. Clarke (eds.). 2008. *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008*. NOAA Technical Memorandum NOS NCCOS 73. NOAA/NCCOS Center for Coastal Monitoring and Assessment's Biogeography Team. Silver Spring, MD. 569 pp.; Jokiel, Paul L. and Erik K. Brown. 2004. Global warming, regional trends and inshore environmental conditions influence coral bleaching in Hawaii. *Global Change Biology* 10: 1627–1641, doi: 10.1111/j.1365-2486.2004.00836.x.; Pandolfi, J.M., J. B.C. Jackson, N. Baron, R.H. Bradbury, H.M. Guzman, T. P. Hughes, C.V. Kappel, F. Micheli, J.C. Ogden, H. P. Possingham, E. Sala. 2005. Are U.S. coral reefs on the slippery slope to slime? *Science* 307: 1725-1726; Jackson, Jeremy B.C. 2008. Ecological extinction and evolution in the brave new ocean. *Proceedings of the National Academy of Sciences* 105: 11458-11465.

<sup>79</sup> Turgeon, D.D., R.G. Asch, B.D. Causey, R.E. Dodge, W. Jaap, K. Banks, J. Delaney, B.D. Keller, R. Speiler, C.A. Matos, J.R. Garcia, E. Diaz, D. Catanzaro, C.S. Rogers, Z. Hillis-Starr, R. Nemeth, M. Taylor, G.P. Schmahl, M.W. Miller, D.A. Gulko, J.E. Maragos, A.M. Friedlander, C.L. Hunter, R.S. Brainard, P. Craig, R.H. Richond, G. Davis, J. Starmer, M. Trianni, P. Houk, C.E. Birkeland, A. Edward, Y. Golbuu, J. Gutierrez, N. Idechong, G. Paulay, A. Tafleichig, and N. Vander Velde. 2002. *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2002*. National Oceanic and Atmospheric Administration/National Ocean Service/National Centers for Coastal Ocean Science, Silver Spring, MD. 265 pp; Wilkinson 2008; Waddell and Clarke 2008.

<sup>80</sup> Turgeon et al. 2002, Waddell and Clarke 2008.

<sup>81</sup> Waddell 2005.

<sup>82</sup> *Id.*

U.S. jurisdiction. These two coral species only occur in the turbid habitats in the deeper eastern parts of Apra Harbor where the CVN channel and turning basin are to be dredged. They will be severely impacted by the proposed dredging for either of the two proposed CVB berthing alternatives. In addition to these species, there are likely other unique species of coral, algae, sponge, and other invertebrates and fishes that occur in the deeper parts of the direct impact area of the proposed channel and turning basin dredging that might not be found anywhere else in U.S. waters. New undescribed species may even be in this unique habitat. Two species of the Pentapodidae fish genus *Pentapodus* have been recorded from these same turbid habitats deep in Apra Harbor but apparently do not occur anywhere else in American waters. This indicates the uniqueness of the special habitats that will be seriously impacted by the dredging. However, the DEIS ignored assessments of the species and marine communities found in, and dependent upon, the acres upon acres of habitat deeper than 18 meters that may be destroyed by rubble, sediment, and silt settling on them because of the dredging.

Further, there is reason to believe the DEIS underestimated the rugosity of the Inner Apra Harbor Shoal system and age classes of corals within them. The Navy only used coral percent cover for the Habitat Equivalency Analysis, instead of using the numbers and sizes of coral colonies, which is a better indicator of what mitigation measures are appropriate. This method is flawed and contested by federal and Guam regulatory agencies and must be rejected. Furthermore, no data below 60 feet was collected or analyzed (which represents a large area of reef habitat). This is significant because there are ongoing studies on whether the screens (that typically only drop to 30 feet) are as effective as claimed at mitigating sedimentation. Another flaw can be found in the sediment plume study. It only used 2 days worth of data, and the data was from 24 hour sampling periods. This likely does not accurately reflect the cumulative impacts of dredging on nearby reefs. Finally, approximately 40,000-50,000 temporary workers, largely from Micronesia and the Philippines will aid in the construction of the proposed project. These workers are likely to add significant additional pressures to Guam's fisheries, reefs, and other environmental resources. The final EIS must address these impacts.

The dredging at Apra Harbor also will negatively impact the mangrove forest and fish nursery area of the Sasa Bay Marine Preserve, which serves as breeding grounds for a vast array of sealife, including plankton, and their prop roots protect juvenile fish from predation. This area is believed to be the largest stand of mangroves in U.S. waters in the entire Pacific. However, the DEIS does not make note of this fact. The impacts to this marine preserve were not adequately addressed in the DEIS.

## **V. Conclusion**

Section 101 of NEPA requires that federal agencies "use all practicable means and measures" to protect environmental values. The inadequacies cited throughout this comment letter reveal that the Navy is not meeting this standard by failing to fully address, or even mention, some very serious impacts. In addition to faults in the substance of the DEIS, its organization and volume also made it very difficult to provide meaningful feedback. Because the DEIS was split into so many volumes, and then multiple chapters within each volume, it was frequently very difficult to determine where to find information sought. Despite the complexity of the DEIS, and the

significance of the issues raised (or not raised) in it, the Navy's on-line comment form limits comments to 2500 characters.

Also, the considerable volume of the DEIS also made it difficult to ensure that all issues were adequately addressed. Federal regulations provide that an EIS generally not exceed 150 pages. Here, the DEIS exceeded 10,000 pages and commenters were only given 90 days to review and comment, despite the Governor, other elected officials, and members of the public (including the Center) requesting additional time. The Navy had the authority to do so, and instead decided that the 90 day comment period "best balances the need for additional time to review a complex document with the Department's requirement to complete the military buildup on Guam on an aggressive schedule."<sup>83</sup>

The military buildup at Guam depends on a series of decisions to be made by Japan, including the proposed relocation of a base in Okinawa and Japan's willingness to finance that relocation for \$6 billion. The siting of the planned Okinawa base relocation must happen before the construction at Guam can start.<sup>84</sup> The plan to resite the military base in Okinawa has been stalled due to opposition by Okinawa officials as well as unmitigated environmental impacts. Prime Minister Hatoyama has announced that he will not make a decision regarding Futenma's replacement site until May 2010.<sup>85</sup> Given these facts, it was highly irresponsible of the Navy to only allow 90 days to review a document over 10,000 pages long on a proposed project that would not only forever change the physical landscape of Guam, but would also deeply damage the culture of the residents of Guam. The Guam Legislature is currently drafting a resolution to request an additional extension. It should not have come to that.

Please contact me if you would like to discuss these comments or the proposed project. We appreciate the opportunity to have these comments taken into consideration. Please send me one copy of the Final EIS and the Record of Decision when they are made available to the public.

Sincerely,

Jaclyn Lopez, Staff Attorney  
Center for Biological Diversity  
415-436-9682 x. 305  
[jlopez@biologicaldiversity.org](mailto:jlopez@biologicaldiversity.org)

---

<sup>83</sup> <http://www.guambuildupeis.us/about/faq> (accessed Feb. 10, 2010).

<sup>84</sup> Marchesseault, J., *Clinton Whips Up 'Snowstorm Diplomacy' For Okinawa-Guam Transfer Deal*, Guam News Factor (Dec. 12, 2009) available at <http://www.guamnewsfactor.com/200912291744/News-Analysis/Clinton-Whips-Up-Snowstorm-Diplomacy-For-Okinawa-Guam-Transfer-Deal.html>; Hauswirth, H. *Cruz asks for more time to review DEIS*, KUAM News (Jan. 14, 2010) available at <http://www.kuam.com/Global/story.asp?S=11820282>.

<sup>85</sup> Sakamaki, S. and T. Hirokawa, *Japan Seeks Clinton Meeting to Discuss Okinawa Base Dispute*, Bloomberg (Jan. 6, 2010) available at <http://www.businessweek.com/news/2010-01-06/japan-seeks-clinton-meeting-to-discuss-okinawa-base-dispute.html>; Carmichael, L., *Clinton plays down row over air base*, AFP.com (Jan. 12, 2010).