

CHAPTER 9.

RECREATIONAL RESOURCES

9.1 INTRODUCTION

This chapter provides the assessment of potential environmental consequences associated with implementation of the alternatives within the region of influence (ROI) for recreational resources and public access. Recreational resources have been categorized according to similar uses in Volume 2 (Marine Corps Relocation – Guam), and where applicable, limitations on access to each resource were noted. The locations described in Volume 2 include the ROI for the Army Air and Missile Defense Task Force (AMDTF); the chapters in this volume are presented in the same order as the resource areas contained in that volume.

9.2 ENVIRONMENTAL CONSEQUENCES

9.2.1 Approach to Analysis

9.2.1.1 Methodology

Information on recreational resources on Guam and public access was collected through stakeholder meetings in April 2007, geographic information system data compiled and reviewed for this Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), literature review, personal communications, and the limited visitor data that are available for a few specific locations on the island. A comprehensive recreational carrying capacity analysis, i.e., assessing the number of individuals who can be supported in a given area within natural resource limits without degrading the natural social, cultural, and economic environment (Global Development Research Center 2009), was not conducted as part of this EIS/OEIS. However, such an analysis is suggested as a mitigation measure to better quantify potential impacts on recreation resources. As indicated in the Affected Environment section in Volume 2, existing baseline data for conducting recreational resource impact analyses are somewhat limited since the Government of Guam (GovGuam), Department of Parks and Recreation does not collect visitor data (e.g. user counts, visitor satisfaction, user conflicts, visitor demands, etc.) for its recreational facilities (GovGuam 2009). Consequently, the analysis in this chapter relied considerably on information obtained through site reconnaissance and communications with natural resource planners at Andersen Air Force Base (AFB) and park rangers at the National Park Service which manages the War in the Pacific National Historical Park.

9.2.1.2 Determination of Significance

For the purpose of this EIS/OEIS, the proposed action would cause a significant impact to recreational resources if it:

- Impeded access to recreational resources
- Substantially reduced recreational opportunities
- Causes substantial conflicts between recreational users
- Causes substantial physical deterioration of recreational resources

9.2.1.3 Issues Identified During Public Scoping Process

As part of the analysis, concerns that were mentioned by the public, including regulatory stakeholders, during the public scoping meetings were addressed. These include: the potential impact of the proposed

action on civilian access to Department of Defense (DoD) facilities, recreation areas, Apra Harbor, and other locations, both in terms of construction and operation impacts.

9.2.2 Headquarters/Housing Alternatives

This description 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.

9.2.2.1 Headquarters/Housing Alternative 1 (Preferred Alternative)

North

NCTS Finegayan

Construction. Construction activities associated with the proposed action would occur at Naval Computer and Telecommunications Station (NCTS) Finegayan. Existing recreational resources at NCTS Finegayan are situated outside of the proposed action areas and would not be impacted by construction. Increased travel time on affected roads may occur, but impacts to the recreational resource itself are not expected. Therefore, Alternative 1 would result in no impacts to recreational resources at NCTS Finegayan.

Operation. Available recreational resources at NCTS Finegayan include Haputo Ecological Reserve Area and Guam National Wildlife Refuge, offering a variety of uses, such as trails, dive sites, passive enjoyment of pristine sand beaches, limestone forests, coral reefs, and ancient pictographic caves. The primary users of these on-base recreational resources would be installation personnel, civilian workers, and their dependents. To shelter military on-base equipments and personnel, as well as to facilitate training operations, persons other than the described would not have access to, and use of, these recreational resources.

The number of potential recreational resource users would increase under Alternative 1 due to the placement of unaccompanied and accompanied housing at NCTS Finegayan. An increase in users would be expected during weekends, holidays, and school vacation months. These potential recreational users may opt to pursue recreational resources on-base at NCTS Finegayan, other bases on Guam, or those available off-base. Persons involved with the proposed action do not represent a significant increase in the number of recreational users island-wide. Nevertheless, some crowding at the existing recreational resources (e.g., more people on trails, beaches, cultural sites) is expected as the result of the presence of the new population on base. Therefore, Alternative 1 would result in less than significant impacts to recreational resources at NCTS Finegayan.

South Finegayan

Construction. There are no existing recreational resources at South Finegayan. Consequently, there would be no impacts on recreational resources from construction. Therefore, Alternative 1 would result in no impacts to recreational resources at South Finegayan.

Operation. There are no existing recreational resources on South Finegayan. Consequently, there would be no impacts on recreational resources from operation. Therefore, Alternative 1 would result in no impacts to recreational resources at South Finegayan.

Central

Navy Barrigada

Construction. The construction activities associated with the proposed action would not occur at Navy Barrigada; however, persons attempting to reach the Admiral Nimitz Golf Course—the sole recreational resource on-base—may experience increased travel time due to the presence of construction-related vehicles. Increased time traveling on affected roads may occur, but impacts to the recreational resource itself are not expected. Therefore, Alternative 1 would result in no impacts to recreational resources at Navy Barrigada.

Operation. The sole recreational resource at Navy Barrigada features one of two golf courses available to installation personnel and guests on Guam, the Admiral Nimitz Golf Course. Golf courses on-base tend to offer lower fees than public and private courses, i.e., Nimitz Golf Course offers a tee time fee ranging from \$30 to \$49, weekdays and weekends, respectively, while public/private golf courses off base charge from \$70 to \$160 for weekdays and weekends (Barrigada Admiral Nimitz Golf Course, 2009; Guam Golfnet 2009). The new Army population could potentially increase the number of golf course users. An increase in the number of golfers could potentially lead to reduced availability of tee times at the golf course. Therefore, Alternative 1 would result in less than significant impacts to recreational resources at Navy Barrigada.

Air Force Barrigada

Construction. There are no recreational resources on Air Force Barrigada. Consequently, no impact would occur on recreational resources from construction. Therefore, Alternative 1 would result in no impacts to recreational resources at Air Force Barrigada.

Operation. There are no recreational resources sited on Air Force Barrigada. Consequently, no impact would occur to recreational resources from operation at Air Force Barrigada. Therefore, Alternative 1 would result in no impacts to recreational resources at Air Force Barrigada.

Alternative 1 Potential Mitigation Measures

Proposed quality of life (QOL) facilities offering comparable and alternate choices of recreational resources for use by the new Army population would minimize impacts associated with implementation of Alternative 1; therefore, no mitigation measures would be necessary.

9.2.2.2 Headquarters/Housing Alternative 2

North

NCTS Finegayan

Construction. Construction activities associated with the proposed action would occur at Navy Barrigada. Existing recreational resources at Navy Barrigada are situated outside of the proposed action areas and would not be impacted by construction. Increased travel time on affected roads may occur, but impacts to the recreational resource itself are not expected. Alternative 2 would result in no impacts to recreational resources at NCTS Finegayan.

Operation. The potential impacts on the recreational resources at NCTS Finegayan may be similar to or less than significant as described under Alternative 1 because housing would be located in Navy Barrigada. Currently, with the exception of the Admiral Nimitz Golf Course, there are no recreational resources present at Navy Barrigada. Army personnel and their dependents inhabiting the proposed housing would have to travel elsewhere to pursue recreational activities. Because Navy Barrigada is

situated in close proximity to the east coast of Guam and adjoining villages in Central and Southern Guam comparable and/or alternate forms of recreational resources are available as viable options. NCTS Finegayan offers a sense of exclusivity to its users (military and their dependents and guests only), as well as unique resources not found in other parts of the island. As a result, it can be reasonably anticipated that the resources at NCTS Finegayan would continue to experience usership, but at a lesser degree than where housing elements are co-located with recreational resources. Therefore, Alternative 2 would result in less than significant impact to recreational resources at NCTS Finegayan.

South Finegayan

Construction. There are no existing recreational resources at South Finegayan. Consequently, there would be no impacts on recreational resources from construction or operation at South Finegayan. Therefore, Alternative 2 would result in no impacts to recreational resources at South Finegayan.

Operation. There are no existing recreational resources on South Finegayan. Consequently, there would be no impacts on recreational resources from construction or operation at South Finegayan. Therefore, Alternative 2 would result in no impacts to recreational resources at South Finegayan.

Central

Navy Barrigada

Construction. The construction activities associated with the proposed action would occur at Navy Barrigada. Persons attempting to reach the Admiral Nimitz Golf Course—the sole recreational resource on-base—may experience increased travel time due to the presence of construction-related vehicles. Increased time traveling on affected roads may occur, but impacts to the recreational resource is not expected. Therefore, Alternative 2 would result in no impacts to recreational resources at Navy Barrigada.

Operation. Due to the presence of new permanent population associated with the proposed action at Navy Barrigada, its sole recreational resource, Admiral Nimitz Golf Course, may experience a greater likelihood of attracting new users [due to the proximity of new housing to the Golf Course (e.g. walk-on users)]. Similar to the effects described under Alternative 1, the potential impacts, such as reduced availability of tee time may be minimized by alternate forms of recreational activities. As also discussed previously, this need would be met by the proposed QOL features at NCTS Finegayan. Therefore, Alternative 2 would result in less than significant impacts to recreational resources at Navy Barrigada.

Air Force Barrigada

Construction. There are no existing recreational resources at Air Force Barrigada. Consequently, there would be no impacts on recreational resources from construction or operation at Air Force Barrigada. Therefore, Alternative 2 would result in no impacts to recreational resources at Air Force Barrigada.

Operation. There are no existing recreational resources on Air Force Barrigada. Consequently, there would be no impacts on recreational resources from construction or operation at Air Force Barrigada. Therefore, Alternative 2 would result in no impacts to recreational resources at Air Force Barrigada.

Alternative 2 Potential Mitigation Measures

No mitigation measures would be necessary.

9.2.2.3 Headquarters/Housing Alternative 3

North

NCTS Finegayan

Construction. Construction activities associated with the proposed action would occur at NCTS Finegayan. Existing recreational resources at NCTS Finegayan are situated outside of the proposed action areas and would not be impacted by construction. Increased travel time on affected roads may occur; however, impacts to the recreational resource itself are not expected. Therefore, Alternative 3 would result in no impacts to recreational resources at NCTS Finegayan.

Operation. The impacts under Alternative 3 would be similar to, but reduced from those described for Alternative 1. The primary difference, as it affects recreational resources, is that under Alternative 3 NCTS Finegayan would host only unaccompanied personnel housing. The absence of dependents on NCTS Finegayan would reduce the number of potential users of recreational resources during weekends, holidays, and school vacation months. The number of recreational users at NCTS Finegayan could possibly remain negligible in the likely event the would-be users opt to seek recreational resources on other bases or off-base. Therefore, Alternative 3 would result in less than significant impacts to recreational resources at NCTS Finegayan.

South Finegayan

Construction. There are no existing recreational resources at South Finegayan. Consequently, there would be no impacts on recreational resources from construction or operation at South Finegayan. Therefore, Alternative 3 would result in no impacts to recreational resources at South Finegayan.

Operation. There are no existing recreational resources on South Finegayan. Consequently, there would be no impacts on recreational resources from construction or operation at South Finegayan. Therefore, Alternative 3 would result in no impacts to recreational resources at South Finegayan.

Central

Navy Barrigada

Construction. The construction activities associated with the proposed action would occur at Navy Barrigada. Persons attempting to reach the Admiral Nimitz Golf Course—the sole recreational resource on base—may experience increased travel time due to the presence of construction related vehicles. Increased time traveling on affected roads may occur; however, direct impacts to the recreational resource is not expected. Therefore, Alternative 3 would result in no impacts to recreational resources at Navy Barrigada.

Operation. Due to the presence of new permanent population associated with the proposed action at Navy Barrigada, its sole recreational resource, Admiral Nimitz Golf Course, may experience a greater likelihood of attracting new users [due to the proximity of new housing to the Golf Course (e.g. walk-on users)]. Similar to the effects described under Alternative 1, the potential impacts, such as reduced availability of tee time may be minimized by alternate forms of recreational activities. As also discussed previously, this need would be met by the proposed QOL features at NCTS Finegayan. Therefore, Alternative 3 would result in less than significant impacts to recreational resources at Navy Barrigada.

Air Force Barrigada

Construction. There are no recreational resources on Air Force Barrigada. Consequently, no impact would occur on recreational resources from construction. Therefore, Alternative 3 would result in no impacts to recreational resources at Air Force Barrigada.

Operation. There are no recreational resources sited on Air Force Barrigada. Consequently, no impact would occur to recreational resources from operation at Air Force Barrigada. Therefore, Alternative 3 would result in no impacts to recreational resources at Air Force Barrigada.

Alternative 3 Potential Mitigation Measures

No mitigation measures would be necessary.

9.2.3 Munitions Storage Alternatives

9.2.3.1 Munitions Storage Alternative 1 (Preferred Alternative)

Construction

The majority of construction activities associated with the proposed actions would occur outside of Andersen AFB. Some construction would occur at Andersen AFB for the proposed earth-covered magazines (ECMs) in the Munitions Storage Area (MSA) 1. No recreation resources occur at or near this location. There are several recreational resources on the northern tip of Guam accessible via Route 3A, including scenic vistas, Ritidian Point, and the Guam National Wildlife Refuge (see Figure 9.1-1 in Volume 2). There would be additional vehicle traffic along Route 3A during construction. Increased time traveling on affected roads may occur; however, impacts to recreational resources is not expected. Therefore, Alternative 1 would result in no impacts to recreational resources at Andersen AFB.

Operation

The increase in residents on Guam would likely correlate to an increased usage of recreational resources. Heavier uses of the recreational resources are expected during weekends, holidays, and school vacation days since most persons involved with the proposed actions would otherwise be expected to be engaged with work and/or school. Therefore, Alternative 1 would result in less than significant impacts to recreational resources at Andersen AFB.

9.2.3.2 Munitions Storage Alternative 2

Existing conditions do not vary between the three munitions storage alternatives at MSA 1. Therefore, impacts for Munitions Storage Alternative 2 are identical those described for Munitions Storage Alternative 1.

9.2.3.3 Munitions Storage Alternative 3

Existing conditions do not vary between the three munitions storage alternatives at MSA 1. Therefore, impacts for Munitions Storage Alternative 3 are identical those described for Munitions Storage Alternative 1.

9.2.4 Weapons Emplacement Alternatives

Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L). An unclassified summary of impacts specific to each set of alternatives is presented at the end of this chapter.

9.2.5 No-Action Alternative

Under the no-action alternative, there would be no presence of active duty deployable Army units stationed on Guam. Recreational resources would continue to be used as they currently are. Therefore, recreational resources would not be impacted under the no-action alternative.

9.2.6 Summary of Impacts

Tables 9.2-1, 9.2-2, 9.2-3 summarize the potential impacts of each major component – headquarters/housing, munitions storage, and weapons emplacement, respectively. A text summary is provided below.

Table 9.2-1. Summary of Headquarters/Housing Impacts – Alternatives 1, 2, and 3

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>
Construction		
NI • There would be no impacts from construction	NI • The impacts would be the same as Alternative 1	NI • The impacts would be the same as Alternative 1
Operation		
LSI • Increase in the number of recreational users at NCTS Finegayan is likely. Users may experience crowding	LSI • The impacts would be the same as Alternative 1	LSI • The impacts would be the same as Alternative 1
LSI • Increase in the number of Admiral Nimitz Golf Course users is likely. Increased competition for tee times is expected at Navy Barrigada	LSI • The impacts would be the same as Alternative 1	LSI • The impacts would be the same as Alternative 1
NI • There would be no impacts to recreation at South Finegayan and Air Force Barrigada	NI • The impacts would be the same as Alternative 1	NI • The impacts would be the same as Alternative 1

Legend: LSI = Less than significant impact, NI = No impact.

Table 9.2-2. Summary of Munitions Storage Impacts – Alternatives 1, 2, and 3

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>
Construction		
NI • There would be no impacts from construction	NI • The impacts would be the same as Alternative 1	NI • The impacts would be the same as Alternative 1
Operation		
LSI • Increase in the number of recreational resource users is likely. Users may experience crowding at resources	LSI • The impacts would be the same as Alternative 1	LSI • The impacts would be the same as Alternative 1

Legend: LSI = Less than significant impact, NI = No impact.

Table 9.2-3. 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			
LSI <ul style="list-style-type: none"> The existing recreational resources are not in proximity to the proposed location 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1
Operation			
LSI <ul style="list-style-type: none"> The existing recreational resources are not in proximity to the proposed location 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1 	LSI <ul style="list-style-type: none"> The impacts would be the same as for Alternative 1

Legend: LSI = Less than significant impact.

Construction

Under all alternatives, construction activities would cause minor inconvenience to those traveling to the recreational resources at NCTS Finegayan, Navy Barrigada, and Andersen AFB; however, impacts to the recreational resource is not expected. Therefore, the proposed action would result in less than significant impacts to recreational resources.

Operation

Implementation of the Headquarter/Housing Alternative 1 would result in an increase in permanent population at NCTS Finegayan and South Finegayan. As a result, the existing recreational resources in those areas would likely experience an increase in the number of users. Crowding at recreational uses may be offset by alternate and additional forms of recreational resources made available by the proposed QOL facilities. Under Headquarter/Housing Alternative 2, all proposed actions would be confined to Navy Barrigada. Similar to Alternative 1, QOL facilities would be in close proximity to housing areas; by providing alternate forms of recreational resources, potential impacts to the existing recreational resource at Navy Barrigada may be offset. Installations offering different or additional recreational resources, such as NCTS Finegayan and Andersen AFB, would experience an increase in user numbers. Headquarter/Housing Alternative 3 would result in less than significant impacts to existing recreational resources.

In any scenario provided, discussion on potential impacts to the Admiral Nimitz Golf Course was included as it is one of only two golf courses on Guam with restricted use by installation personnel, retired personnel, and dependents. The implementation of any alternatives would result in an increase of installation personnel on Guam, and the Admiral Nimitz Golf Course would inevitably experience user number increase. As discussed under all alternatives, the addition of QOL facilities would complement the golf course uses by providing alternate forms of recreation for use, thereby offsetting potentially adverse impacts. Therefore, the proposed action would result in less than significant impacts to recreational resources.

9.2.7 Summary of Potential Mitigation Measures

Table 9.2-4 summarizes the potential mitigation measures proposed for each action alternative.

Table 9.2-4. Summary of Potential Mitigation Measures

<i>Headquarters/Housing Alternatives</i>	<i>Munitions Storage Alternatives</i>	<i>Weapons Emplacement Alternatives</i>
Construction		
<ul style="list-style-type: none"> No mitigation measures necessary 	<ul style="list-style-type: none"> No mitigation measures necessary 	<ul style="list-style-type: none"> No mitigation measures necessary
Operation		
<ul style="list-style-type: none"> No mitigation measures necessary 	<ul style="list-style-type: none"> No mitigation measures necessary 	<ul style="list-style-type: none"> No mitigation measures necessary

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