CHAPTER 16. MARINE TRANSPORTATION

16.1 INTRODUCTION

This chapter discusses the potential environmental consequences associated with implementing the alternatives for utilities and roadway projects (Guam) within the region of influence for marine transportation. For a description of the affected environment for marine transportation, refer to Volume 2, Chapter 14.

16.2 ENVIRONMENTAL CONSEQUENCES

16.2.1 Approach to Analysis

The primary military, commercial, and recreational port facilities on Guam are located in Apra Harbor. It is critical that navigational access to the channels be maintained for these users. The consequences of the alternatives for the proposed project have been evaluated based on the magnitude and duration of impacts to navigation. For activities that would have an adverse impact on navigation, appropriate mitigation measures have been identified. The following analysis focuses on possible effects to marine transportation from the proposed relocation of the Marines from Okinawa to Guam.

16.2.1.1 Methodology

Apra Harbor is the only Department of Defense (DoD) harbor that could accommodate the ships needed to support the Marine Corps relocation. No documented alternatives analysis was conducted.

16.2.1.2 Determination of Significance

For marine transportation, the significance of impacts of the alternatives for utilities and roadway projects are determined by the potential interference to marine vessel navigation from any proposed increase in vessel usage in Apra Harbor.

16.2.1.3 Issues Identified During Public Scoping Process

As part of the analysis, the concerns relating to navigation that were identified by the public during scoping meetings were reviewed. These concerns are related to the potential increase in the number of vessels in Outer Apra Harbor as a result of the proposed action.

16.2.2 Power

The power improvement alternative would involve facilities that use fuel oil. Fuel oil would be delivered by ship. It is expected that there would be up to one additional shipment of fuel oil per month.

Additionally, a switch from high-sulfur diesel fuel currently used at power facilities to lower sulfur diesel fuel is anticipated based on discussions with Guam Power Authority (GPA), United States Environmental Protection Agency Region 9, and Guam Environmental Protection Agency. This switch is expected to occur sometime in the year 2012 in response to the need for low-sulfur diesel fuels in newer model diesel vehicles, as required under the Clean Air Act Amendments of 1990. GPA has indicated that the lower sulfur fuel required by new diesel vehicles could also be used in their Combustion Turbines. DoD is currently working with relevant stakeholders including United States Environmental Protection Agency, Guam Environmental Protection Agency, GPA, and suppliers to determine an appropriate strategy for implementing an islandwide switch to low-sulfur fuel. There are several ongoing logistics, economics,

contracts, and regulatory issues that must be resolved before an islandwide switch to ultra-low sulfur diesel fuel can be realized. It is anticipated that lower sulfur diesel fuel would be shipped in the future in the same manner as fuel oil is shipped today; therefore, there would be no change in vessel traffic or needed facilities based on this switch to lower sulfur diesel fuel.

The annual number of vessels visiting the Port of Guam has decreased by 1,902 vessels between 1995 and 2008. It is expected that the addition of up to 12 vessels per year transporting fuel for the power facilities above the average annual number of vessels would result in a less than significant impact on marine transportation in Apra Harbor. During construction, to recondition the five Combustion Turbines, a negligible increase in the use of the port would be expected. Thus, during construction, no impact on marine transportation in Apra Harbor would occur.

16.2.2.1 Summary of Impacts

Table 16.2-1 summarizes the potential impact of the basic alternative.

Table 16.2-1. Summary of Potential Impacts to Marine Transportation – Power

Potentially Impacted Resource	*Basic Alternative 1**
Construction – Apra Harbor (direct and indirect same)	NI
Operations – Apra Harbor (direct and indirect same)	LSI

Legend: LSI= Less than significant impact; NI = No impact. *Preferred Alternative.

Only 12 additional ships are estimated to be needed annually to provide extra fuel for power plant operations; therefore, the impact on marine transportation would be less than significant. During construction, a negligible increase in shipping would occur; thus, no impact would occur. With the 12 additional ships estimated to be needed annually to provide extra fuel for power plant operations, the impact on marine transportation would be less than significant.

16.2.3 Potable Water

Neither construction nor operation of the potable water improvement alternatives would have an impact on Apra Harbor or marine transportation within the harbor. The indirect impacts of improvements to the Guam Waterworks Authority water system would also not have an impact on Apra Harbor or marine transportation within the harbor.

16.2.3.1 Summary of Impacts

Table 16.2-2 summarizes the potential impacts of each alternative.

Table 16.2-2. Summary of Potential Impacts to Marine Transportation – Potable Water

Potentially Impacted Resource	*Basic Alternative 1**	*Basic Alternative 2*
Construction – Apra Harbor (direct and indirect same)	NI	NI
Operations – Apra Harbor (direct and indirect same)	NI	NI

Legend: NI = No impact. *Preferred Alternative.

16.2.4 Wastewater

Construction of the wastewater improvement alternatives would have a very minor impact on Apra Harbor or marine transportation within the harbor. None of the operations of the wastewater improvement alternatives would have an impact on Apra Harbor or marine transportation within the harbor. Indirect

impacts from the Guam Waterworks Authority wastewater systems would not have an impact on Apra Harbor or marine transportation within the harbor.

16.2.4.1 Summary of Impacts

Table 16.2-3 summarizes the potential impacts of each basic alternative.

Table 16.2-3. Summary of Potential Impacts to Marine Transportation – Wastewater

Potentially Impacted Resource	*Basic Alternative 1a* and 1b (direct impact with indirect impact in parenthesis)*
Construction – Apra Harbor	LSI (NI)
Operations – Apra Harbor	NI (NI)

Legend: LSI= Less than significant impact; NI = No impact. *Preferred Alternative.

16.2.5 Solid Waste

Solid waste improvement alternatives would not have an impact on Apra Harbor or marine transportation within the harbor. No new construction would occur; therefore, no construction impacts would occur.

16.2.6 Summary of Impacts

Table 16.2-4 summarizes the potential impacts of the preferred basic alternative.

Table 16.2-4. Summary of Potential Impacts to Marine Transportation – Solid Waste

Potentially Impacted Resource	*Basic Alternative 1**
Construction – Apra Harbor (direct and indirect same)	NA
Operations – Apra Harbor (direct and indirect same)	NI

Legend: NA = not applicable; NI = No impact. *Preferred Alternative.

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