

CHAPTER 19.

ENVIRONMENTAL JUSTICE AND THE PROTECTION OF CHILDREN

19.1 INTRODUCTION

This chapter contains a discussion of the potential environmental consequences of the proposed action with regard to environmental justice and protection of children. For a description of the affected environment and a definition of the resource, refer to the respective chapter of Volume 2 (Marine Corps Relocation – Guam). The locations described in that Volume 2 include the region of influence (ROI) for the Army Air and Missile Defense Task Force (AMDTF); the chapters are presented in the same order as the resource areas contained in this Volume.

This analysis of environmental consequences addresses all components of the proposed actions for the Army AMDTF. This includes the headquarters/housing component and the munitions storage component, each of which has three alternatives. A full analysis of each alternative is presented beneath the individual headings of this chapter. The weapons emplacement component has four alternatives. Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L). A summary of impacts specific to each set of alternatives (including an unclassified summary of weapons emplacement impacts) is presented at the end of this chapter.

This chapter focuses on the potential for racial and ethnic minorities, low income populations, or children to be disproportionately affected by project-related impacts. Normally an analysis of environmental justice is initiated by determining the presence and proximity of these segments of the population relative to the specific locations that would experience adverse impacts to the human environment. The situation on Guam is unique in this regard because racial or ethnic minority groups (as defined by the United States [U.S.]) comprise a majority of the Guam population, and the proportions of people living in poverty or who are under 18 years of age are also substantially higher than in the general U.S. population. The analysis is further complicated by the fact that Guam is a relatively small and isolated island, and certain types of impacts would be experienced islandwide. Accordingly, the analysis of environmental justice described in this chapter acknowledges the unique demographic characteristics of the island population and assumes that the project effects could disproportionately affect disadvantaged groups and children because they comprise relatively high proportions of the population. By the same logic, proposed mitigation measures would be expected to effectively mitigate potential environmental justice impacts. Consequently, a distinction is made between potential significant impacts that would be mitigated and those for which no mitigations have been identified. The focus of this analysis is on the latter type of impacts. If a resource area did not have significant impacts, or impacts were mitigable to less than significant, as analyzed in each individual chapter in Volume 5, then it was not further analyzed in this chapter. These resources are: geological and soil resources, water resources, air quality, noise, airspace, land and submerged land use, recreational resources, terrestrial and marine biological resources, cultural resources, visual resources, marine transportation, socioeconomics, hazardous materials and waste. Impacts associated with utilities (power, potable water, wastewater) and roadways are discussed in Volume 6.

19.2 ENVIRONMENTAL CONSEQUENCES

19.2.1 Approach to Analysis

19.2.1.1 Methodology

Volume 5 of this EIS examines the potential impacts that each alternative for the Army AMDTF would potentially have on various environmental and human resources. Based on the conclusions reached in each resource chapter, the analysis of environmental justice sought to identify the adverse impacts that would disproportionately affect racial minorities, children, and/or low-income populations, based on the following assumptions.

- Environmental Justice and Protection of Children policies require a federal agency to analyze whether its proposed action would adversely affect minority, low-income, and child populations disproportionately to the rest of the community. The island of Guam is unique in that a majority of the population of Guam meet the criteria for being an Asian Pacific minority group in the context of the overall U.S. population. As a result, where the EIS identifies significant impacts for a particular resource, there would be a corresponding, island-wide adverse effect to minority populations on Guam, compared to the U.S. population. However, because of international agreements that require the proposed action to focus on Guam, and not other locations within the U.S., the evaluation of environmental justice would be on whether there are disproportionate adverse effects within the context of alternatives for facility location on Guam. Because of this, it would be impossible for there to be a disproportionate effect from an identified adverse impact based solely on the impact affecting a minority population. Therefore, the analysis for environmental justice on Guam must consider whether there is a disproportionate adverse effect on a low-income population or children. For example, if there is a low-income population that is being impacted by a potential reduction in Public Health and Social Services, that impact would be considered a significant impact because the population, as a given, is a minority population and it is being disproportionately affected because it is a low-income population. As a result, some resource areas may have effects on a minority population, but because they do not impact a low-income or child population in a disproportionate manner they will not be considered as causing an environmental justice adverse effect.
- The ROI is defined as the area in which the principal effects arising from the implementation of the proposed action or alternatives are likely to occur. Those who may be affected by the consequences of the alternatives are often those who reside or otherwise occupy areas immediately adjacent to the alternative locations.
- Because the proposed actions are related either to construction or operations, impacts to the ROI would likely be either “spill over” effects that extend beyond an installation’s boundary line into the surrounding community, or impacts that directly affect minority populations in the ROI.

In Volume 5, components of the proposed action were determined to have potential adverse cultural resource impacts (Chapter 12) and noise impacts (Chapter 6), both of which have implications for environmental justice and protection of children. Volume 6 (Chapter 4) also identified traffic impacts associated with the action that are also applicable to this analysis (based on a Federal Highway Administration study). No other resource impacts identified in Volume 5 would have potential significant

impacts with regard to environmental justice or protection of children. Therefore, this chapter focuses on significant adverse impacts to cultural resources, noise, and traffic as described in Volume 5 and Volume 6.

The analysis involved the application of three tiers of criteria to assess the environmental justice implications for each significant impact identified in the relevant resource chapters. In some cases if the analysis shows that the requirements for the specific criteria have not been met, then a discussion on the next tier may not be required. For instance, if an applicable disadvantaged group is not disproportionately affected in Tier 2, then a discussion on significant effects under environmental justice would not be warranted.

- *Tier 1: Are there any racial minorities, low-income, or children populations adjacent to the proposed action site?*
- *Tier 2: Are the applicable disadvantaged groups disproportionately affected by the negative environmental consequences of the proposed action(s)?*
- *Tier 3: Would the disproportionate adverse effects be significant?*

19.2.1.2 Determination of Significance

According to Section 1508.27 of the Council on Environmental Quality (CEQ) Regulations for Implementing National Environmental Policy Act (NEPA) (CEQ 1979), determining the level of significance of an environmental impact requires that both context and intensity be considered. These are defined in Section 1508.27 as follows:

- “Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant”.
- “Intensity. This refers to the severity of the impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.” The following should be considered in evaluating intensity:
 - Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect would be beneficial.
 - The degree to which the proposed action affects public health or safety.
 - Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
 - The degree to which the effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.
 - The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
 - Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
 - The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined critical under the Endangered Species Act of 1973.
- Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.”

19.2.1.3 Issues Identified during Public Scoping Process

Concerns related to environmental justice that were raised by the public and regulatory stakeholders during the public scoping meetings were considered during the analysis of environmental justice and are discussed in Volume 2, Chapter 19, Environmental Justice. Also discussed in Volume 2 Chapter 19 are public outreach efforts that were undertaken during the development of the EIS to ensure that racial and ethnic minority and low-income populations had the opportunity to provide comments on the proposed military relocation on Guam.

19.2.2 Headquarters/Housing Alternatives

19.2.2.1 Headquarters/Housing Alternative 1 (Preferred Alternative)

According to Chapter 2 of Volume 5, Alternative 1 for the proposed headquarters/housing projects includes the construction of Army administrative buildings co-located with Marine Corps facilities at Naval Computer and Telecommunications Satation (NCTS) Finegayan and construction of Army housing co-located with Marine Corps housing at South Finegayan. Construction activities and operations would occur on base. The village located adjacent to NCTS Finegayan is Dededo.

Public Health Care Services

Volume 5, Chapter 18 identifies potential significant impacts to health care services as a consequence of population growth associated with the Army AMDTF. An increased patient to health care provider ratio is predicted, and it is anticipated that Guam clinics and hospital would not be able to increase staffing to meet health care service needs, resulting in significant impacts to public health care services.

Tier 1: Are there any racial minorities, low-income, or children populations adjacent to the proposed action site?

Dededo has a majority (97%) of racial minorities compared to the U.S. average (U.S. Census Bureau 2000a). Dededo has a similar percentage of households in poverty to other villages on Guam, which is higher (25%) than that of the U.S. (11%) (U.S. Census Bureau 2000b). Dededo also has a relatively high percentage of children relative to other villages on Guam, CNMI, and the U.S. average (U.S. Census Bureau 2000a; CNMI Department of Commerce 2005).

Tier 2: Are the applicable disadvantaged groups disproportionately affected by the negative environmental consequences of the proposed action(s)?

Low-income populations and children of low-income families would be more susceptible to the consequences of reduced availability of public health care services. This would result in disproportionately high and adverse effects on low-income populations resulting from potential impacts to the public health services.

Tier 3: Would the disproportionate adverse effects be significant?

Unless the federal inter-agency task force succeeds in finding funding or other assistance to help Guam correct deficiencies in public health services, disproportionate adverse effects on low-income populations and their children could be significant.

Public Safety Services

Volume 5, Chapter 18 identifies potential significant impacts to public safety services as a consequence of population growth associated with the Army AMDTF. Public safety agencies; Police, Fire, Corrections, and Youth Affairs, would require additional staff. During the construction phase, public service agencies would experience some strain. There is an acknowledged existing sub-standard condition of key public social service on Guam and documented historical difficulty in addressing and funding these conditions. Thus any increase in service population due to the proposed action would further strain these services.

Tier 1: Are there any racial minorities, low-income, or children populations adjacent to the proposed action site?

Dededo has a majority of racial minorities compared to the U.S. average (U.S. Census Bureau 2000a). Dededo has a similar percentage of households in poverty to other villages on Guam, which is higher than that of the U.S. (U.S. Census Bureau 2000b). Dededo also has a relatively high percentage of children relative to other villages on Guam, CNMI, and the U.S. average (U.S. Census Bureau 2000a; CNMI Department of Commerce 2005).

Tier 2: Are the applicable disadvantaged groups disproportionately affected by the negative environmental consequences of the proposed action(s)?

All people of Guam would be affected in the same manner by potential impacts to the public safety services associated with Army AMDTF population growth. Such impacts would not disproportionately affect minority and low-income populations or children.

Alternative 1 Proposed Mitigation Measures

Proposed mitigation measures, listed in Chapters 16 and 18 of this Volume and Chapter 2 of Volume 7, to reduce potential impacts from the implementation of Alternative 1 would reduce impacts on low-income populations related to public health services.

19.2.2.2 Headquarters/Housing Alternative 2

According to Chapter 2 of this Volume, Alternative 2 includes the construction of Army housing, headquarters and support facilities near the northwest corner of Navy Barrigada. The village adjacent to this area is Barrigada. Construction would occur on base; however, the residential area of Barrigada Heights is across the street from the proposed construction site at Navy Barrigada. Proposed operations would occur on base and would be mainly housing and administrative. Volume 5, Chapter 2 states that the on-island Army population would be 50 by 2014, with all 630 personnel arriving by 2015. The total expected population increase from Army personnel and their dependents is 1,580. Therefore, over time there would be an increase in the number of people traveling to and from the base, which may affect traffic along Routes 15 and 16. Impacts associated with roadways are discussed in Chapter 4 of Volume 6.

Public Health Care Services

Impacts to public health care services would be the same for Headquarters/Housing Alternative 2 as described for Headquarters/Housing Alternative 1.

Tier 1: Are there any racial minorities, low-income, or children populations adjacent to the proposed action site?

The villages of Barrigada and Mangilao have a high percentage of racial and ethnic minorities, as well as a higher poverty rate and a higher percentage of children than in the U.S.

Tier 2: Are the applicable disadvantaged groups disproportionately affected by the negative environmental consequences of the proposed action(s)?

Low-income populations and children of low-income families would be more susceptible to the consequences of reduced availability of public health care services. This would result in disproportionately high and adverse effects on low-income populations and their children resulting from potential impacts to the public health services.

Tier 3: Would the disproportionate adverse effects be significant?

Unless the federal inter-agency task force succeeds in finding funding or other assistance to help Guam correct deficiencies in public health services, disproportionate adverse effects on low-income groups and children of low-income families could be significant.

Public Safety Services

Impacts to public safety services would be the same for Headquarters/Housing Alternative 2 as described for Headquarters/Housing Alternative 1.

Tier 1: Are there any racial minorities, low-income, or children populations adjacent to the proposed action site?

The villages of Barrigada and Mangilao have a high percentage of racial and ethnic minorities, as well as a higher poverty rate and a higher percentage of children than in the U.S.

Tier 2: Are the applicable disadvantaged groups disproportionately affected by the negative environmental consequences of the proposed action(s)?

All people of Guam would be affected in the same manner by potential impacts to the public safety services associated with Army AMDTF population growth. Such impacts would not disproportionately affect minority and low-income populations or children.

Alternative 2 Proposed Mitigation Measures

The mitigation measures proposed for Alternative 2 are the same as for Alternative 1.

19.2.2.3 Headquarters/Housing Alternative 3

Under Alternative 3, Army administrative buildings would be collocated with Marine Corps facilities at NCTS Finegayan and accompanied personnel housing and related recreational and quality of life facilities would be collocated with Marine Corps housing within Navy Barrigada and Air Force Barrigada. Proposed actions and impacts at NCTS Finegayan would be the same as described above for that portion of Alternative 1, and impacts at Navy Barrigada would be the same as described above for that portion of Alternative 2. The additional unique feature of Alternative 3 is that construction of facilities would also occur at Air Force Barrigada.

Villages adjacent to Air Force Barrigada are Barrigada and Mangilao. There are residential areas in these villages that are adjacent to the proposed construction site. There would be no additional significant impacts from construction of these facilities, and the impacts affecting environmental justice and the protection of children under Alternative 3 would be the same as described for NCTS Finegayan (Alternative 1) and Navy Barrigada (Alternative 2). According to Chapter 18 of this Volume, there would

be significant impacts to public health care services and public safety services as a result of population growth associated with the Army AMTDF Housing/Headquarters Alternative 3.

Impacts to public health care services and public safety services relative to environmental justice and protection of children would be the same for Headquarters/Housing Alternative 3 as described for Headquarters/Housing Alternatives 1 and 2.

Alternative 3 Proposed Mitigation Measures

The mitigation measures proposed for Alternative 3 are the same as for Alternative 1.

19.2.3 Munitions Storage Alternatives

19.2.3.1 Munitions Storage Alternative 1 (Preferred Alternative)

Three munitions storage magazines would be constructed in three non-contiguous areas near the Habitat Management Unit (HMU) in the southwestern part of Andersen Air Force Base (AFB). No new operations are proposed at Andersen AFB under Alternative 1. This alternative would not result in any disproportionately high and adverse impacts to racial or ethnic minorities, low-income populations, or children.

19.2.3.2 Munitions Storage Alternative 2

Munitions storage magazines would be consolidated at one site located north of B Avenue on Andersen AFB. No new operations are proposed at Andersen AFB for Alternative 2. This alternative would not result in any disproportionately high and adverse impacts to racial or ethnic minorities, low-income populations, or children.

19.2.3.3 Munitions Storage Alternative 3

Munitions storage magazines would be consolidated at a site located northeast of the HMU and an unnamed road on Andersen AFB. No new operations are proposed at Andersen AFB for Alternative 3. This alternative would not result in any disproportionately high and adverse impacts to racial or ethnic minorities, low-income populations, or children.

19.2.4 Weapons Emplacement Alternatives

The weapons emplacement component of the proposed Army AMDTF action has four alternatives. Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L).

No potential significant impacts of the weapons emplacement alternatives were identified; therefore, this alternative would not result in any disproportionately high and adverse impacts to racial or ethnic minorities, low-income populations, or children.

19.2.4.1 Weapons Emplacement Alternative 2

Alternative 2 involves the same type of facility, construction, and operations as Alternative 1 and the impacts would be the same. Therefore, the environmental justice impacts for actions proposed in Alternative 2 are the same as those discussed under Alternative 1.

19.2.4.2 Weapons Emplacement Alternative 3

Alternative 3 involves the same type of facility, construction, and operations as Alternative 1 and the impacts would be same. Therefore, the environmental justice impacts for actions proposed in Alternative 3 are the same as those discussed under Alternative 1.

19.2.4.3 Weapons Emplacement Alternative 4 (Preferred Alternative)

Alternative 4 involves the same type of facility, construction, and operations as Alternative 1 and the impacts would be the same. Therefore, the environmental justice impacts for actions proposed in Alternative 4 are the same as those discussed under Alternative 1.

19.2.5 No-Action Alternative

Under the no-action alternative, no construction or operations associated with the Army AMDTF would occur and existing operations at the proposed project areas would continue. There would be no significant impacts associated with the no-action alternative; therefore, the no-action alternative would have no adverse environmental justice impacts on the villages of Dededo, Barrigada, and Mangilao and would not increase health and safety risks for children.

19.2.6 Summary of Impacts

Tables 19.2-1, 19.2-2, and 19.2-3 summarize the potential impacts of each major component – headquarters/housing, munitions storage, and weapons emplacement, respectively.

Table 19.2-1. Summary of Headquarters/Housing Impacts – Alternatives 1, 2, and 3

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>
Construction		
SI <ul style="list-style-type: none"> Significant impact to low-income populations and children of low-income families from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts 	SI <ul style="list-style-type: none"> Significant impact to low-income populations and children of low-income families from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts 	SI <ul style="list-style-type: none"> Significant impact to minority and low-income populations and children from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts
Operation		
SI <ul style="list-style-type: none"> Significant impact to low-income populations and children of low-income families from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts 	SI <ul style="list-style-type: none"> Significant impact to low-income populations and children of low-income families from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts 	SI <ul style="list-style-type: none"> Significant impact to low-income populations and children of low-income families from public health services impacts NI <ul style="list-style-type: none"> No disproportionate impact to minority populations from public health services impacts No disproportionate impact to minority and low-income populations or children from public safety services impacts

Legend: SI = Significant impact; NI = No impact

Table 19.2-2. Summary of Munitions Storage Impacts – Alternatives 1, 2, and 3

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>
Construction		
NI <ul style="list-style-type: none"> No impacts to racial minorities. No impacts to low-income populations No impacts to children No impacts to cultural resources 	NI <ul style="list-style-type: none"> The impacts would be the same as Alternative 1 	NI <ul style="list-style-type: none"> The impacts would be the same as Alternative 1
Operation		
NI <ul style="list-style-type: none"> No impacts to racial minorities No impacts to low-income populations No impacts to children. 	NI <ul style="list-style-type: none"> The impacts would be the same as Alternative 1 	NI <ul style="list-style-type: none"> The impacts would be the same as Alternative 1

Legend: NI = No impact

Table 19.2-3. Summary of Weapons Emplacement Impacts – Alternatives 1, 2, 3 and 4

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>	<i>Alternative 4</i>
Construction			
NI <ul style="list-style-type: none"> There would be no disproportionate impacts to low-income populations or children 	NI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 NI <ul style="list-style-type: none"> There would be no disproportionate impacts to low-income populations or children 	NI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 NI <ul style="list-style-type: none"> There would be no disproportionate impacts to low-income populations or children 	NI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 NI <ul style="list-style-type: none"> There would be no disproportionate impacts to low-income populations or children
Operation			
NI <ul style="list-style-type: none"> There would be no impacts from operations 	NI <ul style="list-style-type: none"> There would be no impacts from operations 	NI <ul style="list-style-type: none"> There would be no impacts from operations 	NI <ul style="list-style-type: none"> There would be no impacts from operations

Legend: NI = No impact

19.2.7 Summary of Proposed Mitigation Measures

Table 19.2-4 summarizes proposed mitigation measures for each component of the proposed action.

Table 19.2-4. Summary of Proposed Mitigation Measures

<i>Headquarters/Housing Alternatives</i>	<i>Munitions Storage Alternatives</i>	<i>Weapons Emplacement Alternatives</i>
Public Health Care and Safety Services		
<ul style="list-style-type: none"> DoD would implement the proposed mitigation measures in Volume 5, Chapters 16 and 18 	<ul style="list-style-type: none"> DoD would implement the proposed mitigation measures in Volume 5, Chapters 16 and 18 	<ul style="list-style-type: none"> DoD would implement the proposed mitigation measures in Volume 5, Chapters 16 and 18

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