

FINAL
MITIGATION MONITORING AND TRACKING PROGRAM PLAN
FOR GUAM AND CNMI MILITARY RELOCATION PROGRAM



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GUAM AND CNMI MILITARY RELOCATION PROGRAM MITIGATION MONITORING AND TRACKING PROGRAM PLAN

The Department of the Navy (“Navy”) is required to ensure that mitigation measures in Navy environmental planning documents are implemented. Navy guidance specifies that mitigation measures must be monitored and tracked by the responsible installations, action proponents, and environmental management offices.

This Mitigation Monitoring and Tracking Program Plan has been prepared to identify the specific mitigation measures that are required to be implemented based on the Record of Decision (ROD) for the Environmental Impact Statement (EIS) for the Guam and Commonwealth of the Northern Mariana Islands (CNMI) Military Relocation and addendums thereto. This plan has been prepared by the Navy to ensure that mitigation measures committed to by the Navy in the ROD are implemented by monitoring and tracking progress and completion of each mitigation measure. A separate *Design and Construction Mitigation Monitoring and Tracking Plan* has been prepared to monitor and track specific mitigation measures that must be integrated into design and construction projects in support of the proposed action

This plan was prepared with input from Pacific Program-Design Management Services (PPDMS) Joint Venture (JV) Contract N62742-08-D-0009, Delivery Order 0009, Technical Direction Letter (TDL) A026 Revision 00.

1.0 PURPOSE OF THE PLAN

1.1 Scope of this Plan

This Mitigation Monitoring and Tracking Program Plan describes the framework for monitoring and tracking of mitigation measures that will be implemented by the Department of the Navy as part of the Guam and CNMI Military Relocation EIS/ROD.

1.2 Purpose and Objectives

The purpose of this Mitigation Monitoring and Tracking Program Plan is to define a method by which mitigation measures can be monitored and tracked on a program-wide level.

The objectives of this Mitigation Monitoring and Tracking Program Plan are to:

- Provide an effective management tool for the monitoring and tracking of Department of the Navy mitigation measures projects associated with the Guam and CNMI Military Relocation Program;
- Provide a tracking system to document compliance with Department of the Navy mitigation requirements; and,
- Provide a tracking system that will indicate status of Department of the Navy mitigation compliance across the program.

1.3 Regulatory Basis

The requirement for mitigation monitoring and tracking is derived from the following guidance documents:

- Guidance for National Environmental Policy Act (NEPA) Mitigation and Monitoring. Council on Environmental Quality. Draft Guidance. February 18, 2010.
- *Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking.* Department of the Navy, The Assistant Secretary of the Navy (Installations and Environment) Memorandum for Deputy Chief of Naval Operations Fleet Readiness and Logistics (N4) Deputy Commandant of the Marine Corps (Installations and Logistics). May 31, 2007.

- Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking. Department of the Navy, Headquarters United States Marine Corps. April 28, 2008.
- OPNAV Instruction 5090. 1C Environmental Readiness Program Manual. Department of the Navy, Chief of Naval Operations. 30 October 2007.
- *Environmental Compliance and Protection Manual*. MCO P5090.2A. PCN 10207187100. Headquarters, U.S. Marine Corps. Effective 1 July 1998.

The goals of each of these guidance documents are summarized in Table 1-1.

Table 1-1. Goals of Guidance on NEPA Mitigation

| No. | Guidance | Source | Goals |
|-----|--|---|--|
| 1 | <i>Guidance for NEPA Mitigation and Monitoring. Draft Guidance. February 18, 2010.</i> | Council on Environmental Quality | Proposed mitigation should be considered throughout the NEPA process. Decisions to employ mitigation measures should be clearly stated and those mitigation measures adopted by the agency should be identified as binding commitments to the extent consistent with agency authority and reflected in the NEPA documentation and any agency decision documents |
| | | | A monitoring program should be created or strengthened to ensure measures are implemented and effective. |
| | | | Public participation and accountability should be supported through proactive disclosure of and access to agency mitigation monitoring reports and documents. |
| 2 | <i>Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking. Memorandum for Deputy Chief of Naval Operations Fleet Readiness and Logistics (N4) Deputy Commandant of the Marine Corps (Installations and Logistics). May 31, 2007.</i> | Department of the Navy, The Assistant Secretary of the Navy (Installations and Environment) | Directs the development and implementation of environmental planning mitigation monitoring and tracking procedures for Navy projects. Provide policy and guidance no later than 30 April 2008 to Echelon II commands, installations and action proponents. Once implemented, provide annual summary reports to DASN(E). Review effectiveness of mitigation monitoring and tracking procedures within five years (31 May 2012). |
| 3 | <i>Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking. April 28, 2008</i> | Department of the Navy, Headquarters United States Marine Corps | Establishes new requirements to ensure that: installation commanders mitigate impacts per environmental statutes, meets permit conditions and commitments; action proponents fund mitigation commitments and satisfy established success criteria; and, installation environmental management offices negotiate mitigation requirements with regulatory agencies, monitor implementation of mitigation, and certify that success criteria have been met. |
| 4 | <i>OPNAV Instruction 5090.1C Environmental Readiness Program Manual. 30 October 2007.</i> | Department of the Navy, Chief of Naval Operations. | Outlines the Navy Readiness Program designed to ensure that U.S. Navy forces effectively operate worldwide in an environmentally responsible manner, both ashore and afloat. Establishes environmental protection policies, procedures and actions that must be followed by Navy personnel, tenants and contractors. |
| 5 | <i>Environmental Compliance and Protection Manual. MCO P5090.2A. PCN 10207187100. Effective 1 July 1998.</i> | Headquarters, U.S. Marine Corps | Establishes Marine Corps policy for funding, evaluating and continually improving environmental compliance and protection programs, with emphasis on pollution prevention and training and education. |

Source: Final EIS, 2010 (July 2010)

2.0 BACKGROUND

2.1 Definition of the Project

As a result of reviews of the United States (U.S.) defense posture in the Pacific region and the U.S. alliance with Japan, a portion of U.S. Marine Corps (Marine Corps) forces currently located in Okinawa, Japan would be relocated to Guam. This relocation is proposed to occur during the same timeframe as a proposed wharf construction in Guam's Apra Harbor to support U.S. Navy (Navy) transiting nuclear aircraft carriers. A U.S. Army (Army) Air and Missile Defense Task Force (AMDTF) is also proposed for Guam to protect against the threat of harm from ballistic missile attacks. These three proposed actions

are referred to as the Guam and CNMI military relocation. The proposed actions are complex, multi-service projects involving components of the U.S. Marine Corps, Navy, and Army. The proposed actions consist of:

- constructing facilities and infrastructure to support the relocation of approximately 8,600 Marines and their dependents from Okinawa (Japan) to Guam,
- constructing a Navy deep-draft wharf with shoreside infrastructure improvements for transient aircraft carriers, and
- constructing facilities and infrastructure on Guam to support relocation of approximately 600 military personnel and their dependents in order to establish and operate an Army AMDTF.

To support this relocation, upgrades and improvements to utilities and roadways would be required; these actions were evaluated in the Final EIS as related actions to the relocation. A project of this size and complexity would generate environmental impacts in a range of resource areas. The Final EIS also identified mitigation measures for potential environmental impacts that could occur as a result of the proposed actions and related actions.

2.2 Lead Agency

The Department of the Navy is the lead agency for preparation of the EIS. The Office of the Secretary of Defense directed the Navy to establish a Joint Guam Program Office that manages the NEPA function.

2.3 Cooperating Agencies

A number of federal agencies were invited to be cooperating agencies in the preparation of the EIS. These agencies have either jurisdiction or technical expertise for certain components of the proposed actions or a potentially affected resource. The agencies that have accepted the invitation to participate as cooperating agencies are the United States (U.S.) Fish and Wildlife Service, U.S. Department of Transportation Federal Highways Administration (FHWA), Federal Aviation Administration (FAA), U.S. Environmental Protection Agency (USEPA) Region 9, U.S. Office of Insular Affairs, U.S. Department of Agriculture, U.S. Army Corps of Engineers, and U.S. Air Force.

2.4 NEPA Document

The National Environmental Policy Act of 1969 (NEPA) requires federal agencies to examine the environmental effects of their proposed actions. The Draft EIS/Overseas EIS for the proposed Guam and CNMI Relocation was released to the public in November 2009. Public hearings were held in January 2010 on Guam, Tinian and Saipan. The Final EIS was released to the public in July 2010 and the ROD was signed on 20 September 2010.

2.5 Definition

A mitigation measure is an action that is implemented to avoid, minimize, rectify, reduce/eliminate, or provide compensation for an environmental impact. In accordance with 40 Code of Federal Regulations (CFR) 1508.20, the Council on Environmental Quality (CEQ) defines mitigation as:

- **Avoidance:** Avoids the impact by changing the action. Does not take certain actions that would cause the environmental effect.
- **Minimization:** Minimizes impacts by changing the intensity, timing, magnitude, or duration of the action and its implementation.
- **Rectifying:** Rehabilitating, repairing, or restoring damage that may be caused by implementing the proposed action.
- **Reducing/Eliminating:** Reduction or elimination of the impact over time.
- **Compensation:** Replacing damage and improving the environment elsewhere, or provide substitute resources such as funds to pay for the environmental impact.

2.6 Evolution of Mitigation Measures

Mitigation measures as identified in the EIS will continue to evolve as regulatory agency consultations and permit applications (i.e., Biological Opinions, Programmatic Agreements) proceed. The Final EIS includes proposed mitigation measures to reduce or avoid environmental impacts identified during the NEPA environmental review process; however, the Final EIS and NEPA environmental review process do not commit the DoD to the proposed mitigation measures. Commitment to a mitigation measure is established in the ROD. Environmental requirements can also change or emerge after issuance of the ROD as a result of agency consultations, permit conditions, and new laws, regulations, and policies. Permit conditions may contain new mitigation measures and best management practices for projects. Figure 2-1 illustrates the factors that can influence mitigation measures.

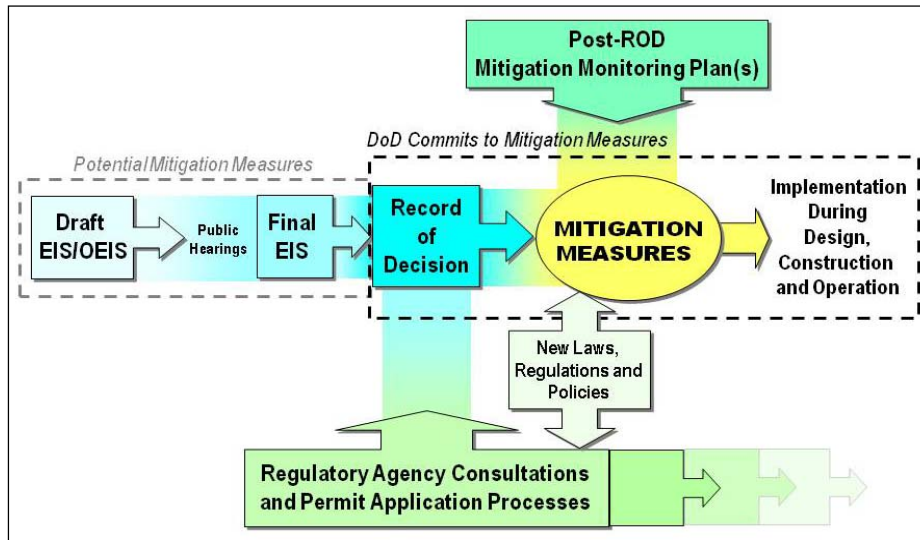


Figure 2-1. Evolution of Mitigation Measures for the Military Relocation

One or more Post-ROD Mitigation Monitoring Plan(s) would be developed with the ROD to track the implementation of mitigation measures. The Department of the Navy would be responsible for preparing and implementing the post-ROD monitoring plan.

Table 2-1 provides an overview of the mitigation measures in each of the environmental resource categories evaluated in the Final EIS. Each environmental resource category is coded to designate the mitigation measures as will be described throughout the rest of this plan. Table 2-1 also indicates the number of mitigation measures that are excluded from the ROD, some of which will be implemented as part of other mitigation measures. A total of 159 mitigation measures are included in the ROD, of which 118 are DoD mitigation measures and 41 are non-DoD mitigation measures (Note: TB-2 is listed under both). Refer to Appendix B for the complete list of mitigation measures included in the ROD. Five of the 118 DoD mitigation measures in the ROD are new mitigation measures: four for Cultural Resources and one for Socioeconomics (focused on Tinian).

Table 2-1. Summary of Mitigation Measures

| Environmental Resource Category | Code | Final EIS Vol. 7 Chapter 2 (July 2010) | Excluded from ROD | Final Mitigation Measures |
|--|------|--|-------------------|---------------------------|
| Utilities and Infrastructure | UI | 26 | 3 | 23 |
| Roadways | TR | 5 | 1 | 4 |
| Geologic and Soil Resources | GS | 1 | 0 | 1 |
| Water Resources | WR | 6 | 0 | 6 |
| Air Quality | AQ | 2 | 1 | 1 |
| Noise | N | 4 | 0 | 4 |
| Land Use and Submerged Lands | LU | 3 | 0 | 3 |
| Recreational Resources | RR | 7 | 1 | 6 |
| Terrestrial Biological Resources | TB | 33 | 5 | 30 |
| Marine Biological Resources | MB | 17 | 0 | 17 |
| Cultural Resources | CR | 19 | 8 | 11 + 4 |
| Visual Resources | VR | 8 | 0 | 8 |
| Socioeconomics and General Services | SE | 29 | 6 | 23 + 1 |
| Public Health and Safety | PHS | 1 | 0 | 1 |
| Environmental Justice and Protection of Children | EJ | 4 | 0 | 3 |
| Workforce Housing | WH | 11 | 0 | 11 |
| General Mitigation (Force Flow Reductions and Adaptive Program Management) | G | 2 | 0 | 2 |
| Revised Total | | 178 | 25 | 159 |

- Notes: 1. All measures in the ROD are applicable to the preferred alternatives.
 2. No mitigation measures were identified for airspace, marine transportation or hazardous materials.
 3. There are five new mitigation measures: four for cultural resources and one for socioeconomics (for Tinian).

2.7 Best Management Practices

The Final EIS also includes best management practices (BMPs) for the purpose of reducing or avoiding environmental impacts particularly during construction activities. BMPs are management actions that would be implemented by the Navy on an ongoing basis as part of standard operating procedures. Many BMPs are embedded in Navy policies, specifications and plans. The development and implementation of BMPs may also be a condition of an environmental permit issued by a regulatory agency. Because BMPs are not mitigation, they are not identified or bound as requirements in the ROD. For the purposes of the Final EIS, BMPs are existing policies, practices, and measures required by law, regulation, or DoD policy that reduce the environmental impacts of designated activities, functions, or processes. Although BMPs mitigate potential impacts by avoiding, minimizing, or reducing/eliminating impacts, BMPs are distinguished from mitigation measures in the Final EIS because BMPs are: (a) existing requirements for the proposed action; (b) ongoing, regularly occurring practices; (c) often a condition of a regulatory permit; and, (d) not necessarily specific only to the proposed action. In other words, the BMPs identified in the Final EIS are inherently part of the proposed action and are not additional mitigation measures proposed as a result of the NEPA environmental review process for the proposed action. A comprehensive list of BMPs is provided in Volume 7, Chapter 2 of the Final EIS.

3.0 SCHEDULING CONSIDERATIONS

In order to provide the required facilities, utilities, and site improvements that would support the military relocation to Guam, the preparation of RFPs for individual projects has been initiated. Figure 3-1 shows a conceptual timeline of the environmental review process and corresponding planning activities for the military relocation.

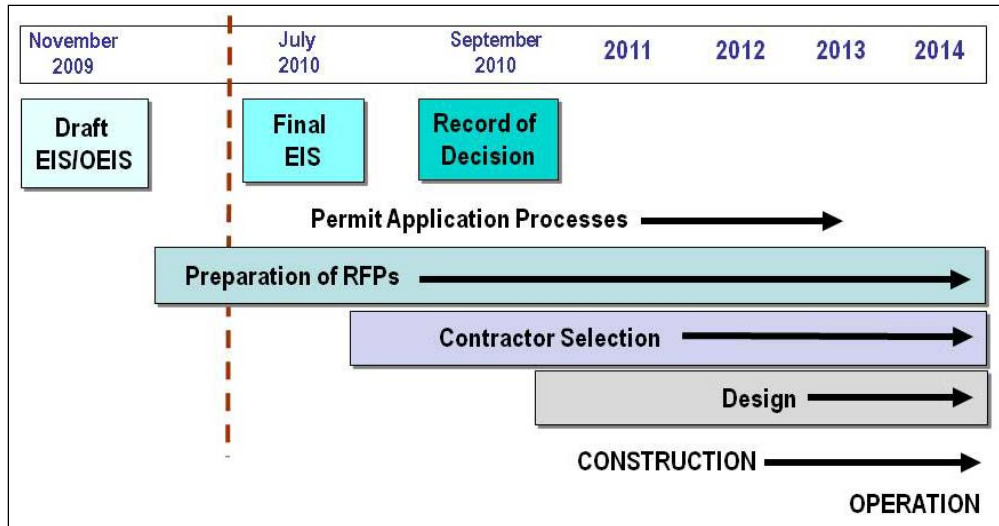


Figure 3-1. Environmental Planning Schedule for Military Relocation to Guam

The Navy will implement mitigation measures for the military relocation by ensuring that Navy contractors design, construct, and operate Navy projects in compliance with the mitigation measures that DoD committed to in the ROD.

4.0 ROLES AND RESPONSIBILITIES

The Department of the Navy is responsible for ensuring that mitigation measures are carried out on a program-wide level in support of the military relocation to Guam. The Department of the Navy is responsible for monitoring and tracking the implementation of mitigation measures in accordance with NEPA and Navy policies and guidance.

Table 4-1 provides a definition of the responsible entities associated with implementation of 157 mitigation measures included in the ROD. This table identifies both Navy and non-Navy responsible entities although certain mitigation measures may become the responsibility of two or more entities working in coordination with each other.

Table 4-1. Responsible Entities for Mitigation Measures

| Responsible Entity | Scope of Responsibilities | Tracking and Reporting Method |
|---|--|---|
| Department of the Navy | Program-wide responsibility as Lead Agency; will oversee implementation of all mitigation measures. | To utilize a mitigation tracking database for mitigation monitoring and reporting to demonstrate compliance. |
| Department of the Navy Design and Construction Contractors (under contract with the Navy) | Design and construction of horizontal and vertical projects on Guam and Tinian. Responsible for: ensuring that mitigation measures are included in RFPs, bid packages and specifications; and, construction oversight. | Contractors to follow procedures defined in the <i>Design and Construction Mitigation Monitoring and Tracking Plan</i> . NAVFACMAR and NAVFACPAC to utilize a mitigation tracking database for mitigation monitoring and reporting to demonstrate compliance. |
| FHWA | Roadway, bridges and culvert construction, replacement and improvements as funded by DAR | (to be determined) |
| Government of Guam | Utilities and infrastructure projects on Guam | (to be determined) |
| Workforce Housing Contractors | Workforce housing | (to be determined) |

Table 4-2 identifies the responsible entity for implementation of the 159 mitigation measures included in the ROD. A tabulation of the responsible entity for each mitigation measure is provided in Appendix B which also provides the reference to the EIS volume and chapter where each mitigation measure is discussed.

As shown on Table 4-2, most mitigation measures will be the responsibility of the Department of the Navy and its contractors. Figure 4-1 illustrates a breakdown of the 159 total mitigation measures by responsible entity.

The Department of the Navy will be responsible for implementing and reporting of mitigation measures for military relocation projects on Guam and Tinian as follows:

- Enforcement and monitoring of the implementation of mitigation measures;
- Ensuring that mitigation measures are accomplished in an environmentally responsible manner and implemented by designated and qualified personnel, which may include specialty contractors;
- Ensuring that the status of mitigation measures is reported in accordance with the program mitigation monitoring plan;
- Ensuring that the cost of mitigation is included in the budget, as appropriate;
- Inclusion of applicable mitigation measures into request for proposals (RFP) and specification packages; and,
- Ensuring that applicable mitigation measures are carried forward in operational and maintenance procedures for facilities constructed and/or operated by, or on behalf of, the Navy.

Table 4-2. Summary of Responsibility for Mitigation Measures

| Responsibility | | Mitigation Codes | Total |
|--------------------------------------|---|--|------------|
| Sole Responsibility | Department of the Navy | AQ-2, LU-1, LU-3, RR-2, RR-3, RR-4, RR-5, RR-7, TB-3, TB-6, TB-7, TB-8, TB-9, TB-10, TB-11, TB-14, TB-17, TB-19, TB-21, TB-22, TB-23, TB-24, TB-26, TB-27, TB-31, TB-32, TB-33, MB-13, MB-17, CR-2, CR-3, CR-7, CR-8, CR-9, CR-10, CR-12, CR-15, CR-17, CR-18, CR-20, CR-21, CR-22, CR-23, UI/W-3, UI/SW-2, SE/CI-2, SE/CI-3, SE/CI-5, SE/CI-7, SE/CR-1, SE/CR-2, SE/CR-3, SE/LA-1, SE/LA-2, SE/LA-3, SE/LA-5, SE/PP-1, SE/PS-2, SE/PS-3, SE/T-3, SE/T-4, SE/T-5, SE/T-6, EJ-1, EJ-2, EJ-3, G-1, G-2 | 68 |
| | Department of the Navy Design & Construction Contractors (under contract with the Navy) | GS-1, N-1, N-2, N-3, TB-2, TB-4, TB-5, TB-12, TB-15, TB-28, TB-29, TB-30, MB-1, MB-2, MB-3, MB-4, MB-5, MB-6, MB-7, MB-8, MB-9, MB-10, MB-11, MB-12, MB-14, MB-15, MB-16, CR-11, VR-1, VR-2, VR-3, VR-4, VR-7, UI/SW-3, UI/CI-1, WH-1, WH-2, WH-3, WH-4, WH-5, WH-6 | 41 |
| | FHWA | WR-2, WR-3, WR-4, WR-5, WR-6, N-4, TB-2, TB-28, VR-8, VR-9, VR-10, TR-1, TR-2 | 13 |
| | Government of Guam | LU-2, RR-1, UI/W-4, UI/W-5, UI/W-6, UI/W-7, UI/W-8, UI/W-9, UI/W-10, UI/W-11, UI/W-12, UI/WW-4, UI/WW-5, UI/WW-7, UI/WW-8, UI/WW-9, UI/SW-5, SE/CI-8, SE/CR-4, SE/LA-4, SE/LA-6, SE/PS-1 | 22 |
| | Workforce Housing Contractors | WH-7, WH-8, WH-9, WH-10, WH-11 | 5 |
| Joint Responsibility and Cooperation | Department of the Navy and FHWA | TR-3 | 1 |
| | Department of the Navy Design and Construction Contractors and FHWA | WR-1 | 1 |
| | Department of the Navy and Government of Guam | TB-20, UI/W-1, UI/W-2, UI/WW-1, UI/WW-3, UI/SW-1, PHS-1 | 7 |
| | FHWA and Government of Guam | TR-4 | 1 |
| Total | | | 159 |

- Notes: 1. This table reflects deletion of 21 mitigation measures from the 178 included in the Final EIS.
 2. PHS-1 may also be responsibility of CNMI.
 3. All measures listed above are applicable to the preferred alternatives.

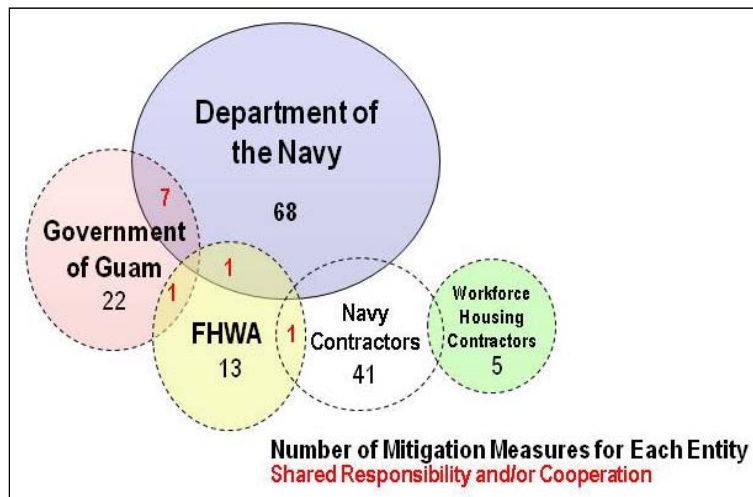


Figure 4-1. Mitigation Responsibility

5.0 IMPLEMENTATION OF MITIGATION MEASURES

Mitigation measures will be implemented by first identifying the appropriate measure and carrying this measure forward through the lifecycle of the program from planning (pre-design), design and construction, to operation. The key aspects of mitigation measure implementation are as follows:

- Inclusion of mitigation measure(s) in the appropriate DD1391 form.
- Ensuring that mitigation measures are tracked at pre-design, as part of design submittals, as well as during construction and operations.
- Review of projects by the Navy Environmental (EV) Team which consists of Environmental Compliance, Cultural Resources and Natural Resources specialists, as a minimum.
- Support by the Installation(s) Subject Matter Experts (SMEs) to address safety and environmental concerns.
- Implementation of mitigation measures and a mitigation monitoring and tracking program by the Navy
- Oversight management, program-level tracking, monitoring and reporting of the mitigation measures.

5.1 Incorporating Mitigation Measures by Phase

Mitigation measures represent actions that must be incorporated into the most appropriate phase of project planning in order to avoid, minimize, rectify, reduce/eliminate, or provide compensation for an environmental impact that would otherwise occur. To achieve this objective, the mitigation measure is either programmatic in nature or can be incorporated into the design, construction or operational phase of a project. For most mitigation measures that comprise actions during construction, it will be necessary to include the measure in the design phase. This is because: (a) specifications and design packages must include these actions; and, (b) the measure must be carried out during the construction period. Table 5-1 identifies the applicable phase(s) for mitigation measures.

As shown on Table 5-1, there are 113 program-level mitigation measures that would not necessarily be carried out as part of individual projects. These mitigation measures fall into the following general categories:

- Enable use of Navy resources (i.e., financing, donations or contributions)
- Preparation of plans or studies
- Establishing of new policies, plans, or fee structures
- Establishing interagency task forces to examine funding and financing sources or provide technical assistance
- Providing new educational, orientation, or outreach programs including training programs
- Creating new community, cultural awareness, social, or safety programs
- Creating new or improved DoD internal services, programs, and staffing
- Biological resource planning, surveys, management, or restoration efforts for the purpose of conservation (e.g., not project-specific)
- Development of management and preservation plans for cultural resources

Table 5-1. Applicable Phase for Mitigation Measures

| Environmental Resource Category | Code | Mitigation Measures in ROD | Mitigation Phase | | |
|--|------|----------------------------|------------------|---------------------|-------------|
| | | | Program-Level | Design/Construction | Operational |
| Utilities and Infrastructure | UI | 23 | 22 | 1 | 0 |
| Roadways | TR | 4 | 4 | 0 | 0 |
| Geologic and Soil Resources | GS | 1 | 0 | 1 | 0 |
| Water Resources | WR | 6 | 5 | 0 | 0 |
| Air Quality | AQ | 1 | 1 | 0 | 0 |
| Noise | N | 4 | 1 | 3 | 3 |
| Land Use and Submerged Lands | LU | 3 | 2 | 0 | 1 |
| Recreational Resources | RR | 6 | 6 | 0 | 0 |
| Terrestrial Biological Resources | TB | 30 | 21 | 8 | 1 |
| Marine Biological Resources | MB | 17 | 1 | 15 | 1 |
| Cultural Resources | CR | 15 | 14 | 1 | 0 |
| Visual Resources | VR | 8 | 3 | 5 | 0 |
| Socioeconomics and General Services | SE | 24 | 22 | 1 | 1 |
| Public Health and Safety | PHS | 1 | 1 | 0 | 0 |
| Environmental Justice and Protection of Children | EJ | 3 | 3 | 0 | 0 |
| Workforce Housing | WH | 11 | 5 | 6 | 0 |
| General Mitigation (Force Flow Reductions and Adaptive Program Management) | G | 2 | 2 | 0 | 2 |
| Total | | 159 | 113 | 41 | 9 |

Notes: 1. This table reflects deletion of 19 of the 178 mitigation measures identified in the Final EIS.
 2. Some operational mitigation measures are also program-level mitigation measures.
 3. All measures listed above are applicable to the preferred alternatives.

Many of the programmatic measures would mitigate potential socioeconomic impacts on a community level and/or island-wide basis. For instance, the mitigation measures for socioeconomic and general services have been assigned into the subcategories of: Chamorro issues/community cohesion; crime and social order; land acquisition; population; and, public services, growth permitting, and regulatory agencies. These mitigation measures would be accomplished on a program-level basis by the DoD primarily in collaboration with key Government of Guam and/or CNMI agencies. Implementation of programmatic mitigation measures would occur during the advance planning phase.

A total of 41 mitigation measures are applicable to the design and construction phase of the relocation projects as shown on Table 5-1. Some of these measures continue to be applicable during the operational phase.

Operational mitigation measures are those measures that would typically not be included in the design or construction projects. As shown on Table 5-1, there are nine operational mitigation measures.

6.0 TRACKING IMPLEMENTATION OF MITIGATION MEASURES

To document the implementation and progress of mitigation measures over the course of the relocation program, the Mitigation Measure Status Report form (refer to Appendix D) will be used by Navy personnel and Contractors. Information provided on the Mitigation Monitoring Status Report form will be entered into the Mitigation Monitoring Tracking System (database) for management and reporting of mitigation implementation.

6.1 Mitigation Monitoring Status Report Form

The monitoring and completion of each applicable mitigation measure will be documented on the Mitigation Measure Status Report form. This form will be completed by the responsible entity for a mitigation measure (refer to Table 4-2). Supplemental recordkeeping, report preparation, and documentation may be required for specific mitigation measures. The Mitigation Measure Status Report form will be filled out by the appropriate individual who can confirm that the information on the form is

accurate and reflects the status of completion of the mitigation measure. The completed form will be uploaded into the Mitigation Monitoring Tracking System and retained in the Navy's project files. Completion of these forms and/or maintenance of the Mitigation Monitoring Tracking System will demonstrate and document compliance with draft Council on Environmental Quality (CEQ) guidance for NEPA Mitigation and Monitoring (CEQ, 2010) and Navy policy guidance on mitigation monitoring and tracking (Department of the Navy, 2007 and 2008).

6.2 Mitigation Monitoring Tracking System (Database)

Information from Mitigation Measure Status Reports will be entered into the Mitigation Monitoring Tracking System to show status. This would enable Navy managers to compare status to schedules and estimated completion dates. The database will display planning elements for each mitigation measure. The database will include scheduling information that reflects the estimated completion date for each measure. The database will be updated by Navy personnel upon receipt of periodic mitigation monitoring status reports. The Mitigation Monitoring Tracking System database will compile project information and track implementation of Mitigation Measures in accordance with Navy policy.

7.0 SCHEDULED AUDITS AND COMPLIANCE REPORTING

Contractor auditing is an important tool for the Navy as it provides a measure of how effectively the contractors and the Navy are incorporating and implementing mitigation requirements into design and construction projects.

In order to have a successful audit, adequate and sufficient records of performance should be maintained. Records should be easily accessible to staff, and lines of communication should be established between the auditor(s) and the Navy team. Results of the audit should be presented to the Navy team so that corrective action responses for any findings can be provided as a performance indicator. An audit finding may result in the need to establish a preventive action. A follow-up audit may be conducted to ensure that corrective actions for all audit findings are completed and adequately addressed.

A successful audit of compliance with mitigation measures can be achieved when:

- Accurate mitigation measure implementation and status information can be readily available
- Documentation on implementation of mitigation measures are complete
- Mitigation measure tracking and reporting is being carried out in accordance with an approved mitigation monitoring plan

Results of the contractor audits may be used to identify insufficient progress in incorporating or implementing mitigation measures. In that case, the Navy may consider requiring corrective action from the contractor for any major audit findings to establish preventive action. A follow-up audit may be conducted to ensure that corrective actions for all audit findings are completed and adequately addressed.

8.0 UNRESOLVED ISSUES

The following issues are unresolved at this time:

This plan identifies a tracking procedure for the mitigation measures identified to date. Mitigation measures will continue to evolve as a result of regulatory approvals.

The Contractor will be required to implement each mitigation measure applicable to their contract. However, there may be instances when a mitigation equivalency can be identified. A procedure for reviewing and accepting the equivalent mitigation measure may be needed.

There may be additional mitigation measures that result from the Micronesia Biosecurity Plan (MBP) now in preparation, agency consultations, and permit conditions. The Micronesia Biosecurity Plan (MBP) will address potential invasive species impacts associated with the relocation actions which include a

comprehensive regional approach for invasive species management. The MBP will include specific procedures to avoid, minimize, and mitigate these risks associated with invasive species introductions from Guam including control of the brown tree snake and coconut rhinoceros beetle. Certain mitigation measures herein may be implemented as part of the MBP.

The Section 106 consultation under the National Historic Preservation Act and the associated Programmatic Agreement for cultural resources was finalized after the ROD was signed and has not been incorporated in this plan. Mitigation measures for cultural resources may need to be revised.

9.0 RECOMMENDATIONS

The following recommendations are provided with respect to mitigation measures:

Mitigation measures should be revised once the MBP is available as well as from completion of agency consultations and permit approvals.

Reference diagrams in Appendix C should be updated with the most recent information as available.

10.0 REFERENCES

- CEQ, 2010. *Guidance for NEPA Mitigation and Monitoring*. Prepared by the Council on Environmental Quality (CEQ). Draft Guidance. February 18, 2010.
- Department of the Navy, 2008. *Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking*. Memorandum from Commandant of the Marine Corps. April 28, 2008.
- Department of the Navy, 2007. *Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking*. Memorandum for Deputy Chief of Naval Operations Fleet Readiness and Logistics (N4) Deputy Commandant of the Marine Corps (Installations and Logistics). Prepared by Department of the Navy, The Assistant Secretary of the Navy (Installations and Environment). May 31, 2007.
- U.S. Marine Corps, 1998. *Environmental Compliance and Protection Manual*. MCO P5090.2A. PCN 10207187100. Prepared by Headquarters U.S. Marine Corps. Effective 1 July 1998.
- JGPO, 2010. Environmental Impact Statement. Guam and CNMI Military Relocation. Relocating Marines from Okinawa, Visiting Aircraft Carrier Berthing, and Army Air and Missile Defense Task Force. Prepared for Joint Guam Program Office, c/o Naval Facilities Engineering Command, Pacific. Attn: Guam Program Management Office. 258 Makalapa Drive, Suite 100, Pearl Harbor, HI 96890. July.
- PPDMS, 2010. *Reader's Guide to Potential Mitigation Measures and Best Management Practices*. Based on the Draft EIS for Guam and CNMI Military Relocation. Prepared by Pacific Program Design Management Services. (reflecting the March 11, 2010 version). March.

APPENDIX A
GUIDANCE ON NEPA MITIGATION

(Available online)

This appendix references the following guidance documents:

- Guidance for National Environmental Policy Act (NEPA) Mitigation and Monitoring. Council on Environmental Quality. Draft Guidance. February 18, 2010.
- *Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking.* Department of the Navy, The Assistant Secretary of the Navy (Installations and Environment) Memorandum for Deputy Chief of Naval Operations Fleet Readiness and Logistics (N4) Deputy Commandant of the Marine Corps (Installations and Logistics). May 31, 2007.
- *Policy Guidance for Environmental Planning Mitigation Composition, Monitoring and Tracking.* Department of the Navy, Headquarters United States Marine Corps. April 28, 2008.
- *OPNAV Instruction 5090. 1C Environmental Readiness Program Manual.* Department of the Navy, Chief of Naval Operations. 30 October 2007.
- *Environmental Compliance and Protection Manual.* MCO P5090.2A. PCN 10207187100. Headquarters, U.S. Marine Corps. Effective 1 July 1998.

APPENDIX B

**DOD AND NON-DOD MITIGATION MEASURES
FOR GUAM AND CNMI MILITARY RELOCATION PROGRAM**

Table B-1. DoD Mitigation Measures

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|--------------------------------------|-----------------|--|--|------------------------|--|
| Geological and Soil Resources (GS) | | | | | |
| 1 | GS-1 | Avoid known sinkholes and place a buffer zone of vegetation around them to prevent further erosion or expansion. Erect educational signs and/or fencing where appropriate. Any sinkholes discovered will be evaluated to determine significant impacts and projects will be designed in consideration of these sinkholes as appropriate. | Included in design process for DoD construction projects. | Navy Contractor(s) | V2.3.2.3.5 V2.3.2.8 V3.3.2.6 V3.3.2.7 T3.3.2-6 V5.3.2.2.1 T5.3.2-5 |
| Air Quality (AQ) | | | | | |
| 2 | AQ-2 | Install temporary air quality monitoring station for SO ₂ and PM near Northern Guam construction site. | | Department of the Navy | V2.5.2.8 |
| Noise (N) – based on human receptors | | | | | |
| 3 | N-1 | Operations (Firing Ranges): Install noise barriers where feasible and practicable. | Where practical and feasible, evaluate noise attenuating features with safety berms and other features for ranges. Necessity TBD during design. | Navy Contractor(s) | V2.6.2.2.2 |
| 4 | N-2 | During construction, install noise barriers where feasible and practicable such as constructing concrete block walls as sound barriers to reduce noise levels. | Where noise impacts are determined to be significant near housing areas, use of temporary noise barriers during construction. Necessity TBD during design. | Navy Contractor(s) | V2.6 V2.6.2-19 V5.6.2.2.1 V5.6.2.7 T5.6.2-4 |
| 5 | N-3 | Maintaining the current dense foliage, and constructing berms to contain the sound from training range operations, when practicable. | Evaluate incorporation of noise attenuating features with safety berms and other features. | Navy Contractor(s) | V2.6.2.2.1 |
| Land and Submerged Land Use (LU) | | | | | |
| 6 | LU-1 | Provide access to land and submerged land to extent practicable for cultural stewardship and access that balance operational needs, public safety concerns, and the continuing public use and enjoyment of these sites. | | Department of the Navy | V2.8.2.9 |
| 7 | LU-3 | In the event a non-federally controlled property is acquired under the proposed action, DoD will assist the landowner in obtaining a new legal access. | | Department of the Navy | V2.8.2.6 |
| Recreational Resources (RR) | | | | | |
| 8 | RR-2 | DoD will offer resources consistent with DoD policy in the form of time and donation or use of equipment to assist the volunteer conservation officer (VCO) at Andersen AFB (an existing program). | | Department of the Navy | V2.9.2.2.6 V2.9.2.8 T2.9.2-1 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|--------------------------------------|-----------------|---|--|------------------------|--|
| 9 | RR-3 | Collaborate with the GDAWR to establish outreach programs and docent (person who leads guided tours) programs for the five marine preserves and other environmentally sensitive areas on Guam. | DOD will create education brochures and a video for all users of the DOD Marina and DOD boat renters. Could be a requirement for the rental "license". | Department of the Navy | V2.9.2.2.6 V2.9.2.8 T2.9.2-1 |
| 10 | RR-4 | As practicable, provide for improvements and maintenance of federally owned portions of Tanguisson Beach, along with the management of the coastline to the north of Hilaan that contains significant natural, cultural, scenic, and recreational resources. | | Department of the Navy | V2.9.2.2.6 V2.9.2.8 T2.9.2-1 |
| 11 | RR-5 | If the DOD selects the FEIS preferred alternative for the transient nuclear aircraft carrier berth, to alleviate impacts to the limited recreational resources at Polaris Point during construction and carrier visits, additional on-base shuttle bus services to Dadi Beach, Gabgab Beach, and other DOD recreational facilities would be provided to ensure Sailors and airmen have the ability to access comparable and/or alternate recreational resources. For off-base recreational resources, Sailors and airmen would be able to take commercial shuttles and taxis. | | Department of the Navy | V4.9.2.6.1 T4.9.2-6 |
| 12 | RR-7 | As practicable, to compensate for potentially significant impacts to beach and ocean recreational resources from the proposed actions on Guam, DoD to improve the Seaman Service Club Beach in Piti. The existing beach pilings, shelter, and bathroom would be improved. Available recreational activities include: kayaking, snorkeling, and beach combing. | | Department of the Navy | V2.9.2.2.6 |
| Terrestrial Biological Resources(TB) | | | | | |
| 13 | TB-2 | Approximately one week prior to clearing vegetation a qualified biologist will survey the project site for the occurrence of ESA-listed species (e.g., Mariana fruit bats, Mariana crows, and Mariana moorhens), and if present, the work will be postponed. | | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 V5.10.2.3.1 |
| 14 | TB-3 | Ensure periodic updates of the Joint Region Marianas Training Handbook with procedures to protect special-status species during project-specific training. | Already being updated for MIRC | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 15 | TB-4 | Appropriate native and non-invasive species will be planted in all new landscapes upon completion of proposed construction activities. Plants to be used will be selected from a list of recommended plants identified in the consolidated landscape plan. Construction specifications would address salvaging valuable tree species from areas to be cleared during construction. | Included in designs of projects; part of MCON projects for USMC | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| 16 | TB-5 | Lighting will be designed to meet minimum safety, anti-terrorism, and force protection requirements. To the maximum extent practicable, hooded lights would be used at all new roads and facilities proposed for construction and use near sea turtle land based | Included in designs of projects; part of MCON projects for USMC | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V4.10.2.2.2 V4.10.2.3.1 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|--|------------------------|--|
| | | habitat and within Mariana fruit bat habitat. | | | |
| 17 | TB-6 (MB) | To prevent disturbance of sensitive species in recreational areas, restrictions on the use of Haputo Beach and ERA would be included within the Joint Region INRMP. | Access restrictions to be included in INRMP | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.2 V2.10.2.2.6 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.11.1 |
| 18 | TB-7 | Pyrotechnics will only be used during low-fire risk conditions in accordance with Range Training Area Management Plan SOPs. | Would be in USMC SOPs; fire management plan would address. | Department of the Navy | V2.10.2.2.4 |
| 19 | TB-8 | The DoD will fund research on the Mariana fruit bat. The long-term goal is to develop guidelines to be used in recovery and sustainable management of fruit bats on different islands. | | Department of the Navy | V2.10.2.1 T2.10.2-22 |
| 20 | TB-9 | An ungulate management plan would be finalized by the DoD for DoD lands on Guam to include specific management and control of ungulates. | | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| 21 | TB-10 | The U.S. Forest Service (USFS) has developed a fire management plan that the DoD will use to develop Instruction to implement fire management actions on DoD (USFS 2008). The Instruction will also include BMPs such as for cleaning gear and equipment to prevent the spread of non-native invasive species resulting from wildfire suppression. | Navy already updating the Fire Mgmt Plan for MIRC | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 22 | TB-11 | To compensate for the removal of a portion of the existing FAA Mitigation Area on Tinian, the replacement area, which will be expanded and reconfigured will be at a minimum 2:1 ratio. | | Department of the Navy | V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 23 | TB-12 | The 5-Step HACCP planning method for reducing or eliminating the spread of unwanted species will be used for high-risk activities. HACCP methodology will be incorporated into contracting documents associated with high-risk projects. | Included in designs of projects; part of MCON projects for USMC | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.7 T3.10.2-14 |
| 24 | TB-14 (MB) | The DoD will develop a biosecurity program to be employed throughout the construction phase of the military build-up. The program will have terrestrial and aquatic resource response capabilities. The DoD's biosecurity program would address non-native, invasive species issues on DoD property within Guam and the CNMI. | Includes monitoring for invasives and some inspection at construction sites to ensure non-native invasive species are not established as a result of the proposed action. For FHWA projects, FHWA would need to coordinate with Strike Team but not fund separately. | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.11.1 |
| 25 | TB-15 | To prevent the spread of coconut rhinoceros beetle, the DoD will include specifications in contracts for inspections, proper re-use or disposal of vegetation within coconut rhinoceros beetle quarantine area. Biosecurity measures will ensure that yard waste and vegetation debris is not harboring coconut rhinoceros beetle or the waste is treated prior to re-use or movement off construction site. | Included in designs of projects; part of MCON projects for USMC | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| 26 | TB-17 | DoD will provide funding during the construction phase of the Proposed Action to develop methods to eradicate or significantly suppress BTS on DoD lands. | Part of ESA consultation | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|---|--|------------------------------------|--|
| 27 | TB-19 | The DoD will expand the existing environmental education program for new personnel arrivals (personnel undergoing Permanent Change of Station). | Part of ESA consultation | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| 28 | TB-20 | DoD will submit proposals: a. Orote ERA - Expand the existing Orote ERA to include Orote Island (seabird nesting habitat), Adotgan Point, and the Spanish Steps area that supports sea turtle nesting. The expansion will add approximately 32 ac (13 ha) of terrestrial habitat to the Orote ERA; b. For a NMS ERA. The proposed ERA will encompass approximately 553 ac (234 ha) of habitat for listed species; c. For a Ritidian Point ERA. The entire proposed Ritidian Point ERA will be approximately 781 ac (316 ha) of habitat for listed species; d. For a Pati Point ERA. The proposed ERA will include approximately 713 ac (289 ha) of habitat for listed species. DoD will coordinate with GovGuam: a. To develop a continuous band of protected area from Andersen AFB at the proposed Pati Point ERA through GovGuam's Anao Conservation Area south to the proposed Route 15 Range Complex. | | Department of the Navy and GovGuam | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.11.1 |
| 29 | TB-21 | DoD will develop a restoration plan for the Camp Covington wetlands in an effort to increase suitable habitat for the Mariana common moorhen. If Camp Covington is deemed unsuitable for wetland enhancement or restoration, the Atantano wetlands will be evaluated for restoration potential. | | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| 30 | TB-22 (MB) | DoD will enter into an MOU with USFWS and NMFS outlining the details of a joint investigation on sea turtle population abundance estimates, demographic information, near shore habitat use, baseline populations, and long-term population parameters. This will be a 3 to 5 year joint DoD-USFWS-NMFS capture-mark-recapture laparoscopy program for green sea turtles occurring in near shore waters surrounding Guam, Saipan, Tinian and Rota. | | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V4.10.2.6 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.11.1 |
| 31 | TB-23 | Additional surveys for the moth skink and Pacific slender-toed gecko on DoD lands will be addressed in the Joint Region INRMP. | Mitigation in response to a comment; species are Guam-listed species. Would be a project identified in INRMP (species already addressed in the INRMP). | Department of the Navy | V2.10.3.6 |
| 32 | TB-24 | The DoD will establish an outdoor recreation area at the proposed Main Cantonment area at NCTS Finegayan to help direct recreation away from sensitive habitats near and within the Haputo ERA (beaches, cliff line forests). | To be included as part of planned open areas in Main Cantonment. | Department of the Navy | V2.10.2.1 T2.10.2-22 |
| 33 | TB-26 | Develop and implement a Guam and Tinian Native Forest Enhancement Plan to improve and restore the ecosystem and control erosion. | | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 34 | TB-27 | Upon termination of any agricultural leases in the leaseback area on Tinian, DoD will work with | | Department of the Navy | V2.10.2.1 T2.10.2-22 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|---|-----------------|---|--|------------------------|--|
| | | CNMI land use and natural resource officials to ensure that native forest habitat concerns for ESA-listed species are taken into account. | | | V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 35 | TB-28 | If nesting Mariana common moorhens are present within the limits of construction, clearing and construction will be postponed until the chicks have fledged. If work stops for more than 1 week, pre-construction surveys will be repeated to ensure that no moorhens have begun to nest. (Only on Tinian for USMC). | Applies only to FHWA for off-base roads on Guam. Navy to provide language/requirement to FHWA for inclusion in contracts. | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 36 | TB-29 | On Tinian, if Micronesian megapodes are present within 492 ft (150 m) of the project site, the work will be postponed until the megapode has left the area. If megapodes are nesting within 984 ft (300 m) of the project site, the work will be postponed and the USFWS contacted immediately as no nesting is known to occur there. | similar to TB-28 | Navy Contractor(s) | V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 37 | TB-30 | Construction personnel will receive natural resource awareness briefings which address special-status species, avoidance measures and reporting requirements. | Biomonitors would give briefings; addressed in MCON specs. | Navy Contractor(s) | V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 38 | TB-31 | DoD will hire two full-time biological monitors during the construction phase on Guam and Tinian. The Biological Monitors will be responsible for oversight of avoidance, minimization, mitigation measures, and conservation measure implementation by the construction contractors for projects associated with the proposed action. | | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.10 V4.11.1 |
| 39 | TB-32 | DoD will re-evaluate and re-structure the current vegetation monitoring and anchor points that have been established on Guam and Tinian to provide information necessary for long-term habitat monitoring associated with DoD natural resources management efforts. | No vegetative monitoring for FHWA. Only on DoD land, with majority on USMC land and only where construction and training occurs. Also would be small part of Army for construction & training areas. | Department of the Navy | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| 40 | TB-33 | The Micronesia Biosecurity Plan is being developed to address potential invasive species impacts associated with the actions proposed in this EIS as well as to provide a plan for a comprehensive regional approach. The MBP will include risk assessments for invasive species throughout Micronesia and procedures to avoid, minimize, and mitigate these risks. The MBP is intended to be a comprehensive evaluation of risks in the region, including all Marine Corps and Navy actions on Guam and Tinian. For actions selected in the ROD, specific biosecurity measures will be implemented to supplement existing practices to address invasive species. | Plan is already funded and ongoing. | Department of the Navy | V2.10.2.2.2 V2.10.2.2.6 T2.10.2-22 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 |
| Marine Biological Resources (MB) | | | | | |
| 41 | MB-1 | No in-water blasting will be allowed. | Part of construction contract specifications. | Navy Contractor(s) | V4.11.2.2.4 T4.11.2-22 |
| 42 | MB-2 | Water quality will be monitored for in-water construction projects during the construction | Part of construction | Navy | V2.11.2.2.6 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|---|--------------------|--|
| | | phase. | contract specifications. | Contractor(s) | T2.11.2-16 V4.4 V4.11.2.2.4 T4.11.2-22 |
| 43 | MB-3 | Preliminary shutdown safety zones corresponding to where sea turtles could be injured or harassed will be established based upon empirical field measurements of pile driving sound levels at the construction site. The sound pressure levels (SPLs) will be monitored on the first day of pile driving to ensure accuracy of contours. Until validation of the harm threshold, no pile driving may occur within 50 m of sea turtles and no dredging operations shall occur within 50 m of sea turtles. Safety zones will be re-established to accommodate validated harm threshold and reported to NMFS with acoustic monitoring data. Monitoring of sea turtle harassment safety zones will be conducted by qualified observers, including two observers for safety zones around each pile driving and dredging site. Monitoring shall commence 60 minutes prior to the start of pile driving. If a sea turtle is found within the safety zone, pile driving or dredging of the segment shall be until the animal(s) has been visually observed beyond the impact zone or 30 minutes have passed without re-detection. Pile driving or dredging may continue into the night, but where there has been an interruption of the activity, it will not be initiated or re-initiated during nighttime hours when visual clearance cannot be conducted. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11.2.2.4 T4.11.2-22 |
| 44 | MB-4 | Pile driving and dredging would commence using soft-start or ramp-up techniques, at the start of each work day or following a break of more than 30 minutes. Pile driving would employ a slow increase in hammering, whereas dredging would commence with slow and deliberate deployment of the bucket or chisel to the bottom for the first several cycles to alert protected species and allow them an opportunity to vacate the area prior to full-intensity operations. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11.2.2.4 T4.11.2-22 |
| 45 | MB-5 | No pile driving or dredging will be conducted after dark unless that work has proceeded uninterrupted since at least one hour prior to sunset, and no protected species have been observed near the respective safety range for that work. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11.2.2.4 T4.11.2-22 |
| 46 | MB-6 | If a sea turtle or other listed species is found injured within the vicinity of the action area, all in-water pile driving or dredging activities shall cease immediately, regardless of their effect on the noted turtle and the Navy would contact the regional NMFS stranding coordinator. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11 |
| 47 | MB-7 | Construction related vessels within Apra Harbor shall remain at least 50 yards from sea turtles, reduce speed to 10 knots or less in the proximity of sea turtles (if practicable, 5 knots or less in areas of suspected turtle activity), and, when consistent with safety practices, put engine in neutral and allow the turtle to pass if approached by a turtle. Additionally, sea turtles shall not be encircled or trapped between multiple construction-related vessels or between construction-related vessels and the shore. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|---|--|------------------------|--|
| 48 | MB-8 | All construction-related equipment will be operated and anchored to avoid contacting coral reef resources during construction activities or extreme weather conditions. Anchor lines from construction vessels will be deployed with appropriate tension to avoid entanglement with sea turtles. Construction-related materials that may pose an entanglement hazard will be removed from the project site if not actively being used. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11 |
| 49 | MB-9 | Anchors, anchor chain, wire rope and associated anchor rigging from construction related vessels will be restricted to designated anchoring areas within the construction footprint (i.e., soft bottom) or within the area that would be permanently impacted. | Part of construction contract specifications. | Navy Contractor(s) | V4.11 V2.11.2.7 V2.11.2.2.6 T2.11.2-16 |
| 50 | MB-10 | During pile driving or dredging activities, if a visible plume is observed outside the silt curtains, the construction activity will be suspended, evaluated, and corrective measures taken. | Part of construction contract specifications. Language committing to this reviewed by team is included in the EFH letter back to NMFS. | Navy Contractor(s) | V2.4.2.7 T2.4.2-8 V2.11.2.2.6 T2.11.2-16 V4.4.2.2.6 T4.4.2-6 V4.11.2.2.4 |
| 51 | MB-11 | Incorporate seasonal dredging prohibitions , which may include: <ul style="list-style-type: none"> • Cessation of dredging operations during the period of peak coral spawning (7-10 days after the full moon in July) in consultation with the University of Guam (UoG) Marine Lab. • Dredging or filling of tidal waters will not occur during hard coral spawning periods, usually around the full moons of June, July, and August. | Part of construction contract specifications. | Navy Contractor(s) | V2.11.2.2.6 T2.11.2-16 V4.11.2.2.4 T4.11.2-22 |
| 52 | MB-12 | Construction related vessels will be restricted from Sasa Bay so as to reduce potential impacts to sea turtles and other protected marine and/or wildlife species. | Part of construction contract specifications. | Navy Contractor(s) | V4.10.2.2.1 V4.10.2.2.2 V4.10.2.6 V2.11.2.2.6 T2.11.2-16 V2.11.2.7 |
| 53 | MB-13 | Provide marine biological resources education and training on Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA) and Essential Fish Habitat (EFH) to military personnel. This may include Base Orders, natural resource educational training (i.e., watching of short ERA/MPA video) and documentation (i.e., preparation of Military Environmental/ Natural Resource Handbook, distribution of natural resource educational materials to dive boat operators), or a combination of all. | Could use eCATTS to make available to personnel and contractors. Programmatic shared cost. | Department of the Navy | V2.11.2.7 V2.11.2.2.6 T2.11.2-16 V4.11 |
| 54 | MB-14 | Aboard dredge-related tug, barge or scow vessels at sea, use the minimum lighting necessary to comply with navigation rules and best safety practices to help reduce potential impacts on protected species such as sea turtles. | Part of construction contract specifications. | Navy Contractor(s) | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 V2.11.2.2.6 T2.11.2-16 |
| 55 | MB-15 | No barge overflow during dredging operations. | Part of construction contract specifications. | Navy Contractor(s) | V2.4.2.7 T2.4.2-8 V4.4.2.2.6 T4.4.2-6 V4.11 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-------------------------|-----------------|--|---|------------------------|--|
| 56 | MB-16 | Where practicable, installation of silt curtains during channel and/or harbor dredging operations to maintain water quality and provide coral protection. | Part of construction contract specifications. | Navy Contractor(s) | V2.4.2.7 T2.4.2-8 V4.4.2.2.6 T4.4.2-6 V2.11.2.2.6 T2.11.2-16 V4.11.2.2.4 |
| 57 | MB-17 | The following are being considered as potential coral mitigation measures in the development of the compensatory mitigation plan: a) Coral reef restoration via water quality improvements through watershed restoration. b) Coral reef restoration via water quality improvements through WWTP upgrades/improvements. c) Coral reef restoration via site-specific water quality improvements through retrofitting road stormwater controls at a range of sites on Guam. d) Coral reef restoration within non-DOD federal property. e) Aquaculture of native herbivorous fish f) Coral transplantation g) Establishment of marine protected area(s) MPA(s) h) Artificial reefs i) Support for enhanced enforcement of fishing and recreational diving regulations. j) Marine debris removal k) Remove nuisance algae l) Installation of recreational mooring buoys m) Coral reef restoration inside Apra Harbor through water quality and habitat improvements. | CEQ Task Group Six results | Department of the Navy | V4.11.2.2.4 |
| Cultural Resources (CR) | | | | | |
| 58 | CR-20 | Data recovery of historic properties will be conducted and the data recovered from such excavations will be used to develop an information package for use on the Internet that includes photos, a summary of excavations, materials recovered, and significance of the site to the regional culture. | New – added in the ROD | Department of the Navy | Not included in FEIS |
| 59 | CR-2 | CNMI Curation Assessment. Artifacts from non-DoD properties will follow local regulations regarding the handling and repatriation of cultural materials or human remains. | | Department of the Navy | V3.12.2.2.3 V3.12.2.6 T3.12.2-5 |
| 60 | CR-3 | Historic property awareness training of DoD employees to promote protection of sensitive sites. | | Department of the Navy | V5.12.2.2.1 V2.12.2.2.5 V2.12.2.8 T2.12.2-6 |
| 61 | CR-7 | Guam Curation Assessment. Curation of cultural materials and/or artifacts from DoD properties will be in a facility that meets 36 CFR 79. Curation Assessment will help in making determination of where DoD collections are curated. Artifacts from non-DoD properties follow local regulations regarding the handling and repatriation of cultural materials or human remains. | Already contracted out and draft report already submitted. Should be completed in next month or so. | Department of the Navy | V2.12.2.2.5 V2.12.2.8 T2.12.2-6 V5.12.2.2.1 V5.12.2.7 T5.12.2-4 |
| 62 | CR-8 | Incorporate recommendations of Cultural Landscape Report (CLR) for Tinian NHL in the next version of the Cultural Resource | Cultural Landscape report already done. | Department of the Navy | V3.12.2.7 T3.12.2-5 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|---|------------------------|--|
| | | Management Plan when not in conflict with natural resources. | | | |
| 63 | CR-9 | Thematic Synthesis Publications for the areas affected by the ranges on Tinian. Themes include: <ul style="list-style-type: none"> • Camp Churo “Old Village” • Japanese Farmsteads on Tinian • West Field This mitigation measure will be implemented unless a future agreement with the CNMI SHPO on a similar measure supersedes this one. | | Department of the Navy | 3.12.2.7 T3.12.2-5 |
| 64 | CR-10 | Update North Tinian Historic Properties Driving Tour Pamphlet. | Cost is minimal | Department of the Navy | 3.12.2.7 T3.12.2-5 |
| 65 | CR-11 | In recognition of culturally important natural resources, highly forested areas were avoided during the early planning process for the preferred alternatives. However, in places where impacts could not be avoided to such resources, DoD will coordinate with traditional artisans and provide the artisans the opportunity to safely collect these resources consistent with current DoD and installation security instructions and other safety related guidelines. | (e.g., Historic/culturally significant trees, etc. Already included in contract specs.) | Navy Contractor(s) | V2.12.2.2.5 V2.12.2.8 T2.12.2-6 V5.12.2.2.1 V5.12.2.7 T5.12.2-4 |
| 66 | CR-12 | Allow suruhanus access for medicinal plant collection on DoD properties if the plants collected are not threatened or endangered species and where security requirements are not prohibitive. | Only if specifically requested. No cost. | Department of the Navy | V2.12.2.2.5 V2.12.2.8 T2.12.2-6 V5.12.2.2.1 V5.12.2.7 T5.12.2-4 |
| 67 | CR-15 | Avoidance of Latte Stone Park (Site 08-0141-South Finegayan). Interpretive signage to be corrected and upgraded. | | Department of the Navy | V2.12.2.3.4 T2.12.2-6 V5.12.2.2.1 V5.12.2.7 T5.12.2-4 |
| 68 | CR-17 | Access to Mt. Jumullong Manglo will be maintained through existing trail. | | Department of the Navy | V2.12.2.2.4 |
| 69 | CR-18 | Eighth Avenue will remain open and drivable to allow access to the Tinian NHL. | | Department of the Navy | V3.12.2.2.1 V3.12.2.3.1 V3.12.2.4.1 |
| 70 | CR-21 | All surveys, testing, and planning relating to archaeological resources in the form of objects, sites, structures, and districts will be carried out by, or under the oversight or supervision of, a person or persons meeting the professional qualifications for Archaeologist found in “The SOI’s Historic Preservation Professional Qualification Standards” (SOI Qualification Standards), 62 Federal Register (FR) 33712. | New – added in the ROD | Department of the Navy | Not included in FEIS |
| 71 | CR-22 | All historic property surveys and eligibility determinations for architectural resources in the form of historic buildings, structures, sites, objects, and districts will be carried out by, or under the oversight or supervision of, a person or persons meeting the professional qualifications for Architectural Historian under Standard a or b found in SOI Qualification Standards, or Historical Architect under Standard a or b found in SOI Qualification Standards, 62 FR 33719, or 62 FR 33713-4. | New – added in the ROD | Department of the Navy | Not included in FEIS |
| 72 | CR-23 | All archaeological materials (artifacts, midden, ecofacts, manuports, etc.) collected during the | New – added in the ROD | Department of the Navy | Not included in |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|--|-----------------|--|---|------------------------------------|---|
| | | course of the Undertaking on Tinian shall, consistent with federal law, be transferred to the CNMI Museum for curation. DoD will transfer its collections to the CNMI Museum and enter into a cooperative agreement with the CNMI Museum. | | | FEIS |
| Visual Resources (VR) | | | | | |
| 73 | VR-1 | To maintain the existing visual appearance, land clearing and grading should be minimized to the extent possible on lands proposed for range uses. | | Navy Contractor(s) | V2.13.8 T2.13.2-6 V3.13.2.2.3 V3.13.2-7 T3.13.2-5 |
| 74 | VR-2 | Minimize impact by using native flora to create a natural-appearing "screen" around the cleared range areas, outside of the firebreaks/perimeter roads. | | Navy Contractor(s) | V2.13.8 T2.13.2-6 V3.13.2.2.3 V3.13.2-7 T3.13.2-5 |
| 75 | VR-3 | Prepare Installation Appearance Plan and implement design guidelines for all buildings. | | Navy Contractor(s) | V2.13.8 T2.13.2-6 V5.13.2.7 T5.13.2-4 |
| 76 | VR-4 | Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam's native flora. | Part of Installation Appearance Plan and Guam Landscaping Guidelines. Included in the contract specifications. | Navy Contractor(s) | V2.13.8 T2.13.2-6 V5.13.2.7 T5.13.2-4 |
| 77 | VR-7 | Create a buffer area and screen development on NCTS between the Haputo Point Overlook and adjacent proposed development. | | Navy Contractor(s) | V5.13.2.2.1 V5.13.2.7 T5.13.2-4 |
| 78 | VR-8 | Provide an open railing to the extent possible to provide views from bridges out to the adjacent areas. | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.15.2.6 |
| 79 | VR-9 | Hide utility crossings on bridges and in between bridge girders or use other methods of screening utilities on bridges to improve views from a bridge and to enhance the structures integration into the overall landscape. | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.15.2.6 |
| 80 | VR-10 | Preserve existing trees or stands of vegetation by shifting the roadway alignment to the extent feasible where roadways are widened. | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.15.2.6 |
| Utilities and Infrastructure (UI) Water (UI/W); Wastewater (UI/WW); Solid Waste (UI/SW); Power (UI/P) | | | | | |
| 81 | UI/W-1 | Arrange for DoD to transfer excess water production capacity to Guam Water Authority (GWA) as available and needed to mitigate Guam potable water supply impacts (if GWA has a water shortage). Set up additional physical interconnections in the transmission systems. | During the buildup period, DoD will make excess water in the DoD systems available, upon request, for use by the Guam Waterworks Authority (GWA) to supplement the water demand GWA is expected to encounter during the buildup period. | Department of the Navy and GovGuam | V6.3.2.3.1 |
| 82 | UI/W-2 | Carefully monitor the chloride concentrations in the Northern Guam Lens Aquifer (NGLA) sub-basins and adjust well pumping rates to reduce | DoD supports the standup of a Northern Guam Lens Aquifer | Department of the Navy and GovGuam | V6.3.2.3.1 V5.4.2.2.2 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|--|------------------------------------|------------------------|
| | | localized impacts to the NGLA sub-basin if high chloride concentrations are detected in individual wells. | (NGLA) advisory panel of stakeholders: (GWA, GEPA, CCU and DOD) with technical assistance from the University of Guam (UOG), Water Engineering Resource Institute (WERI, USGS, EPA Region IX and others as appropriate to guide efforts to protect the quantity and quality of the water in the NGLA. This advisory panel can provide expert technical advice and guidance with respect to addressing ongoing and proposed actions that have the potential to impact the NGLA. | | |
| 83 | UI/W-3 | Set up a joint GWA, GEPA, CCU, and DoD NGLA advisory panel, with technical assistance from the University of Guam [UOG], Water Engineering Resource Institute [WERI], USGS, and others as appropriate. | See notes for UI/W2 | Department of the Navy | V6.3.2.3.1 |
| 84 | UI/WW-1 | Seek Government of Japan (GoJ) financing for the repairs and upgrades to the Hagatna WWTP. | DoD will not commence with construction until GOJ has committed funding. | Department of the Navy and GovGuam | V6.3.2.4.1 |
| 85 | UI/WW-3 | Seek GoJ financing for the repairs and upgrades to the GWA northern and central wastewater collection systems. | | Department of the Navy and GovGuam | V6.3.2.4.1 |
| 86 | UI/SW-1 | DoD, in coordination with GovGuam, will continue to explore the use of transfer stations. | To eliminate the number of vehicles on the road. GovGuam will have transfer stations that DoD will use. We have plans to handle our waste by utilizing GovGuam transfer stations. GovGuam currently planning only for one transfer station 5 miles from DPW office. DoD will utilize transfer stations GovGuam is planning to build. | Department of the Navy and GovGuam | V6.3.2.5 |
| 87 | UI/SW-2 | DoD, in coordination with GovGuam, will continue to explore the need for recycling centers. | 2 recycling related facilities planned: Expansion of Air Force Facility at Andersen AFB and construction of new facility on Finegayan | Department of the Navy | V6.3.2.5 |
| 88 | UI/SW-3 | DoD will implement programs for reduction of disposal of construction and demolition debris, such as reuse of concrete without lead-based paint, asphalt concrete, and scrap metal. | Planning C&D recycling facility on Finegayan to divert C&D waste. DoD minimize C&D waste by recycling and using the Navy landfill. Navy will manage hardfill internally to the extent practical as | Navy Contractor(s) | V6.3.2.5 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
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| | | | there is not much capacity in Guam hardfills. | | |
| Socioeconomics and General Services (SE): Chamorro Issues/Community Cohesion (SE/CI); Crime and Social Order (SE/CR); Land Acquisition (SE/LA); Population (SE/PP); Public Service, Growth Permitting and Regulatory Agencies (SE/PS); Tinian, CNMI focused (SE/T) | | | | | |
| 89 | SE/CI-1 | Implement a collaborative effort with construction worker contractors to implement an orientation course on Guam local culture, language and history, designed in conjunction with the Guam Department of Chamorro Affairs and Chamorro cultural specialists, to be attended by all arriving H2B workers. | | Navy Contractor(s) | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |
| 90 | SE/CI-2 | Implement a mayoral outreach task force aimed at developing military-civilian relationships, to minimize local community perceptions of separations of military and civilian communities. The task force will work with each mayor and their staff to integrate military participation in existing cultural or recreational community events, expand on existing military outreach activities, and develop new civilian-military collaborative projects as determined by the task force and mayors. | Would involve expansion of an existing program. | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |
| 91 | SE/CI-3 | Implement an orientation course on Guam local culture, language and history, designed in conjunction with the Guam Department of Chamorro Affairs and Chamorro cultural specialists, to be attended by all arriving active-duty DoD personnel, their dependents, and military civilian workers This mitigation measure is also applicable to the cultural resources category (CR). | This program could potentially be combined with TB and MB resource education/orientation program. | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |
| 92 | SE/CI-5 | Expand sister village programs to promote military civilian community interaction. | | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 |
| 93 | SE/CI-7 | Implement an orientation course on Guam local laws and culture, language and history, designed in conjunction with GovGuam public safety agencies, the Guam Department of Chamorro Affairs and Chamorro cultural specialists, to be attended by all arriving service members prior to shore leave on the island of Guam. | Same as SE/CI-3 | Department of the Navy | V4.16.1.5 T4.16.2-24 |
| 94 | SE/CR-1 | Increase collaborative programs with GovGuam public safety agencies to develop a comprehensive and regular shore patrol system, and maintain a regular visible preventative presence. | | Department of the Navy | V2.16.1.15 T2.16.2-69 |
| 95 | SE/CR-2 | Continue to participate in CMTF to address community crime and social order concerns such as effective crime prevention strategies and information sharing. | | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |
| 96 | SE/CR-3 | Continue cross-training exercises with the GovGuam safety agencies. | | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |
| 97 | SE/LA-1 | Conduct new screenings on a periodic basis to identify additional excess DoD lands that could be returned. | Mandatory under federal statute; already routinely being done. | Department of the Navy | V2.16.1.15 T2.16.2-69 V4.16.1.5 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|---|------------------------------------|------------------------|--|
| | | | | | T4.16.2-24 |
| 98 | SE/LA-2 | Expedite the return of lands subject to the Guam Excess Lands Act to the extent possible. | | Department of the Navy | V2.16.1.15 T2.16.2-69 |
| 99 | SE/LA-3 | For the acquisition of property and the increase in DoD controlled lands on Guam, mitigation may include: a. Explore possible and swap of DoD lands for land of similar value and similar cultural and recreational opportunities; b. During the land acquisition process conduct socioeconomic surveys and census of affected landowners, users, ancestral claimants, early in the land acquisition process, in order to identify potential sociocultural impacts; c. In collaboration with community, GovGuam the University of Guam, and GCC representatives, implement a system of protected garden areas on public lands for the growth and collection of native plants, including medicinal plants; d. Continue collaboration between DoD, GovGuam, the University of Guam, and cultural resource specialists to develop public education on the cultural and social value of land on Guam including cultural practices, such as the gathering of medicinal plants and the use of wood for carving, cultural tours, and place-based historical information, and/or e. Collaborate with community, GovGuam and UoG and GCC representatives to implement guided cultural and historical tours and hikes of relevant locations on acquired land, for visitors and the civilian and military population of Guam. | | Department of the Navy | V2.16.1.15 T2.16.2-69 |
| 100 | SE/LA-5 | Mitigation for the restriction and/or loss of access to recreational and cultural sites may include: a. Implementation of a public access plan covering access hours, improved access to sites, locations that can be made safe for entry and use, and maintenance efforts and regular condition assessments of the impact areas, b. Collaborate with GovGuam to improve recreational and cultural activities for the community on GovGuam lands c. Identification of potential locations for the relocation of the Guam International Raceway. | | Department of the Navy | V2.16.1.15 T2.16.2-69 |
| 101 | SE/PP-1 | Implement force flow and adaptive program management. | Already identified as 'force flow" | Department of the Navy | V2.16.1.15 T2.16.2-69 |
| 102 | SE/PS-2 | Continue to support existing DoD programs that contribute and/or donate excess equipment to local agencies. | | Department of the Navy | V2.16.1.15 T2.16.2-69 V5.16.2.5 V6.17.2.2.7 |
| 103 | SE/PS-3 | Coordinate with the Governor's Office of Community Affairs to facilitate volunteer opportunities at Guam public service agencies for military personnel and their dependents. | | Department of the Navy | V2.16.1.15 T2.16.2-69 V5.16.2.5 V6.17.2.2.7 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|---|-----------------|---|--|------------------------|------------------------|
| 104 | SE/T-3 | Assist, as appropriate and practicable, with small business outreach and training on Tinian. | | Department of the Navy | V3.16.2.5 |
| 105 | SE/T-6 | Retain as many grazing/agricultural use permits as possible on Tinian to minimize or avoid this significant impact. | New – added in the ROD | Department of the Navy | Not included in FEIS |
| 106 | SE/T-4 | Participate, as appropriate and practicable, in Military Integration Management Committee and Civilian Military Task Force for the purposes of addressing individuals that are displaced if leases on the LBA do require termination. | | Department of the Navy | V3.16.2.5 |
| 107 | SE/T-5 | As appropriate and practicable, collaborate with CNMI officials to ensure that access to tourism, cultural and economic activities be clearly communicated and made as easy as possible. | | Department of the Navy | V3.16.2.5 |
| Environmental Justice and Protection of Children (EJ) | | | | | |
| 108 | EJ-1 | If DoD selects to implement the FEIS preferred alternative for the live fire training ranges on Guam, implement applicable mitigation measures listed in the Land Acquisition category (SE/LA). | | Department of the Navy | V2.19.2.8 |
| 109 | EJ-2 | Implement applicable mitigation measures listed in the Socioeconomic category (SE). | | Department of the Navy | V2.19.2.8 |
| 110 | EJ-3 | Implement mitigation measures listed in the Socioeconomic category (SE) to reduce the strain on GDPHSS and GDMHSA health services for the poor and uninsured. | | Department of the Navy | V2.19.2.8 |
| Workforce Housing (WH) | | | | | |
| 111 | WH-1 | General Conditions: Workforce Housing and Logistics Evaluation Factor and Contract Provision. During the acquisition process for construction projects, DoD will give preference to potential contractor(s) ("Offerors") who: a. submit a comprehensive plan to address housing requirements, b. explain methods to minimize impacts to local community, c. provide maps and number of living quarters at each location, d. provide discussion of how the housing facility meets GovGuam regulations/policies (including any necessary permits), e. provide adequate housing to workers in accordance with 29 CFR 1910.142 (and other federal and GovGuam statutes as applicable), f. obtain all permits, licenses or other authority required by federal and GovGuam statutes and regulations. | Already being done. Part of DoD contracting process. | Navy Contractor(s) | V1.4.15.3.1 |

| No. | Mitigation Code | Mitigation Measure | Notes | Responsible Entity | Final EIS Reference(s) |
|-------------|-----------------|--|---|------------------------|------------------------|
| 112 | WH-2 | Medical Care: Workforce Housing and Logistics Evaluation Factor and Contract Provision. During acquisition process for construction projects, DoD will give preference to potential contractor(s) ("Offerors") who submit a comprehensive narrative plan to address medical services requirements. | Already being done. Part of DoD contracting process. | Navy Contractor(s) | V1.4.15.3.2 |
| 113 | WH-3 | Orientation Programs: Workforce Housing and Logistics Evaluation Factor and Contract Provision. During acquisition process for construction projects, DoD will give preference to potential contractor(s) ("Offerors") who ensure personnel receive orientation training on safety, security, anti-terrorism, cultural awareness, environmental protection, and invasive species. | Already being done. Part of DoD contracting process. | Navy Contractor(s) | V1.4.15.3.3 |
| 114 | WH-4 | Lodging and Food: Workforce Housing and Logistics Evaluation Factor and Contract Provision. During acquisition process for construction projects, DoD will give preference to potential contractor(s) ("Offerors") who ensure they would comply with Guam lodging, food, and hygiene regulations. | Already being done. Part of current contracting process. | Navy Contractor(s) | V1.4.15.3.4 |
| 115 | WH-5 | Transportation: Workforce Housing and Logistics Evaluation Factor and Contract Provision. During acquisition process for construction projects, DoD will give preference to potential contractor(s) ("Offerors") who submit a comprehensive plan to address transportation requirements, including Guam regulations requiring employer provision of transportation to/from the worksite. | Already being done. Part of current contracting process. | Navy Contractor(s) | V1.4.15.3.5 |
| 116 | WH-6 | Water and Wastewater: Workforce Housing and Logistics Evaluation Factor and Contract Provision. DoD will give preference to construction contract proposals that identify sufficient available water allocation from GWA for workers for that specific construction contract. | Already being done. Part of current contracting process. | Navy Contractor(s) | V7.2.4.2 |
| General (G) | | | | | |
| 117 | G-1 | Force flow reduction. | This mitigation measure will be considered through the Civil Military Coordination Council. | Department of the Navy | V 2, 4, 5, 6 & 7 |
| 118 | G-2 | Adaptive program management | This mitigation measure will be considered through the Civil Military Coordination Council. | Department of the Navy | V 2, 4, 5, 6 & 7 |

Table B-2. Non-DoD Mitigation Measures

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
|---|-----------------|---|--|-----------------------------|--|
| Water Resources (WR; See also Marine Biological Resources Category) | | | | | |
| 1 | WR-1 | Attempt to avoid impacts to wetlands; if avoidance is not possible then minimize potential impacts. Section 404 of the CWA requires mitigation of unavoidable wetland disturbances. Compensate by creating new wetlands or restoring, enhancing, or preserving existing wetland areas to, at a minimum, replace the area. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | Navy Contractor(s) and FHWA | V2.4.2.4.6 V2.4.2.5.6 T2.4.2-8 V2.4.2.9 V5.4.2.2.3 T5.4.2-4 |
| 2 | WR-2 | Channel widening, lining and/or re-contouring for off-base roadways. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.6.2.6.7 T6.6.2-7 |
| 3 | WR-3 | Ensure adequate and appropriate pier placement and/or reconfiguration for bridge replacement. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.6.2.6.7 T6.6.2-7 |
| 4 | WR-4 | Relocate utility lines where utilities cause obstructions to stream flow. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.6.2.6.7 T6.6.2-7 |
| 5 | WR-5 | Debris removal, incorporation of debris noses upstream of piers and wingwalls. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.6.2.6.7 T6.6.2-7 |
| 6 | WR-6 | Aquatic habitat enhancements at Camp Covington or other identified areas to mitigate for bridge and culvert replacements in accordance with Section 404 of CWA permitting requirements. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.6.2.6.7 T6.6.2-7 |
| Noise (N) – based on human receptors | | | | | |
| 7 | N-4 | Installation of sound walls were determined to be feasible (based on engineering considerations) and reasonable in accordance with Guam's Traffic Noise Abatement Policy following identification of noise receptors within project corridors and preparation of noise studies. (FHWA – DAR Projects) | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V5 6.2.2.1 V5 6.2.5 V5 T6.2.6 V6.8.2.1.2 |
| Land and Submerged Land Use (LU) | | | | | |
| 8 | LU-2 | GovGuam could revise community land use plans to address proposed DoD land uses. | | GovGuam | V2.8.3.1 V2.8.3.6 V2.8.2.9 V2.8.2.6 |
| Recreational Resources (RR) | | | | | |

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
|---------------------------------------|-----------------|---|--|--------------------|---|
| 9 | RR-1 | GovGuam could update Guam Comprehensive Outdoor Recreation Plan that addresses recreational user, demand, preference, conflicts, and conditions. | | GovGuam | V2.9.2.2.6 V2.9.2.8 T2.9.2-1 |
| Terrestrial Biological Resources (TB) | | | | | |
| 10 | TB-2 | Approximately one week prior to clearing vegetation a qualified biologist will survey the project site for the occurrence of ESA-listed species (e.g., Mariana fruit bats, Mariana crows, and Mariana moorhens), and if present, the work will be postponed. Additionally, conduct biological surveys for Mariana common moorhens prior to initiating pavement strengthening or bridge replacement adjacent to wetlands. (FHWA – DAR Projects) | | FHWA | V2.10.2.1 T2.10.2-22 V3.10.2.2.3 V3.10.2.7 T3.10.2-14 V5.10.2.3.1 V6.12 |
| 11 | TB-28 | If nesting Mariana common moorhens are present within the limits of construction, clearing and construction will be postponed until the chicks have fledged. If work stops for more than 1 week, pre-construction surveys will be repeated to ensure that no moorhens have begun to nest. (FHWA – DAR Projects). | Applies only to FHWA for off-base roads on Guam. Navy will provide language/requirement to FHWA for inclusion in contracts. | FHWA | V2.10.2.1 T2.10.2-22 V2.10.2.2.6 |
| Transportation - Road (TR) | | | | | |
| 12 | TR-1 | Coordinate with the Guam SHPO to determine if Agana Bridge #1 may be eligible for inclusion in NRHP. FHWA is working with SHPO to determine appropriate considerations for the replacement bridge. | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.21.2.3 |
| 13 | TR-2 | Coordinate with utility improvements. Planning and continued coordination with utility providers during the preliminary engineering and final design and the construction stages of roadway projects will be necessary to minimize or eliminate interruption in utility service to customers. The Joint Region Marianas will coordinate with the affected service provider in each instance to ensure that work is conducted in accordance with the appropriate requirements and criteria. In addition, coordination efforts will lay out utility reroutes, identify potential conflicts, ensure that construction of the proposed project minimizes disruption to utility operations, and formulate strategies for overcoming problems that may arise. If interruptions of utility service are required, they will be restricted in duration and geographic extent. Careful scheduling of these disruptions and advance notification to occupants of the adjacent properties that will be affected by temporary service interruptions will help to avoid any critical service periods. Where feasible, utility relocations will be undertaken in advance of roadway construction activities. | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA | V6.3.2.6.1 V6.3.2.6.5 |

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|--|---------------------------------|------------------------|
| 14 | TR-3 | For the roadways, intersections and bridges identified under the Off-Base Roadways Preferred Alternative 2 that are not DAR-certified or determined to be DAR-eligible, work cooperatively with FHWA and Guam DPW to refine traffic models, determine DAR eligibility of remaining projects, and explore alternate funding options for projects not funded through DAR. Pursue implementation of remaining non-DAR funded off-base road projects. | DoD does not have authority to fund roads not certified as eligible for DAR funding. DoD is working cooperatively with FHWA and Guam DPW to refine traffic models, determine DAR eligibility of remaining projects, and explore alternative funding options for projects not funded through DAR. | Department of the Navy and FHWA | V6.4.2.3 |
| 15 | TR-4 | <p>For off-base roadways: DoD will support FHWA in creating a detailed Traffic Management Plan which will identify and provide alternate traffic detour routes (where practicable), construction materials hauling routes, bus stops, transit routes and operation hours, pedestrian routes, and residential and commercial access routes to be used during the construction period. Specific aspects of the Plan could include:</p> <ul style="list-style-type: none"> • Encourage travel demand management. • Encourage transportation demand measures to reduce single-occupant vehicle use. • Encourage staggered work hours, flextime, telecommuting and compressed work weeks. • Encourage corporate shuttles for local circulation. • Encourage better delivery system for purchases. • Flextime – compressed work weeks. • Promote trip reduction planning. • Traffic management will follow the Manual on Uniform Traffic Control Devices (MUTCD), as deemed necessary and applicable. The MUTCD provides examples on dealing with traffic through many different types of roadway construction activities. • Whenever possible, phase construction to allow two lanes of traffic to remain open. • If two lanes of traffic are not permissible, traffic would be reduced to one lane. • Should it be required for all lanes of traffic to be closed, a detour route would be clearly signed. • Appropriate measures would be taken to maintain access to businesses. • Should construction require a business access to be closed, the business owner would be given reasonable notice of the construction activities and the estimated duration of closure. • Pedestrian routes would remain open and clear of any debris • Should a pedestrian route be closed, a detour route would be clearly signed and maintained throughout construction to ensure pedestrian safety. • All emergency services would be given | Part of DAR project which would be implemented by Guam Department of Public Works (DPW) via the Federal Highway Administration (FHWA). | FHWA and GovGuam | V6.4.2.3 |

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|--|------------------|---|-------|--------------------|------------------------|
| | | <p>sufficient notice of construction activities and relative detour routes as to not affect their response times.</p> <ul style="list-style-type: none"> GovGuam DPW would develop a public outreach program about the project construction schedule, relocation plans and assistance programs, traffic-impacted areas and the Traffic Management Plan. | | | |
| Utilities and Infrastructure (UI) Water (UI/W); Wastewater (UI/WW); Solid Waste (UI/SW); Power (UI/P) | | | | | |
| 16 | UI/W-4 | GWA could implement improvements to reduce water losses associated with unaccounted for water (UFW) (i.e., leakage or theft). GWA current UFW reduction plan is 20% | | GovGuam | V6.3.2.3.1 |
| 17 | UI/W-5 | GovGuam could implement control measures such as accepting private consortiums infrastructure development, moratoriums, and measures through building permit approvals or other mechanisms to steer new development to areas with adequate water. | | GovGuam | V6.3.2.3.1 |
| 18 | UI/W-6 UI/W-7 | Through the workforce housing permit approval process, GovGuam could charge development impact fees that would go toward financing improvements to GWA water system. If the GWA cannot meet the projected increase in demand resulting from induced civilian growth, GovGuam could implement measures to control the rate of induced growth through the building permit process and/or restricting the number of water and sewer connection requests that are approved. | | GovGuam | V6.3.2.3.1 |
| 19 | UI/W-8 | GWA could accelerate development of new GWA supply wells and treatment and distribution (T&D) systems. | | GovGuam | V6.3.2.3.1 |
| 20 | UI/W-9 | GWA could assess system development charges to contractors to generate funding for system upgrades to help meet anticipated demands. | | GovGuam | V6.3.2.3.1 |
| 21 | UI/W-10 | GovGuam could incentivize water conservation on Guam. | | GovGuam | V6.3.2.3.1 |
| 22 | UI/W-11 | GovGuam could provide sewer services to current users of septic tanks and leach fields to protect the quality of water in the NGLA. | | GovGuam | V6.3.2.3.2 |
| 23 | UI/W-12 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam addressing the following: Reduce water losses associated with unaccounted for water (UFW) (i.e., leakage or theft). GWA current UFW reduction plan is 20%; Development of new GWA supply wells and treatment and distribution (T&D) systems; Incentives for water conservation, and/or Providing sewer services to eliminate wastewater treatment systems. | | | V6.3.2.3.2 |
| 24 | UI/WW-4 | GovGuam could improve the southern WWTPs and the Hagatna WWTP and their associated collection systems or impose development moratoriums for areas served by those plants until appropriate upgrades have been made. | | GovGuam | V6.3.2.4.1 |

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|---|-----------------|--|-------|--------------------|---|
| | | (This measure falls within GovGuam authority to implement) | | | |
| 25 | UI/WW-5 | GovGuam could implement control measures such as accepting private consortiums infrastructure development, moratoriums, and measures through building permit approvals or other mechanisms to steer new development to areas with adequate wastewater service. This could reduce the demand at NDWWTP by 1.4 MGd (5.3 mld). This one mitigation measure would reduce the peak flow to the NDWWTP to 10.7 MGd (40.5 mld) at the peak year (2014), within the design capacity of the NDWWTP. | | GovGuam | V6.3.2.4.1 |
| 26 | UI/WW-7 | GWA could assess a system development charge to contractors and workforce housing developers that could be used to fund improvements to the wastewater systems. | | GovGuam | V6.3.2.4.1 |
| 27 | UI/WW-8 | GovGuam could implement measures to control the rate of induced growth through the building permit process and/or by restricting the number of sewer connection requests that are approved. | | GovGuam | V6.3.2.4.1 |
| 28 | UI/WW-9 | GovGuam could incentivize water conservation measures by offering rebates on upgrades to water saving devices in an effort to reduce wastewater flows. This is done periodically on the mainland. Upgrading current water devices to low-flow water saving models would reduce current demand. | | GovGuam | V6.3.2.4.1 |
| 29 | UI/SW-5 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam addressing the following: Providing municipal solid waste transfer stations; Construct recycling center(s); and/or Construct at least one materials resource recovery facility. | | | V6.3.2.5 |
| Socioeconomics and General Services (SE): Chamorro Issues/Community Cohesion (SE/CI); Crime and Social Order (SE/CR); Land Acquisition (SE/LA); Population (SE/PP); Public Service, Growth Permitting and Regulatory Agencies (SE/PS); Tinian, CNMI focused (SE/T) | | | | | |
| 30 | SE/CI-8 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam addressing the following: Supporting the development of Chamorro cultural sites and activities, such as a museum and/or cultural center, Chamorro language immersion school, adult Chamorro language education, and cultural performance and arts organizations; Job counseling assistance to be made available to low income families through the Guam Department of Labor (with US funds), which would include training sessions on how to fill out job applications, identify skills, and prepare resumes for job opportunities; Before and/or after school programs for children on Guam including formal and informal education, while allowing their parent(s) the time to get a job; Transportation to job sites made available for those without the means to travel to work. | | | V2.16.1.15 T2.16.2-69 V4.16.1.5 T4.16.2-24 |

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|--|-------|--------------------|---|
| 31 | SE/CR-4 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for collaborative efforts to enhance cultural awareness. | | | V2.16.1.15 T2.16.2-69 V4.16.1.4 T4.16.2-24 |
| 32 | SE/LA-4 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam: Obtaining additional support for the UoG Tropical Agricultural Department, and other educational and community agricultural programs in the study of traditional plants, including medicinal plant use, and to develop native plant and seedling nurseries accessible to the public for study and use; Obtaining additional support for educational and community programs focused on traditional fishing and shellfishing, and related activities; To improve recreational and cultural activities for the community on GovGuam lands; Funding of conservation efforts on Guam, and/or Special projects to improve local agricultural production. | | | V2.16.1.15 T2.16.2-69 |
| 33 | SE/LA-6 | DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam to address the following: Assistance for opening public garden spaces on GovGuam land; Assistance for CLTC to develop a land use plan, written fees collection policies and procedures for commercial licenses; Assistance for GALC to establish rules and regulations for Land Bank properties, written fees collection system and policies and rules and regulations for issuing licenses; Support for the CLTC agricultural program to address the issues identified in the Chamorro Land Trust Commission Multi-Agency Compliance and Needs Assessment Team First Inspection Report (July-September 2009); Support for CLTC to provide water lines, roads, sewer lines, power, and land management building on CLTC land; Support for CLTC and GALC in establishing property boundaries in the subdivisions where the agencies have active leases; Support and implementation of automation systems to manage CLTC and GALC land inventories, finances, and other data; Provision of or funding for equipment, training and long-term support for agricultural activities, possibly in a cooperative framework; Support for the UoG Tropical Agricultural Department, and other educational and community agricultural programs in the study of traditional plants, including medicinal plant use, and to develop native plant and seedling nurseries accessible to the public for study and use; Support for educational and community programs focused on traditional fishing and | | | V2.16.1.15 T2.16.2-69 |

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
|-----|-----------------|---|-------|--------------------|---------------------------------------|
| | | shellfishing and related activities; Improvement of recreational and cultural activities for the community on GovGuam lands; Conservation efforts on Guam, and/or Special projects to improve local agricultural production. | | | |
| 34 | SE/PS-1 | <p>DoD is leading the EAC, a federal inter-agency effort to identify other federal programs and funding sources for GovGuam addressing the following:</p> <p>Enhancement of GovGuam Tax Revenue Collection efficacy. For example, improved revenue could be used to enhance recruitment and retention of GovGuam work force and contractual support;</p> <p>Examination of currently existing caps on benefits such as Medicaid and Medicare, and the non-provision of benefits such as Supplemental Security Income benefits, and the appropriateness of these caps and limits for Guam;</p> <p>Increase the number of Guam-based offices for the distribution of federal social service support, and to support the work of GovGuam public service agencies;</p> <p>Review and implementation of programs to assist GovGuam's public agencies in adapting to peaks in service population growth;</p> <p>Provision of technical assistance for the development and implementation of a system of interpreters and translators available for the interpreting and translating needs of GovGuam public service agencies, to facilitate timely and appropriate provision of services for the English as a Second Language service population;</p> <p>The development of AmeriCorps, Teach for America, National Health Service Corps programs, and other similar programs on Guam;</p> <p>Improving the grant-writing capabilities within GovGuam agencies to improve possibilities of attracting federal support programs;</p> <p>Support for the recruitment of professionals during the construction phases of the proposed action for GovGuam public agency positions;</p> <p>Support for the use of the Interagency Personnel Act to support identified GovGuam agency personnel requirements, and/or</p> <p>Provision to GovGuam of technical assistance for, and development and implementation of, comprehensive data collection systems focused on the following topics:</p> <p>GovGuam public services provided to FAS citizens, in order to facilitate GovGuam access to Compact Impact and other related funding.</p> <p>GovGuam agency services provided to military individuals, in order to facilitate GovGuam access of TRICARE and other related funding.</p> <p>GovGuam public health agency patient information, records, and services accessed, in order to facilitate appropriate care administered in a timely manner.</p> <p>GovGuam public agency billing systems, in order to facilitate GovGuam collection of</p> | | | V2.16.1.15 T2.16.2-69 V5.16.2.5 |

| No. | Mitigation Code | Mitigation Measure (highlighted text indicates language change in the ROD from language in the Final EIS) | Notes | Responsible Entity | Final EIS Reference(s) |
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| | | payment for services. | | | |
| Public Health and Safety (PHS)/Environmental Justice and Protection of Children (EJ) | | | | | |
| 35 | PHS-1 EJ-4 | DoD is leading the EAC, a federal inter-agency effort, to identify other federal programs and funding sources that could benefit the people of Guam and Tinian in regards to health care, social services, disease control and/or other assistance to help Guam and Tinian upgrade their capacity to care for and help prevent increased incidence of illnesses. | | Department of the Navy GovGuam CNMI | V3.18.2.2.1 V4.2.18.2.8 V18.2..2.10 V4.18.2.2.8 V5.19.2.7 T5.18.2-4 V5.18.2.2.1 |
| Workforce Housing (WH) | | | | | |
| 36 | WH-7 | Avoid known sinkholes and place a buffer zone of vegetation around them to prevent further erosion or expansion. Erect educational signs and/or fencing where appropriate. Any sinkholes discovered will be evaluated to determine significant impacts and projects will be designed in consideration of these sinkholes as appropriate. (Developer of workforce housing facility/facilities) | | Workforce Housing Developer | V1.4.15.5.1 |
| 37 | WH-8 | Using a minimum number of equipment at a given time near residences to reduce noise impacts. (Developer of workforce housing facility/facilities) | | Workforce Housing Developer | V1.4.15.5.4 |
| 38 | WH-9 | Guam Synthesis and Cultural Landscape Report. (Developer of workforce housing facility/facilities) | | Workforce Housing Developer | V1.4.15.5.9 |
| 39 | WH-10 | Bus workers to/from worksite(s). (Developer of workforce housing facility/facilities) | | Workforce Housing Developer | V1.4.15.5.1 2 |
| 40 | WH-11 | Identification and removal of any potential unexploded ordnance (UXO) prior to ground disturbing activities. (Developer of workforce housing facility/facilities) | | Workforce Housing Developer | V1.4.15.5.1 4 |

APPENDIX C
REFERENCE DIAGRAMS

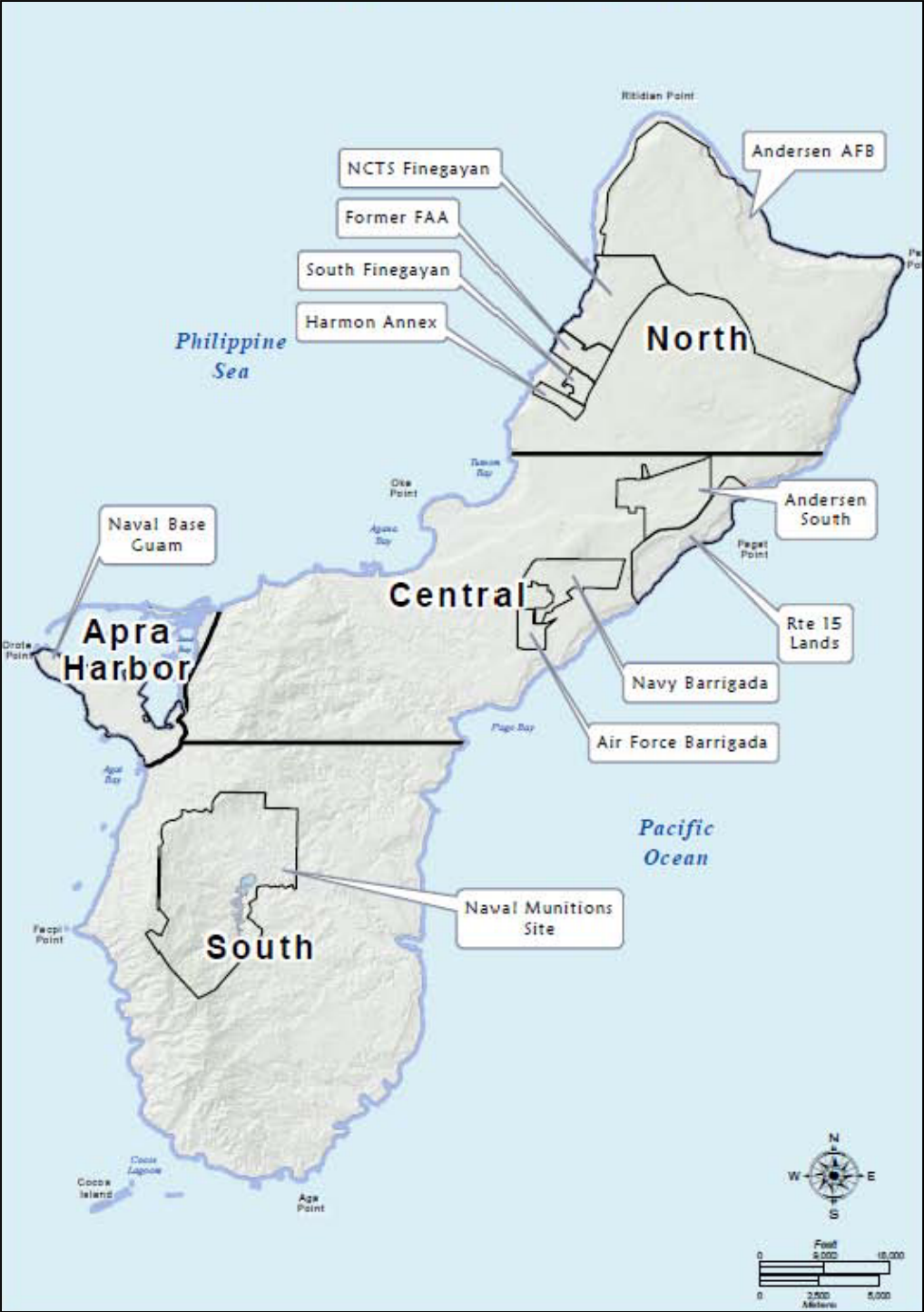


Figure C-1. Geographic Regions of Guam

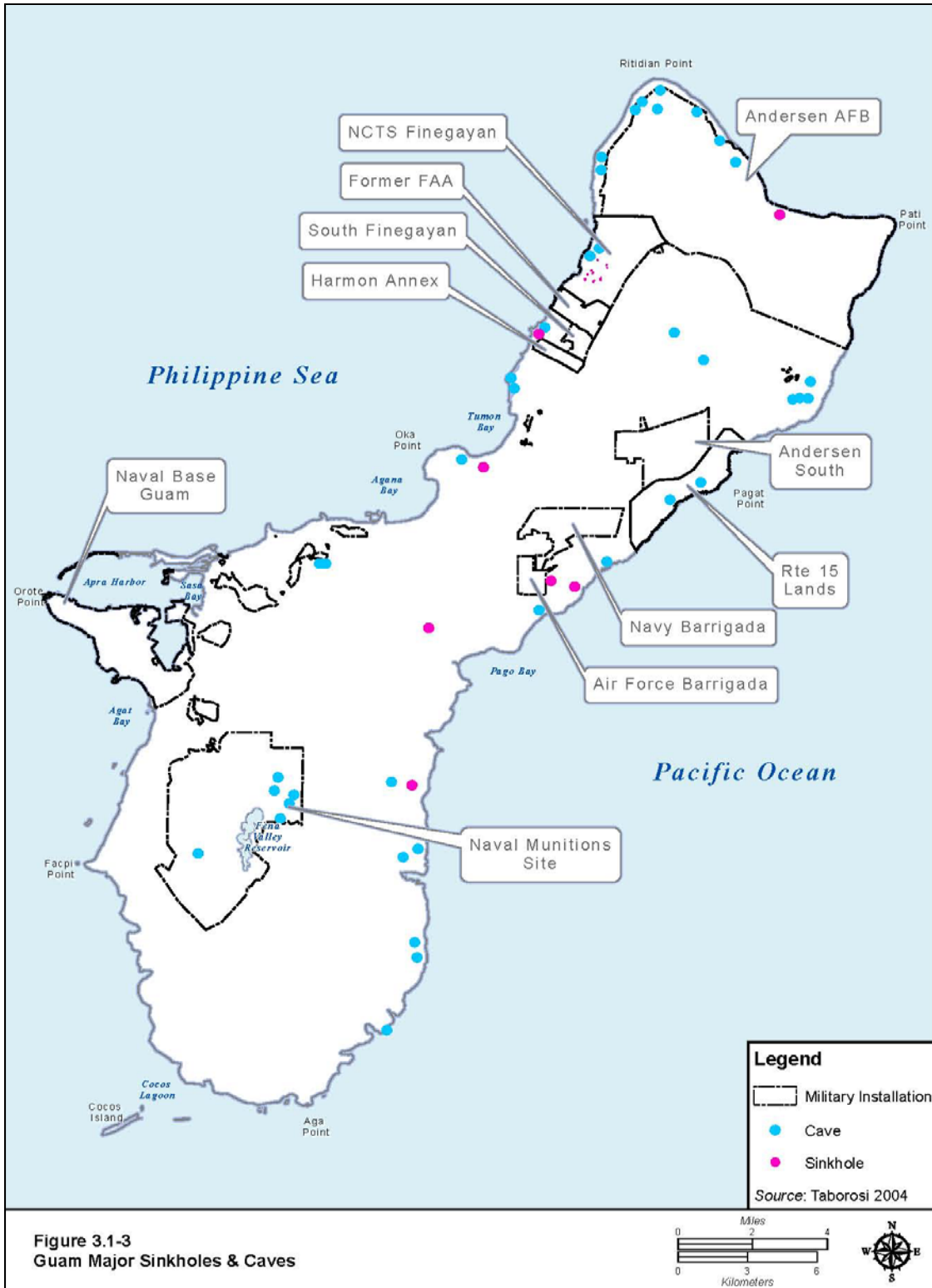


Figure C-2. Known Sinkholes and Caves on Guam

APPENDIX D
MITIGATION MEASURE STATUS REPORT FORM



MITIGATION MEASURES STATUS REPORT GUAM MILITARY RELOCATION

| | | |
|--|---------------|--|
| Project Code: | Project Name: | Date of this Report: NAVFAC Control. No.: |
| Contract Type : <input type="checkbox"/> Design-Build <input type="checkbox"/> Design only <input type="checkbox"/> Construction only <input type="checkbox"/> Other _____ | | Report No.: |
| Project Address/Location: | | Project Contact Name: Affiliation: Phone: Email Address: |
| Mitigation Measure No. _____ Mitigation Description: | | |
| Reference Document(s): <i>Final Environmental Impact Statement for the Guam and Commonwealth of the Northern Mariana Islands Relocation (Relocating Marines from Okinawa, Visiting Aircraft Carrier Berthing, and Army Air and Missile Defense Task Force), Record of Decision</i> | | |
| Required Monitoring Frequency: | | Required Reporting Requirement: |
| Entity Responsible for Mitigation: | | Implementation/Monitoring Phase: <input type="checkbox"/> Program Planning <input type="checkbox"/> Pre-Design <input type="checkbox"/> Design <input type="checkbox"/> Construction <input type="checkbox"/> Operation |
| Mitigation Monitoring Actions Performed: | | |
| Future Actions Planned: | | |
| Future Approvals Required: | | |
| <p><i>The information contained in this report is an independent evaluation based on my personal observations and information provided to me. I hereby certify under penalty of perjury that the information contained herein is true and correct to the best of my knowledge.</i></p> | | |
| Name of Person Completing Form _____ Title _____ | | |
| Affiliation: _____ | | |
| Signature _____ Date Signed _____ | | |
| Mitigation Status: <input type="checkbox"/> In Progress <input type="checkbox"/> Completed | | |
| Compliance Acceptance: <input type="checkbox"/> Yes <input type="checkbox"/> No QC Manager (Contractor) | | |
| Name: _____ Title: _____ | | |
| Signature _____ Date Signed _____ | | |
| Compliance Acceptance: <input type="checkbox"/> Yes <input type="checkbox"/> No Project Engineer/Project Manager, <input type="checkbox"/> NAVFACPAC <input type="checkbox"/> NAVFACMAR | | |
| Name: _____ Title: _____ | | |
| Signature _____ Date Signed _____ | | |
| Compliance Acceptance: <input type="checkbox"/> Yes <input type="checkbox"/> No Environmental, <input type="checkbox"/> NAVFACPAC <input type="checkbox"/> NAVFACMAR | | |
| Name: _____ Title: _____ | | |
| Signature _____ Date Signed _____ | | |

Attach additional sheets if necessary.

