US ERA ARCHIVE DOCUMENT



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX

75 Hawthorne Street San Francisco, CA 94105

July 26, 2012

Captain Rebecca Heyse PACAF/PA 25 E Street, Suite G-108 Joint Base Pearl Harbor-Hickam, HI 96853

Subject: Draft Environmental Impact Statement (DEIS), Divert Activities and Exercises, Guam

and the Commonwealth of the Northern Mariana Islands (CNMI) (CEQ # 20120177)

## Dear Captain Heyse:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

According to the DEIS, the Air Force proposes to improve an existing airport to support a combination of cargo, fighter, and tanker aircraft and support personnel for use in divert landings, periodic military training exercises, and humanitarian assistance. Alternative 1 evaluates the use of Saipan International Airport and Alternative 2 evaluates the use of Tinian International Airport. Alternative 1 is identified as the Preferred Alternative.

Based on our review, we have rated the DEIS's Preferred Alternative as Environmental Objections – Insufficient Information (EO-2) (see enclosed "Summary of Rating Definitions"). The noise impacts predicted to occur to residents on Saipan for 8 weeks per year are severe<sup>1</sup>, with some residents exposed to levels that could put them at risk for potential hearing loss. Despite these findings, the noise impact assessment is minimal, and does not provide supplemental noise analysis (metrics other than the minimum Day-Night Average Sound Level or DNL), nor does it evaluate potential for hearing loss for populations exposed to DNL 80 decibels and above. This appears inconsistent with an applicable DoD internal directive that requires hearing loss risk be estimated for these populations.

The DEIS predicts that 11,095 residents would be periodically exposed to noise levels between DNL 65 and 80 dBA (A-weighted decibels). Land use compatibility guidelines published by the Federal Interagency Committee on Urban Noise (FICUN), an interagency committee – of which Department of Defense was a member – formed to develop Federal policy and guidance on noise, concluded that residential land use is incompatible with noise levels above DNL 65 dB unless measures are taken to achieve additional Noise Level Reduction (NLR). DoD's own policy<sup>2</sup> regarding DoD air installations echoes these guidelines when it states that residential use is discouraged in areas exposed to DNL 65-69 dB and strongly discouraged in areas exposed to DNL 70-74 dB. The fact that the noise impacts would

<sup>&</sup>lt;sup>1</sup> According to Table 1 of the *Guidelines for Considering Noise in Land Use Planning and Control*, Federal Interagency Committee on Urban Noise, 1980, the noise exposure class for noise levels above DNL 75 dB are classified as "severe exposure".

<sup>&</sup>lt;sup>2</sup> http://www.dtic.mil/whs/directives/corres/pdf/416557p.pdf

only occur for 8 weeks per year does not eliminate this land use incompatibility. The Preferred Alternative predicts that a sizable portion of Dandan would receive noise levels at DNL 75 dB or above. The DEIS also acknowledges that this noise will disproportionately affect minority and low-income populations, yet there is no evidence that outreach to these communities has occurred. We are also concerned that three schools will receive impacts greater than DNL 70 dB. The DEIS does not discuss noise mitigation, and suggests that it is not clear that noise mitigation is necessary. EPA does not believe that such a conclusion is supported by the DEIS, and recommends that the Air Force reconsider this matter and evaluate possible changes to the preferred alternative or a new alternative that could reduce the noise impacts.

The DEIS implies that a design capability less than that proposed, i.e., operation of the same number of aircraft at a reduced load capacity, would meet the purpose and need for the proposed project. EPA recommends, in addition to an improved noise analysis, that alternatives be explored that would improve the airport to a comparable design capability by reducing the number of planes rather than the load capacity of each plane. We also request an evaluation as to whether an alternative that would operate under only the "low scenario" (no fighter jets) would meet the purpose and need. In all cases, noise mitigation measures should be incorporated into the Proposed Action.

EPA appreciates the opportunity to review this DEIS and would like to work with the Air Force to explore ways to meet the the purpose and need for the action while adequately protecting the health and well-being of the residents of Saipan. We will contact you to discuss plans for completing the NEPA process. In the meantime, if you have any questions, please call me at (415) 972-3843 or have your staff contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

/s/ Kathleen Goforth for

Enrique Manzanilla, Director Communities and Ecosystems Division

Enclosure: Summary of EPA Rating Definitions

**EPA's Detailed Comments** 

cc: Gordon Wong, Federal Aviation Administration Edward M. Deleon Guerrero, Commonwealth Ports Authority Frank M. Rabauliman, CNMI Division of Environmental Quality Alan Fletcher, Commonwealth Utilities Corporation EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR DIVERT ACTIVITIES AND EXERCISES, GUAM AND THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI), JULY 26, 2012

# **Project Description/Alternatives Analysis**

The project description and rationale for the alternatives are not clear. The DEIS states that the KC-135 Stratotanker aircraft is being used as the design aircraft for cargo and tanker aircraft in the EIS and that the KC-135 dimensions will be used to develop space requirements for airport facilities and infrastructure under the Proposed Action (p. 2-2). The Proposed Action, whether taking place at Saipan International Airport (GSN)(Alternative 1) or Tinian International Airport (Alternative 2), was devised to accommodate 12 KC-135 aircraft "to meet the purpose and need of the Proposed Action"; however the DEIS does not state why 12 aircraft were chosen or how this number was determined. This number is important because it is used to scale the number of fighter jets that would be used during training (a size ratio of 1 to 2 was assumed for cargo planes to fighter jets, therefore the Proposed Action includes the use of 24 fighter jets) and it is these that are the source of significant noise impacts.

For the analysis of the implementation phase, the DEIS assumes that any mix of joint fighter, cargo, and tanker aircraft, not to exceed the design capabilities of the airport, could be diverted to or exercised from the airport selected. Representative scenarios of possible aircraft mixes are used to analyze potential environmental consequences. The "low scenario" consists of 12 KC-135's, the "medium scenario" of 6 KC-135's and 12 fighter jets, and the "high scenario" consists of 24 fighter jets.

The DEIS also includes 3 runway options for the 2 alternative airport sites: Runway Option A - a runway extension to 10,000 ft (the optimum runway length for the KC-135); Runway Option B - a runway extension less than 10,000 ft; and Runway Option C - no runway extension. The DEIS states that a shorter runway (i.e., no extension) can accommodate KC-135's and "the location could still support divert, exercise, and humanitarian relief activities" but each KC-135 would need to operate at a reduced load capacity (p. 2-2). Thus, according to the DEIS, operating at a reduced load capacity would meet the purpose and need for the project.

Recommendation: The FEIS should explain why 12 KC-135s are needed to meet the purpose and need of the Proposed Action and how this was determined. Discuss the nature of the different scenarios for the reader. For example, explain situations that would require both military training and humanitarian assistance simultaneously at a divert airport (medium scenario).

Since the DEIS indicates that 12 KC-135's operating at a reduced capacity on a shorter runway would meet the purpose and need for the proposed project, it is reasonable to consider whether some lesser number of KC-135s operating at full capacity on a longer runway would also meet the purpose and need. If it would, an alternative with a design capability for fewer KC-135's (and, consequently, fewer fighter jets) should be evaluated in the FEIS. If it would not, the FEIS should explain why.

Additionally, we recommend that the Air Force assess whether an alternative that would not utilize the medium and/or high scenario at Saipan International Airport would meet the purpose and need.

# **Noise Impacts**

## Noise analysis

We have significant concerns regarding the noise impacts to residents in Saipan under Preferred Alternative 1, especially under the medium and high scenarios evaluated. The noise analysis under the high scenario indicates that, for an average busy day during the military exercises 8 weeks per year, 11,095 residents would be periodically exposed to noise levels within the 65 to 80 dBA (A-weighted decibels) DNL (Day-Night Average Sound Level) noise contours (p. 4-12). The DEIS states that, according to the U.S. Air Force, Federal Aviation Administration (FAA), and Housing and Urban Development (HUD) criteria, noise-sensitive land uses at or above the 65 dBA DNL contour are considered to be within "areas of high noise exposure" (p. 4-4). EPA believes that it is also important to disclose that, according to Federal Interagency Committee on Urban Noise (FICUN)<sup>3</sup> Guidelines for Considering Noise in Land Use Planning and Control (1980), which were developed by the same agencies as above, noise exposures greater than DNL 65 dB are generally not considered compatible with residential land use<sup>4</sup>. The FICUN Guidelines treat areas above DNL 65 dB as marginally compatible to incompatible with residential land use, depending on the degree of noise level reduction (NLR) provided in affected structures. The FICUN land use compatibility guidelines for noise exposure between DNL 65-70 dB call for building codes to require at least 25 dB outdoor to indoor NLR; and, for exposures between DNL 70-75 dB, at least 30 dB NLR is recommended. FICUN considered noise exposure above DNL 75 dB to be "incompatible" with all residential uses except transient lodging with NLR of at least 35 dB. The DEIS does not discuss the housing structures present on Saipan in relation to noise attenuation potential and whether the current buildings are capable of achieving NLR levels specified above for the indicated noise exposures.

Based on Figure 4.1-4, it appears that, of the over 11,000 residents that would be impacted by 65+ dBA DNL, a large percentage would fall above the 70 dBA DNL noise contour, and some above the 75 and 80 dBA DNL. This is a wide range, and the analysis does not provide a breakdown of population exposed for each noise contour.

Despite the high noise levels predicted, no supplemental noise analysis was performed. Supplemental metrics are useful in characterizing specific events and conveying a clearer understanding of the effects impacted communities can expect on their living and working environments as a result of the Proposed Action. For example, single event analysis is useful in evaluating sleep disturbances. Since, for this project, it is assumed that 30% of the flights will occur at night (p. 4-3, 6, 9), this would be an appropriate noise metric to use. No single event noise levels were identified for the Preferred Alternative 1<sup>5</sup>. Similarly, metrics expressing noise impacts in terms of speech interference are also useful for public disclosure. The analysis in the Marine Corps' West Coast Basing of the F-35B EIS<sup>6</sup> presented data for both indoor speech interference and indoor sleep disturbance for representative

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<sup>&</sup>lt;sup>3</sup> FICUN formed to develop Federal policy and guidance on noise. The committee's membership included the Environmental Protection Agency (EPA), the FAA, the Federal Highway Administration, and the Departments of Defense (DOD), Housing and Urban Development (HUD), and Veterans Affairs (VA).

<sup>&</sup>lt;sup>4</sup> The FICUN Guidelines note that HUD, DOT and EPA recognize DNL 55 dB as a goal for outdoor noise levels in residential areas for the protection of public health and welfare with an adequate margin of safety.

<sup>&</sup>lt;sup>5</sup> For Alt 2 on Tinian, the DEIS discloses that the maximum single-event level is estimated to reach 95 dBA SEL at the closest community of Marpo Heights (p. 4-24), which would experience close to the 65 dB DNL noise contour, but no single-event measures for the closest community on Saipan, lying in the DNL 80 dB contour are disclosed.

<sup>&</sup>lt;sup>6</sup> See http://www.usmcisfwest.com/Resources/Documents/Final Volume I.pdf

residences with windows open and windows closed. The F-35B EIS also identified the number of housing units affected in each noise contour above DNL 65 dB, which is useful for disclosing impacts and expressing the mitigation burden for the soundproofing of dwellings.

The DEIS predicts noise exposures at and above DNL 75 dB, with some above DNL 80 dB, yet there was no analysis to assess the potential for hearing loss. We believe that when noise-sensitive receptors are identified in the 75 dB+ noise contour, risk of hearing loss should be evaluated. DoD policy in "Methodology for Assessing Hearing Loss Risk and Impacts in DoD Environmental Impact Analysis" applies whenever the 80 dB DNL contour extends into populated areas off base and requires that hearing risk loss be estimated for this population.

*Recommendations*: The noise analysis in the FEIS should be improved. We recommend that the following be included:

- Provide a breakdown of the population that would be exposed in each noise contour.
  Quantify the number of residents that would be "highly annoyed" as defined in Table 4.1-1 (Feingold data);
- Conduct supplemental noise analysis to disclose indoor speech interference and indoor sleep disturbance <sup>7</sup> for the 8 week training period, such as was performed in the Marine Corps' West Coast Basing of the F-35B EIS. Discuss sleep disturbance results with reference to the World Health Organization's guidance that equivalent sound pressure level should not exceed 30 dBA indoors for continuous noise, and 45 dB SEL for single events if negative effects on sleep are to be avoided<sup>8</sup>;
- Estimate potential for hearing loss for noise exposures at DNL 75 dB and above. Provide single event analysis (e.g. SEL metrics) for Alternative 1, as is provided for Alternative 2, and include this information in the hearing loss analysis. Discuss results in terms of the World Health Organization's 120 dB guideline threshold for hearing impairment in children<sup>9</sup>. It may be helpful to discuss the frequency of expected noise from the project in terms of hearing loss. Noise-induced hearing impairment occurs predominantly in the higher frequency range of 3,000–6,000 Hz, with the largest effect at 4,000 Hz<sup>10</sup>.
- Quantify the number of dwellings that would fall under each noise contour. Disclose that noise levels above 65 dB are normally considered incompatible with residential land use;
- Discuss the construction materials and methods of housing structures on Saipan in relation to noise attenuation potential and indicate the probable noise level reduction these structures would be capable of achieving.

10 ibid

<sup>&</sup>lt;sup>7</sup> The Federal Interagency Committee on Aviation Noise (FICAN) recommends the use of ANSI Standard ANSI S12.9-2008 to Predict Awakenings from Aircraft Noise. See S12.9-2008, Quantities and Procedures for Description and Measurement of Environmental Sound — Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes, 2008

<sup>&</sup>lt;sup>8</sup> World Health Organization. 1999. *Guidelines for Community Noise*. Available: <a href="http://www.who.int/docstore/peh/noise/guidelines2.html">http://www.who.int/docstore/peh/noise/guidelines2.html</a>

<sup>&#</sup>x27; ibid

# Health Impacts from Noise

The DEIS does not discuss the potential health effects from noise. There is increasing evidence that noise impacts have non-auditory health effects. A 2007 review article 11 that summarizes studies from the National Library of Medicine database on the adverse health effects of noise concludes that "the potential health effects of noise pollution are numerous, pervasive, persistent, and medically and socially significant. Noise produces direct and cumulative adverse effects that impair health and that degrade residential, social, working, and learning environments with corresponding real (economic) and intangible (well-being) losses". Long-term physical health effects have been linked to noise effects related to sleep disturbances, stress, cardiovascular response, and increased blood pressure. The mental health effects that noise is suspected to cause or contribute to include anxiety, emotional instability, mood changes, increase in social conflicts, neurosis, and psychosis.

*Recommendation:* Disclose the physical and mental health impacts that have been linked to the project noise levels identified in the FEIS.

# Impacts to Children and Schools

Pursuant to Executive Order 13045 - Protection of Children from Environmental Health Risks and Safety Risks, the DEIS concludes that the Proposed Action would not result in disproportionate risks to children from environmental health risks or safety risks; however, because there is no discussion of noise impacts on children's health and learning, this conclusion is not supported.

The DEIS identifies 3 schools that fall into the 70 dB noise contour under the medium and high scenarios for Preferred Alternative 1 (p. 4-7, 4-12). Under baseline conditions, none of these land uses are within the 65 dBA DNL noise contour (p. 3-4). Dandan Elementary School noise would increase from 46 dBA to over 70 dBA, Koblerville Elementary School from 50 dBA to over 70 dBA, and Saipan Southern High School from 49 dBA to over 70 dBA. These are substantial noise increases - decibels are on a logarithmic scale, and an increase of 10 dBs represents a subjective doubling of loudness <sup>12</sup>. Elevated noise levels at schools are of concern because research on the effects of aircraft noise on student learning indicates interference with reading, motivation, language and speech, and memory <sup>13</sup>. These represent acoustical barriers to learning, especially for young children since they are more susceptible than adults to the effects of background noise on spoken communication <sup>14</sup>.

Goines and Hagler (2007), in their review article cited above, concluded that children are particularly vulnerable to the effects from noise interference with spoken communication. The inability to comprehend normal speech may lead to a number of personal disabilities, handicaps, and behavioral changes. Children who live in noisy environments have been found to have heightened sympathetic arousal indicated by increased levels of stress-related hormones and elevated resting blood pressure. Noise is assumed to accelerate and intensify the development of latent mental disorders and children may be particularly vulnerable to these effects because they may lack adequate coping mechanisms. The review article concludes that because children are particularly vulnerable to noise induced

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<sup>&</sup>lt;sup>11</sup> Goines, Lisa RN and Hagler, Louis MD. 2007. "Noise Pollution: A Modern Plague", *Southern Medical Journal*: Volume 100 - Issue 3 - pp 287-294.

<sup>&</sup>lt;sup>12</sup> Federal Interagency Committee on Noise (FICON), August 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. Available: <a href="http://www.fican.org/pdf/nai-8-92.pdf">http://www.fican.org/pdf/nai-8-92.pdf</a>

<sup>13</sup> http://www.fican.org/pdf/Effects\_aircraft.pdf

<sup>&</sup>lt;sup>14</sup> ANSI S12.60-2002 American National Standard, Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools

abnormalities, they need special protection, and the evidence is strong enough to warrant monitoring programs in schools and elsewhere to protect children from noise exposure.

The DEIS does not identify these impacts to children's health and learning, nor are any mitigation measures identified, as required by 40 CFR 1502.16(h).

Recommendations: Disclose impacts to children including potential health impacts and impacts to learning. Identify possible mitigation measures, including retrofitting impacted schools with appropriate measures to achieve the classroom acoustics standard of the American National Standards Institute (ANSI)<sup>15</sup>. This could include adding insulation, adding a second window pane or replacing windows with better sound attenuation, sealing gaps or leaks in windows and doors, installing baffles in vents and improving the exterior roofing, consistent with radon safety. Indicate whether noise insulation at these schools could achieve the ANSI acoustical performance criteria with the noise levels predicted from the Proposed Action, specifically the requirement that the one-hour average background noise level not exceed 35 dBA in core learning spaces smaller than 20,000 cubic feet and 40 dBA in larger spaces. Identify possible funding sources for this mitigation and the likelihood that mitigation would occur. See comment below on noise mitigation.

#### Noise mitigation

As mentioned, no mitigation measures for noise are identified despite the very high increases in noise that would occur during 2 months of the year. We understand that there is no existing Department of Defense program that permits appropriated funding for off-base sound attenuation; however, since GSN is a civilian airport, it is eligible to apply for financial assistance from the FAA Part 150 program for noise mitigation. This would require updating the Noise Exposure Maps and the Noise Compatibility Plan, as well as matching funds from the airport. According to the DEIS, the Department of Defense will need to negotiate space for military improvements with the authority running the airport, and any additional costs for construction and ongoing maintenance to the operating authority would be addressed in the mutual use agreement (p. 1-14).

*Recommendations:* Identify mitigation measures for noise impacts in the FEIS per 40 CFR 1502.16(h). We recommend that the Air Force work with the airport authority to ensure that the mutual use agreement includes sufficient financial contributions from DoD for ongoing maintenance so the authority can afford to pursue FAA Part 150 program funding.

## Cumulative Noise Impacts Not Evaluated

The DEIS acknowledges that noise impacts on noise-sensitive receptors during implementation of the preferred alternative would be significant (p. ES-12); however, it does not acknowledge cumulative noise impacts. Table ES-3 on p. ES-22 does not address cumulative noise impacts from implementation of the preferred alternative <sup>16</sup> nor does the text on page 5-9 address cumulative operational noise impacts. Instead, the DEIS states that no cumulative impacts would be expected on the noise environment due to air operations, because the air training operations were analyzed in the MIRC EIS, for which a Record

<sup>15</sup> ANSI/ASA S12.60-2002 (R2009) American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools.

<sup>&</sup>lt;sup>16</sup> A summary bullet is listed only for the construction phase for Saipan, although a summary bullet is included for both construction and implementation for the Tinian alternative.

of Decision was issued. The MIRC EIS, however, did not include training use of the Saipan International Airport, so the impact assessment for the aircraft operations in the MIRC EIS was for noise receptors on Guam. Noise impact assessments are necessarily localized and must involve the actual receptors that would be impacted under the Proposed Action. Cumulative noise impact assessments evaluate project impacts to these receptors in combination with noise from other past, present and reasonably foreseeable future actions.

*Recommendation:* Conduct an impact assessment for noise impacts that occur incrementally from the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7).

# Noise Impacts and Environmental Justice

The DEIS reveals that Saipan has disproportionately high minority populations and disproportionately high low-income populations in some areas, and that noise impacts would represent "a disproportionate impact on disproportionately high minority populations within District 10" (p. 4-114). It also states that "the USAF will conduct outreach to the potentially impacted communities to ensure they are engaged in the NEPA process and are part of the mitigation development process, if it is determined that mitigation is required" (p. 4-114). It is not clear what criteria the Air Force is using to determine when mitigation is required; nor is it clear whether or not the impacted community has yet been engaged. For outreach to be meaningful, especially to environmental justice communities, it should occur early in the NEPA process.

The DEIS concludes that while disproportionate impacts would occur to minority and low-income populations, this impact would not be significant because it would occur intermittently up to 8 weeks per year. (p. 4-114). This is confusing since the DEIS acknowledges significant noise impacts on page ES-12. Additionally, Council on Environmental Quality's (CEQ) NEPA Regulations state that "significance cannot be avoided by terming an action temporary" (40 CFR 1508.27(b)7). The noise levels predicted in the DEIS are very high and much higher than the significance threshold of DNL 65 dB identified by FICON, in which the Air Force was a member (see footnote #9).

The DEIS identifies "quality of life" in the discussion of sociocultural issues and states that "quality of life relates to the ability of Saipan and Tinian to adequately support the Proposed Action, including how the island's general tranquility, family and community relations, cultural identity, infrastructure, social services, and standards of living could be affected" (p. 3-109). The DEIS does not discuss the impact of noise on the island's general tranquility in its discussion of sociocultural impacts. Based on the noise levels predicted, adverse sociocultural issues may not be negligible as stated in the DEIS (p. 4-113).

#### Recommendations:

- If outreach to the community on Saipan has not yet occurred, it should occur as soon as possible, with commenting opportunities provided, before the FEIS is published. Information on noise impacts should be provided in a clear way that is meaningful and understandable to the public. Materials should be translated as appropriate.
- The FEIS should clarify what criteria the Air Force is using to determine when mitigation is required.
- The FEIS should acknowledge that noise impacts are significant, in general, and, therefore, significant to the environmental justice community.

• The FEIS should reassess the sociocultural impacts of the proposed project, including impacts on the island's general tranquility.

#### **Infrastructure**

# Water Supply

The description in the DEIS of the water supply quantity and quality conditions on Saipan is largely accurate with regard to water shortages, the lack of a 24-hour water supply for residents, and high chlorides (saltiness) of the existing groundwater supply. The DEIS states, however, that "it is assumed that both capacity and quality of water at GSN are sufficient to support personnel under both the construction phase and the implementation of the Proposed Action" (p. 3-90). It also characterizes impacts as minor and adverse, noting that they would occur on an already strained system (p. 4-100). Even though the water demand from the project is relatively small, if the BEAR site option is used for billeting and water withdrawal is concentrated in one area (in the vicinity of the intersection of Flame Tree Road and Airport Access Road, p. 2-26), the increase in demand for the 8 weeks per year could have significant localized impacts on the water distribution system in that area. In addition, because of the noted water quality problems, water is deemed too salty for drinking and most residents on Saipan purchase bottled water or groundwater treated by reverse osmosis for drinking.

The DEIS states that a 2-inch water supply line would be required for the proposed hangar, maintenance facility, and billeting areas (p. 4-96). A water line of this size may not be consistent with local codes and could be insufficient to provide flows needed for fire-fighting.

The DEIS estimates the daily increased water demand at approximately 68,000 gpm when the facilities are in use. This is roughly equivalent to one or two of the existing Commonwealth Utility Corporation (CUC) groundwater wells.

Recommendation: The FEIS should evaluate localized impacts to the water supply system for the 8 weeks during which exercises would occur. The Air Force should consider the existing deteriorated system in determining significance of these impacts. We recommend working with the CUC to determine the intake locations that would minimize localized impacts, and whether any additional facilities (additional source capacity and/or storage) are warranted. The commercial lodging option appears likely to reduce localized impacts to the water supply system since it is less centralized. If the BEAR Site is used for billeting, the FEIS should note the probable need for bottled drinking water or treatment of some water via reverse osmosis.

The FEIS should indicate whether a 2-inch water line is consistent with local codes and with military codes. Coordinate with CUC to ensure sizing is sufficient for all water needs.

#### Wastewater Treatment

The DEIS accurately describes the conditions of the existing wastewater and sewer systems on Saipan, noting that they are not in compliance with their EPA National Pollutant Discharge Elimination System (NPDES) Permit requirements and the Clean Water Act. While capacity at the wastewater treatment plants is not an issue, the flows, although minor, could exacerbate the noncompliant condition. CUC is currently undergoing a Master Planning process which details the necessary upgrades that are needed to bring the plants into compliance.

*Recommendation:* We recommend coordinating with CUC to determine how the Air Force can utilize the wastewater and sewer system in a manner that is consistent with the proposed draft master plan for Saipan and that will not contribute to noncompliance.

## **Biological Resources**

Biosecurity is a concern for the Preferred Alternative 1 as well as Alternative 2 on Tinian. Increased aircraft activities will increase the potential for the introduction of invasive species, including the brown tree snake, which the DEIS indicates has already been detected on Saipan (p. 4-60). The DEIS states that the U.S. Air Force will commit to implementing 100 percent inspection of all outgoing aircraft from Guam for the brown tree snake, and that redundant inspections "will be" conducted on Saipan (p. 4-60, line 37). On page 4-61, the DEIS states that redundant inspection "could be" conducted on Saipan during project development and training activities (line 37). The DEIS does not discuss the potential for other invasive species to be introduced on Saipan or Tinian from the project. According to the U.S. Fish and Wildlife Service (USFWS), other invasive species of concern in the CNMI are the little fire ant, the greenhouse frog, and the coconut rhinoceros beetle.

Preferred Alternative 1 would remove 14.3 acres of forest, primarily for the east parking apron and ramp and the bulk fuel storage (p. 4-59). The maintenance facility will result in removal of just under an acre. Based on Figure 2.3-6, if commercial lodging is utilized for billeting and the BEAR site is not needed, space may be available for the fuel tanks and hydrant system at this location to avoid removal of up to 5 acres of forest. Additionally, based on Figure 2.3-5, it appears there could be non-forested space across the road from the proposed maintenance facility that could be utilized for this structure.

*Recommendation:* Clarify in the FEIS whether the Air Force will commit to redundant inspections on Saipan during project development and training activities, and identify whether there is sufficient capacity and infrastructure to perform these inspections or whether additional capacity is needed. Work with USFWS to obtain their concurrence on the biosecurity program.

Explore and discuss in the FEIS whether forest removal has been minimized by site planning, including the possible adjustments to facility locations mentioned above.

#### **Additional Comments**

- The DEIS states that portions of the Marianas Trench Marine National Monument are not within the Study Area but are to the north and south of the Study Area (p. 1-3, line 32). However, the DEIS also states that "the Mariana Islands Range Complex (MIRC) and the [Divert Activities] Study Area are the same geographical areas" (p. 1-10, line 30). We note that the MIRC FEIS states that "the MIRC and the [MIRC] Study Area are the same geographical areas" (MIRC FEIS, p. ES-1) and that "portions of the Marianas Trench Marine National Monument lie within the [MIRC] Study Area" (MIRC FEIS, p. ES-2). Clarify this discrepancy in the FEIS.
- The DEIS mentions "demolition activities" that would occur for Alternative 1 (p. 4-31) but demolition was not identified in the project description, and p. 4-88 states that Alternative 1 does not entail building demolition. Clarify this discrepancy in the FEIS.
- Table 1.5-1 states that no permit will be needed under the Clean Water Act, but that a stormwater general permit will be needed for construction activities. Such permits are issued pursuant to the Clean Water Act.